

**Tsleil-Waututh Nation's History, Culture and
Aboriginal Interests in Eastern Burrard Inlet
(Redacted Version)**

Prepared
for

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1.0 Executive Summary

1. I was retained by Gowling Lafleur Henderson LLP (Gowlings) on behalf of Tsleil-Waututh Nation to address several questions regarding Tsleil-Waututh's history, culture, and land use patterns in the form of an expert report. To address these questions, I have reviewed a large body of relevant evidence from historical, ethnographic, archaeological, genealogical, traditional use study (TUS), and oral history sources.
2. First, I was instructed to document relevant information in the Study Area and provide an opinion about:¹

Who the Tsleil-Waututh people are as a people historically and today: their origins, culture, language, traditions and connection to Eastern Burrard Inlet and the watersheds draining therein (the "Study Area"). And "whether the Tsleil-Waututh were a distinct Aboriginal group at contact and in 1846, and the relationship of the modern Tsleil-Waututh Nation to this historic group and its territories.

3. Tsleil-Waututh was a Coast Salish group with close relationships with other neighbouring groups. Tsleil-Waututh was also a tribe, comprised of a cluster of affiliated villages. These neighbouring villages were:
 - a) linked socially and genetically through kinship connections, shared cultural practices and shared oral histories;
 - b) linked as a speech community whose identity was marked by a distinct dialect of Down River Halkomelem;
 - c) linked economically and politically through participation in potlatches, and
 - d) linked politically for territorial defense.
4. There is archaeological evidence of this village cluster in the Study Area spanning several millennia into the past.
5. The modern Tsleil-Waututh Nation is the group of aboriginal people descended from those encountered in the Study Area at contact and AD 1846. Perhaps most importantly, Tsleil-Waututh's recorded genealogy extends to the mid 18th century, and most of the modern Tsleil-Waututh Nation descends from a single common ancestor (chief Waut-salk I) who lived prior to, as of, and after contact. At First Contact in 1792, aboriginal people, and almost certainly Tsleil-Waututh people, were encountered in Burrard Inlet and Indian River, in close proximity to modern Tsleil-Waututh reserves. There is no pre-1846 evidence indicative of a sudden displacement or migration of aboriginal people into the

¹ The Study Area is defined by the polygon represented in Figure 1. It includes Burrard Inlet from just west of Second Narrows, east to Port Moody, and north to include Indian Arm. It includes a 2-6 km buffer of the lands draining into Burrard Inlet. It is not coterminous with Tsleil-Waututh's territory or Consultation Area.

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Study Area from elsewhere. The archaeological record can be said to corroborate Tsleil-Waututh histories regarding their origin and continuous occupation of Burrard Inlet since ancient times.

6. Tsleil-Waututh is a distinct Coast Salish First Nation with deep ancestral connections to eastern Burrard Inlet. The time depth of their occupancy of this region extends back 1,000 years at a minimum, and includes occupation here through AD 1792 and AD 1846.
7. With regards to the nature and extent of Tsleil-Waututh historic and current use and occupation of the Study Area I was asked to provide opinions on the following specific questions:

a) Did Tsleil-Waututh regularly use lands and waters in the Study Area as of, and prior to, 1846? If so, please describe, with specific reference to the relevant factual basis:

i) the location, nature, intensity, and frequency of Tsleil-Waututh's use of lands and waters in the Study Area as of, and prior to, 1846; and

ii) if and how Tsleil-Waututh communicated to third parties that it used the lands and waters in the Study Area for its own purposes as of, and prior to, 1846.

- Examples of regular use could include permanent or semi-permanent village sites, agriculture-related activities, burial grounds, cycle of residential moves and associated resource harvesting and/or mining activities, routes (and modes) employed to travel via lands and waterways, any other use of lands or waters for fishing, hunting, trapping, or otherwise exploiting resources, and internal legal orders relating to governance and decision-making over resource management and/or stewardship relating to the Study Area.

8. Based on all the available evidence, I conclude that prior to contact (AD 1792), Tsleil-Waututh occupied between 8 and 14 villages in the Study Area. Many of these villages are well-dated and represent three millennia of occupation. These villages were occupied by up to several thousand people in total. The area surrounding these villages was found to have been intensively and regularly used for resource harvesting. At AD 1846 Tsleil-Waututh occupied at least 5 villages, most of which were fortified. At AD 1846 Tsleil-Waututh regularly and intensively made use of all the lands and waters in the Study Area. This area is described visually in **Figure 1**, wherein all areas within the Study Area that I concluded were exclusively, regularly and intensively used are shaded. The specific

portions of the landscape/seascape that were identified as being regularly and intensively used for Tsleil-Waututh subsistence,² technology and travel include (see **Figure 1**):

- All of the marine waters were regularly and intensively used for resource harvesting; this includes fishing a myriad of species, hunting a variety of waterfowl, and hunting sea mammals and swimming terrestrial mammals.
- All of the marine waters were regularly and intensively used for canoe travel; this includes travel to and from other villages and camps, travel to Outer Burrard Inlet, and resource harvesting undertaken while travelling (e.g., trolling).
- All of the intertidal and foreshore environments were regularly and intensively used for harvesting activities; this includes harvesting shellfish and crabs, management of and harvesting resources from fish weirs and similar traps/facilities, near-shore fishing for a variety of species, harvesting fish roe, hunting birds, collecting seaweeds, landing canoes, and hunting sea mammals and terrestrial mammals.
- All of the near-shore (~1 km) terrestrial areas were variably used for places of habitation and places of regular resource harvesting. This includes many places of habitation (i.e., villages and camps), cemeteries, storage facilities, defensive constructions, places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- All of the terrestrial environments within about 8 km from well-documented villages or camps were regularly and extensively used for harvesting plants, hunting and trapping animals, and collecting materials for technological purposes. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.

² I use the term subsistence more broadly than simply consumption. I use the term subsistence more broadly to encompass all aspects of use and exchange of a subsistence resource for other foods or goods as part of a household economy; a subsistence economy. For example, surplus dried clams could be traded to relatives living inland for dressed hides.

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- All of the terrestrial environments adjacent to sizable rivers, streams, and lakes in North Shore Mountains immediately north of Burrard Inlet were used regularly and intensively for fishing, hunting, trapping, harvesting plant foods, and gathering technological materials. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- Specific remote and steep environments including cliffs, rockshelters, and similarly relatively inaccessible areas, and/or in proximity to bodies of water or waterfalls (e.g., pictograph locations) were used regularly for spiritual/ceremonial purposes. This includes places of spiritual practice/training.
- High elevation areas were regularly used for hunting valuable game like mountain goat and collecting other resources. This includes very steep and precipitous terrain such as cliffs.

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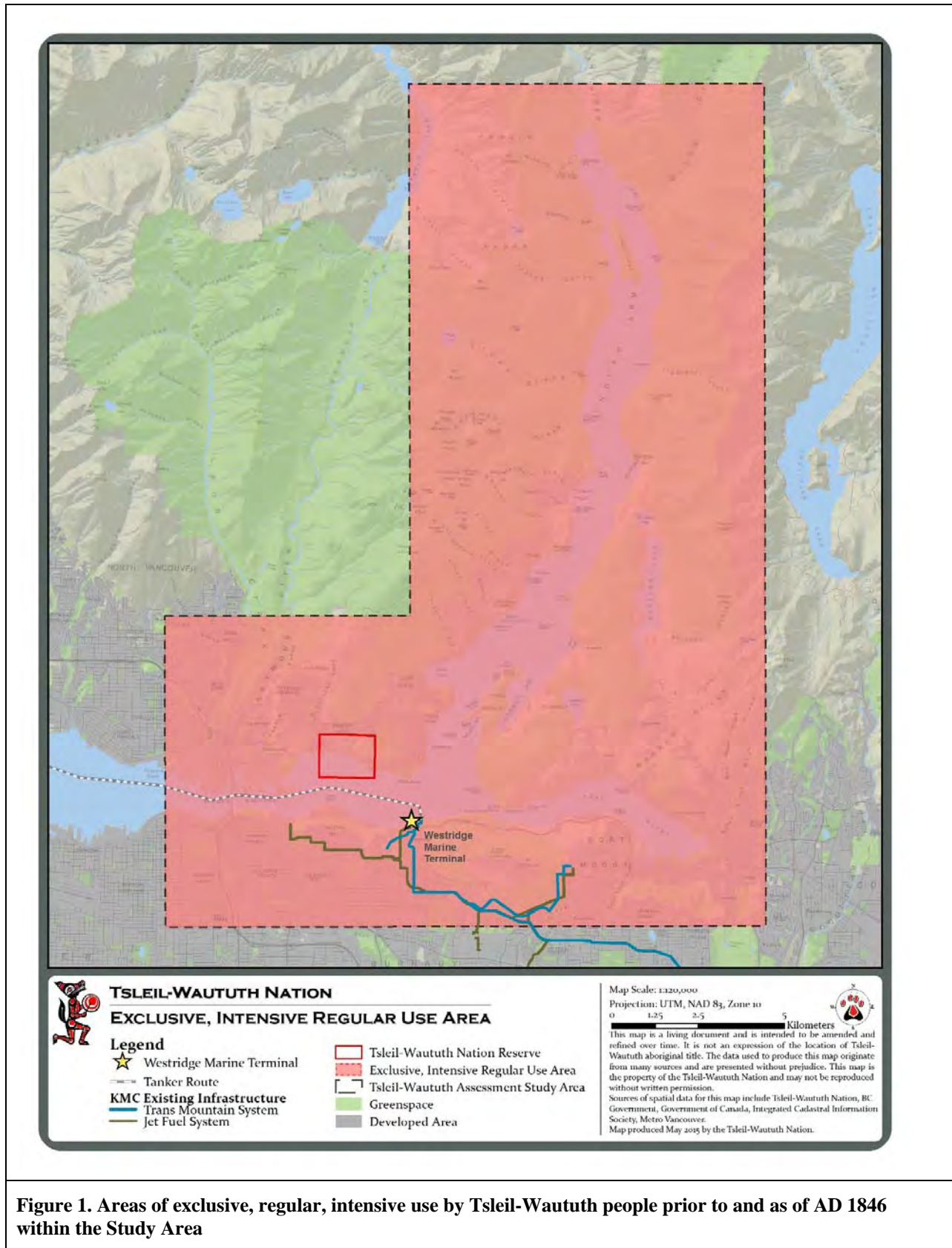


Figure 1. Areas of exclusive, regular, intensive use by Tsleil-Waututh people prior to and as of AD 1846 within the Study Area

9. Tsleil-Waututh people made use of all aspects of their territory³ and the Fraser River by harvesting resources in the vicinity of their villages, called a foraging radius,⁴ and by relocating to other villages or temporary camps as part of a seasonal round.⁵ This seasonal round involved a combination of relocating to other Tsleil-Waututh villages or other First Nation's villages, and dispersal to smaller resource harvesting camps located some distance from villages. A settlement pattern of both dispersed (such as small camps in the mountains and inland areas) and aggregated (as in large fishing camps on the Fraser and other rivers) resource harvesting sites allowed Tsleil-Waututh people to sequentially make full use of the extent of their territory from mountain top to open ocean. Prior to and as of AD 1846, Tsleil-Waututh people utilized the lands and waters of the Study Area both by the foraging radii from their villages, and by their seasonal round of relocating their settlements or camps with resulting different foraging radii.
10. Minimally, this seasonal round included: movement to outer Burrard Inlet or the Fraser River in the spring, movement to the mountains and inland areas in the summer, movement to the Fraser River in late summer, movement to the Indian, Seymour and Capilano rivers in the fall, and congregation at major village sites along the shores of Burrard Inlet in the winter.
11. With regards to the nature and extent of Tsleil-Waututh interactions with third parties identified in AD 1846 within the Study Area, I was asked to provide opinions on the following specific questions:

b) Did Tsleil-Waututh interact with third parties in relation to the lands and waters identified in a) as of, and prior to, 1846? If so, please describe, with specific reference to the relevant factual basis, whether Tsleil-Waututh had the intention and capacity to exclude third parties from the Study Area as of, and prior to, 1846.

• Examples of such exclusion(s) and/or capacity to exclude could include:

• Instances where third parties were actually excluded or expelled from lands and waters in the Study Area;

³ Tsleil-Waututh Nation has presently not precisely identified the bounds of their territory. Tsleil-Waututh territory is usually articulated as the waters of Burrard Inlet, from Point Aitkensen to Point Grea and the lands draining therein to the slope of Mount Garibaldi. I have not been instructed to opine on the extent of Tsleil-Waututh territory beyond the scope of the Study Area. All of the Study Area is well-within the description of Tsleil-Waututh territory described above.

⁴ A foraging radius describes the distance that someone would travel on a daily basis from a central place (camp or village) to collect foods (such as hunting, gathering or fishing) and return with those foods on a daily basis. Kelly (1995) describes a range of hunter-gatherer foraging radii; these typically involve less than two-hour travel each way. Foraging radii are dependent on terrain and technology; canoe travel greatly increases foraging radii.

⁵ A seasonal round describes a pattern of relocating one's settlements throughout the year in accordance with the abundance of local resources.

- *Acts of military defense (e.g. documented battles, defensive installations, etc.);*
- *Where access by third parties may have been allowed, whether rules or protocols would have applied to such access (i.e. were others only allowed to access the lands or waters with Tsleil-Waututh's permission according to Tsleil-Waututh or other laws or protocols); and*
- *Examples of requests by third parties to access the Study Area that were granted or refused by Tsleil-Waututh.*

Please answer (b) with reference to any relevant surrounding factual context relating to the Study Area, including the characteristics of Tsleil-Waututh, the nature of other groups in the Study Area, and the characteristics of the lands and waters in the Study Area.

12. I conclude that at AD 1846 Tsleil-Waututh did regulate access to their territory and resources. They had both the intention and capacity to exclude third parties. Around AD 1846, these third parties would often be large and well-armed Lekwiltok or Haida raiding parties. The defensive features, palisades and trench embankments, associated with most of the AD 1846 Tsleil-Waututh villages indicates that they anticipated raids, and defended themselves and their territory rather than retreating or yielding territory. Several of the AD 1846 Tsleil-Waututh villages appear to have been linked in a defensive network. While many battles are described in Tsleil-Waututh oral histories, there is no evidence of territorial loss through warfare with other First Nations. Based on all of this evidence, around AD 1846 Tsleil-Waututh undertook a military-like defense of their territory and people, and succeeded in doing so.
13. The evidence regarding access to resources in Tsleil-Waututh territory by third parties was also reviewed. Coast Salish conceptions of the nested levels of resource patch ownership, and protocols requesting access, form the baseline from which AD 1846 Tsleil-Waututh evidence of regulating access should be understood. In this framework, non-Tsleil-Waututh people would draw upon familial relationships with Tsleil-Waututh families to visit and request access to harvest resources with them. Several examples of this permission seeking behaviour were identified in TUS studies. All of the Study Area was regulated in this fashion by the sum of individual Tsleil-Waututh households (for household-owned resource patches) and all Tsleil-Waututh people (for tribally-owned resource patches).
14. With regards to Tsleil-Waututh's current use of lands and waters identified above, I was asked to provide opinions on the following questions:
 - c) Does Tsleil-Waututh still use the lands and waters identified in a)? If so, please describe, with specific reference to the relevant factual basis, whether and to what extent the following exist in the Study Area:*

- *the location of modern Tsleil-Waututh communities;*
- *the location of modern Tsleil-Waututh harvesting activities;*
- *modern Tsleil-Waututh governance, resource management, and/or stewardship activities; and*
- *travel via traditional routes and modes;*

relative to the lands and waters identified in a).

15. I conclude that Tsleil-Waututh does still use the lands and waters of their territory. Tsleil-Waututh's modern community is located at IR No.3 in North Vancouver, and Tsleil-Waututh has two additional small reserves on Indian River (IR No.4 and IR No.4a). The Tsleil-Waututh TUS data describing 20th century harvesting activities is very rich, and clearly identifies local pollution and resulting resource collapse in Burrard Inlet in the 1960–1970s. Most specifically, the very local environment surrounding Sleil-Waututh/IR No.3 used to be very rich in shellfish and other resources, and now it is not. While traditional local foods are still harvested by some Tsleil-Waututh people, such foods comprise only a small part of modern diets, even compared to about 50 years ago.
16. Few resource harvesting activities are presently undertaken within the Study Area. Sockeye salmon from the Fraser River (beyond the Study Area) is the primary traditional food still harvested by Tsleil-Waututh. Traditional travel via canoe is still undertaken for leisure/exercise by Tsleil-Waututh people in the Study Area and part of their cultural tourism business.
17. In recent decades, Tsleil-Waututh has launched a number of stewardship initiatives to rehabilitate the local ecology and expand the availability of healthy wild foods.
18. In addressing my third set of instructed questions (part c), I was asked to:

Please review existing documented or recorded oral history, archaeological, anthropological, historical, ethnographic and other relevant sources with a view to providing your findings, opinions, and conclusions as to:

a) whether and to what extent Tsleil-Waututh carried out the following practices as of and prior to contact with Europeans:

i) Harvesting of fish, shellfish, animals, birds, plants (including medicinal plants), and any other marine resources. In each instance, identify and, with reference to the relevant factual basis, explain whether such harvesting was for subsistence, trade, and/or ceremonial purposes;

ii) Regulation, management, stewardship, and/or decision-making by Tsleil-Waututh over specific matters or resources, in relation to members of Tsleil-Waututh and/or third parties;

iii) Any other important cultural practices, including bathing in the Inlet;

b) The extent to which the practices described in a) were important or integral elements of Tsleil-Waututh's culture before, at, and after first contact with Europeans (in the sense that each practice contributed to the Tsleil-Waututh's overall distinctiveness as a culture, and made them who they were);

c) The extent to which such practices continue today and if so, whether and to what extent they occur in a different manner, form, and/or with different method(s); and

d) To the extent such practices do not subsist, the probable reason(s) for same.

This section, while separate from section 2.2, may recast, reference and draw upon your findings, opinions, and conclusions in section 2.2, to the extent it is relevant and appropriate to do so.

19. Here, in section 5.0, I have addressed specific issues regarding pre-1792 Tsleil-Waututh cultural practices and resource harvesting activities. In reviewing the available evidence I have concluded the following:

- Tsleil-Waututh acted under stewardship principles that maintained the health of their lands and the abundance of their resources. They actively managed stocks and modified the environment to promote the growth of desired species. This management included terrestrial and intertidal components.
- Tsleil-Waututh intensively fished the marine, near shore, and freshwater areas of the Study Area (and beyond). These resources (fish) were the basis of the pre-contact Tsleil-Waututh subsistence economy. Fish, harvested and preserved in surplus, were also likely used for trade/exchange for other goods, and to underwrite potlatches and other feasts. Fishing must be considered a practice that was integral to Tsleil-Waututh culture because fishing was the basis of their entire economy and way of life. Fishing structured the past Tsleil-Waututh seasonal round, their relationships with other First Nations. Fish play a central role in Tsleil-Waututh religious and ceremonial activities. For these reasons, fishing must be understood as a practice that made Tsleil-Waututh culture what it was. Current Tsleil-Waututh fishing practices have been heavily curtailed, including the near-complete absence of herring and other small fish from Tsleil-Waututh diets. Almost all of Tsleil-Waututh's fish now comes from the Fraser River, outside of

the Study Area. Harvesting fish was an integral pre-contact Tsleil-Waututh practice.

- Tsleil-Waututh intensively harvested shellfish from the intertidal areas of, and beyond the Study Area. Shellfish were a major component of the Tsleil-Waututh subsistence economy. Shellfish were harvested in surplus and preserved, and likely used to underwrite potlatches/feasts, and for trade/exchange for other goods. Shellfish harvesting must be considered a practice that was integral to Tsleil-Waututh culture because shellfish harvesting was a pillar of their entire economy and way of life. Shellfish harvesting structured the past Tsleil-Waututh seasonal round, their relationships with other First Nations, and influenced the location of Tsleil-Waututh settlements. Shellfish play a central role in Tsleil-Waututh religious and ceremonial activities. For these reasons, harvesting shellfish must be understood as a practice that made Tsleil-Waututh culture what it was. Currently, very few Tsleil-Waututh people harvest shellfish in the Study Area because they are unsafe to eat. Harvesting shellfish was an integral pre-contact Tsleil-Waututh practice.
- Tsleil-Waututh intensively hunted and trapped animals across the terrestrial and marine portions of, and beyond, the Study Area. While terrestrial animals were a relatively minor component of overall pre-contact diets, they also provided very important goods such as antlers and bones for tool production, and hides and horns for exchange. Mountain goat hides and horns would have been a particularly important trade good. Animal harvesting must be considered a practice that was integral to Tsleil-Waututh culture because animal harvesting was a pillar of their economy and way of life. Animal harvesting structured the Tsleil-Waututh seasonal round, and was a significant part of their economic interactions with other First Nations. Tsleil-Waututh people maintained close spiritual relationships with animal spirits, and these beliefs are a core principle of Tsleil-Waututh culture. For these reasons, harvesting animals must be understood as a practice that made Tsleil-Waututh culture what it was. Current Tsleil-Waututh hunting occurs in the Indian River, and areas well beyond the Study Area. Harvesting animals was an integral pre-contact Tsleil-Waututh practice.
- Tsleil-Waututh intensively hunted and trapped birds across the terrestrial and marine portions of, and beyond, the Study Area. Waterfowl were a notable component of the pre-contact Tsleil-Waututh subsistence economy. Waterfowl were important foods at feasts and potlatches, and their feathers were used in clothing and ritual paraphernalia. To my knowledge, Tsleil-Waututh no longer harvests waterfowl within the Study Area, but do hunt birds in association with other terrestrial hunting elsewhere. Harvesting birds was an integral pre-contact Tsleil-Waututh practice.
- Tsleil-Waututh intensively harvested plants from the terrestrial and intertidal portions of, and beyond, the Study Area. Plant foods (especially berries) were a

notable competent of the pre-contact Tsleil-Waututh subsistence economy. Plant products, that is, wood, bark and fiber, were the most important technological goods to pre-contact Tsleil-Waututh material culture. Plant based technology allowed for essentially all of the resource harvesting practices described below. Harvesting plants (including trees) must be considered an integral Tsleil-Waututh cultural practice. Plant harvesting activities structured the Tsleil-Waututh seasonal round and settlement location. Beyond subsistence, Tsleil-Waututh plant harvesting activities literally structured the configurations of their houses, canoes and other technologies. Plant products play highly significant roles in Tsleil-Waututh ritual/ceremonial activities. For these reasons, plant harvesting activities must be understood as a practice that made Tsleil-Waututh culture what it was. Current Tsleil-Waututh terrestrial plant harvesting occurs on and around Sleil-Waututh/IR No.3, and to my knowledge, intertidal plant harvesting no longer occurs. Harvesting plants/plant products was an integral pre-contact Tsleil-Waututh practice.

- Prior to 1792, regulation of access to the resources of the Study Area was defined by Coast Salish concepts of resource ownership and permission seeking behavior. Tsleil-Waututh lineage heads or *si?em* were responsible for regulating such access. Raids or other violent incursions were regulated by coordinated military defense of Tsleil-Waututh territory.
- Prior to 1792, there were many other integral Tsleil-Waututh cultural practices that articulated closely to the local environments of the Study Area. These include: spirit questing, spiritual relationship maintenance, trade and exchange, and travel/canoeing. These were all integral cultural practices to Tsleil-Waututh that contributed to the distinctive Tsleil-Waututh culture. These cultural practices (including all food harvesting activities) were culturally transmitted (passed from generation to generation) by individuals partaking in such activities alongside more experienced people.

20. Finally, I was asked to provide opinions on the following issue:

Does the TMX Project, including Crown regulatory and decision-making processes in relation to the Project, have the potential to adversely affect Tsleil-Waututh lands, waters, and resources in the Study Area or its practices, customs and traditions you described in sections 2.2 and 2.3, respectively? If so, please describe the location, nature, and extent of such impacts.

21. I have reviewed the other expert reports prepared for Tsleil-Waututh in relation to the Trans Mountain Expansion (TMX) Project (DeCola et al. 2015; Galt 2015; Gunton and Broadbent 2015; Levelton 2015; Short 2015) that describe the potential biophysical impacts of the TMX Project and assumed these reports to be accurate and that those impacts would occur. Based on the conclusions of those reports (DeCola et al. 2015; Galt 2015; Gunton and Broadbent 2015; Levelton 2015; Short 2015), I have assessed those

biophysical impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, and customs identified in my report addressed in sections 3.0, 4.0, and 5.0.

22. I have found that several aspects of the proposed TMX Project were identified as having potential impacts on Tsleil-Waututh's lands, resources, and cultural practices. These include:
- Negative impacts to fish populations (especially salmon), further precluding Tsleil-Waututh's ability to harvest these resources, for subsistence and exchange, and negating Tsleil-Waututh's environmental remediation programs aimed at restoring these resources and other now scarce fish (especially herring and eulachon).
 - Negative impacts to shellfish populations (especially clams), further precluding Tsleil-Waututh's ability to harvest these resources, for subsistence and exchange, and negating Tsleil-Waututh's environmental remediation programs aimed at restoring these resources. This includes the exchange of clams for other resources.
 - Negative impacts to marine bird populations (especially duck species), further precluding Tsleil-Waututh's ability to harvest these resources and negating Tsleil-Waututh's environmental remediation programs aimed at restoring these resources.
 - Negative impacts to travel in small vessels in relation to subsistence travel, such as physical infringement of the harvesting of traditional foods, especially crabs.
 - Negative impacts to Tsleil-Waututh cultural and ceremonial activities through the reduction of traditional foods (salmon, clams, herring and birds) that are central to such activities.
 - Negative impacts to the availability of traditional local foods would in turn effect Tsleil-Waututh cultural transmission, because the harvesting and preparing of traditional foods is the primary context for such cultural transmission.
 - Negative impacts (pollution and lack of privacy) to the local environment limiting/precluding traditional ceremonial bathing activities in Burrard Inlet.
 - Negative impacts to the local environment limiting/precluding traditional canoeing activities, including resource harvesting and large social events (inter-tribal canoe races).
 - Potential contamination of ancient Tsleil-Waututh village sites and cemeteries that are considered sacrosanct to current Tsleil-Waututh people.
23. All of these impacts described above affect central or integral aspects of Tsleil-Waututh culture, including their subsistence, economy, social activities, ceremonial activities,

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cultural transmission, and water based travel. There is not one single negative effect to Tsleil-Waututh culture from the potential spills associated with the TMX Project, but rather a number of effects and cascading effects that reach all aspects of Tsleil-Waututh culture. The most certain negative effect would be further dislocation from their territory and the resources of that territory.

24. *Thus the high probability of adverse impacts of the TMX Project on the local environment, including impacts to Tsleil-Waututh's traditional foods (Short 2015), and health impacts to Tsleil-Waututh people (Levelton 2015) within the Study Area has corresponding significantly adverse effects to Tsleil-Waututh's traditional aboriginal harvesting and cultural practices. Namely, the TMX Project has a high probability of negatively impacting Tsleil-Waututh's ability to harvest fish, shellfish, and birds from the Study Area. And, because of the extensive urban development and already massively disrupted local ecologies, Tsleil-Waututh would have few remaining options for obtaining traditional foods from their territory.*
25. From a Tsleil-Waututh perspective, the health of the Inlet and the health of the Tsleil-Waututh people have been linked since the beginning of time (Gabriel George 2014). Their subsistence and economy was predicated on the natural abundance of the Inlet for millennia, and only in recent decades has become dislocated. That is, only in the last few decades, has Tsleil-Waututh not been able to rely on the resources of their territory to supply their food and the goods needed to maintain healthy households and communities. Current Tsleil-Waututh people view a return to healthy, wild, local foods as a solution to many of the community's current health concerns, such as diabetes. Additional sources of pollution to the Inlet, such as shipping or spilled dilbit, are viewed by Tsleil-Waututh people as harming the Inlet and the health of the Tsleil-Waututh community. The Tsleil-Waututh community is not trying to maintain the current health of the Inlet, they are trying to improve it to what it once was. *From Tsleil-Waututh's perspective, the TMX Project will greatly impair their ability to restore the health of Burrard Inlet and the health of their community.* Of course, Tsleil-Waututh people are best positioned to speak about this issue.
26. The overall potential negative effect of the TMX Project to the Tsleil-Waututh Nation's culture as a whole is difficult to project, but it could sever the millennia-long tradition of Tsleil-Waututh's stewardship over the resources of Burrard Inlet. It could limit peoples' abilities to feed their families, including their ancestors. It could limit the contexts for Tsleil-Waututh cultural transmission (i.e., during harvesting activities). These impacts could disrupt the health of the community, the relationships between past, present, and future generations, and sever the link to past Tsleil-Waututh culture. The lack of traditional foods would undermine Tsleil-Waututh's ability to host large gatherings and feed people traditional foods. The impacts to local ecology could preclude any possibility of Tsleil-Waututh gaining economic benefit from exchanging the resources of their territory (e.g., selling clams).

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2.1 Scope of Work

27. I, Jesse Morin, have been contracted by Tsleil-Waututh Nation’s lawyers to provide an expert report (“the Report”) regarding Tsleil-Waututh’s history, identity, and land-use patterns in relation to Kinder Morgan’s Trans Mountain Expansion Project (“the TMX Project”). I have been retained by Gowlings as an expert in the field of anthropology.
28. I have been asked to provide a Report that summarizes the available evidence and offering an expert opinion in respect to the following four issues:
- (1) *Who the Tsleil-Waututh are as a people historically and today: their origins, culture, language, traditions and connection to Eastern Burrard Inlet and the watersheds draining therein (the “Study Area”);*
 - (2) *The nature and extent of Tsleil-Waututh historic and current use and occupation in the Study Area;*
 - (3) *The nature and extent of Tsleil-Waututh harvesting, governance, stewardship, and cultural practices in the Study Area; and*
 - (4) *Potential impacts of the TMX Project on Tsleil-Waututh lands, waters, resources, practices, customs or traditions identified in 1–3.*
29. In addressing these matters, I have been asked to canvas as fully as possible both oral history and documentary/historical evidence. To do so, I have reviewed:
- A wide array of published and unpublished documentary evidence including historic (e.g., early explorers, OMI missionaries, Hudson’s Bay Company records, colonial land title records) , ethnographic (e.g., ethnographic notes and reports, recorded oral histories, place names), and archaeological (e.g., excavation summaries, site reports, maps);
 - All of Tsleil-Waututh’s traditional use study (“TUS”) and elders’ knowledge study (EKS) transcripts;
 - All available Tsleil-Waututh archival and genealogical records; and
 - Most of the relevant evidence from the Common Book of Documents from Mathias (2001), including all relevant expert reports, and most of the relevant transcripts.
30. All of the works reviewed and used for this Report are listed in the References section.
31. To better understand pre-contact Tsleil-Waututh land use and occupancy of Burrard Inlet, I have also:

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- Visited all major Tsleil-Waututh village sites, and most archaeological sites within the Study Area;
 - Visited most Tsleil-Waututh named places,;
 - Travelled much of the Study Area by traditional means (i.e., canoe or foot); and
 - Reviewed and assessed archaeological remains from sites in eastern Burrard Inlet held at local museums and repositories.
32. Prior to undertaking this Report, I had previously undertaken or contracted a number of original research projects for Tsleil-Waututh to better understand pre-contact Tsleil-Waututh land use and occupancy. Such research included:
- Excavating the archaeological remains of a pre-contact Tsleil-Waututh village site (Lepofsky et al. 2007);
 - Studying thousands of artifacts from pre-contact Tsleil-Waututh village sites (Lepofsky et al. 2007; Morin 2012);
 - Planning a study to record Tsleil-Waututh oral history;
 - Conducting interviews with Tsleil-Waututh elders;
 - Contracting a report on the indigenous rock paintings of Indian Arm (Arnett 2013);
 - Surveying and exploring coastal portions of Burrard Inlet for archaeological remains (Morin and Muir 2012; Ritchie 2014);
 - Sampling archaeological village sites and submitting such samples for radiocarbon dating (Morin 2014); and
 - GIS modelling of traditional travel time (via canoe and water) across Tsleil-Waututh territory (Morin and Hunt 2014).
33. In compiling this Report, I have carefully evaluated the range of information summarized above and cited in the References section. . My assessment of the evidence is typical practice in the field of historically oriented anthropology and archaeology. When weighing pertinent evidence and arriving at conclusions, I do my utmost to guide the reader through the logic of my thought process. In the Report, when I am referencing published reports, primary historic documents, or my own primary research, I am careful to cite it as such. When I am offering my opinion based on a range of evidence, or an opinion that is at odds with an established published reference or primary historical document, I am careful to indicate this.

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34. Because of the range of evidence, this Report has to oscillate between common English terminology, technical anthropological and archaeological jargon and concepts, and Coast Salish names and concepts. In all cases, I try to introduce such specialized concepts along with definitions and examples. With respect to archaeology, this is important so that the reader can appreciate the significance of the findings. With respects to Coast Salish concepts, this is highly significant because, in most cases, the common English translation does not fully capture the indigenous concept, and detail is required grasp a markedly non-Western world view and subject matter. In many cases, I refer to Coast Salish concepts by providing Tsleil-Waututh or other First Nation's oral histories. When I reference specific oral histories, I provide the source of the oral history (i.e., who recounted the oral history), but I do not review the individual's source of the information. As per my instructions, I have been instructed to pay particular attention to "factors that which bolster the reliability and evidentiary weight of oral history evidence." To do so, I have created **Appendix "A"**. Appendix "A" specifically describes how such oral histories were transmitted, the attributes of the individual who provided the information, how the individual learned the oral history, and to what extent the oral history is corroborated by other lines of evidence.
35. This Report relies heavily on GIS mapping undertaken by the Tsleil-Waututh Nation, Treaty, Lands and Resources GIS department. I have provided the instructions and data for these maps, and have carefully reviewed many iterations of each. I have approved all final versions of maps used within the Report. Citations for the data underlying each map are generally cited in the text of the Report.
36. I take full responsibility for the content of this Report, and any mistakes, errors, or omissions are my responsibility and were made without prejudice towards any party.

2.2 Statement of Qualifications

37. Within the field of anthropology, I am more specifically an archaeologist with a specialization in the study of the pre-contact cultures of British Columbia, and their material culture (e.g., stone tools) to derive social, cultural, and economic insights about past cultures. My full CV is attached as **Appendix "B"**. My undergraduate degree was in archaeology (Simon Fraser University), while my masters (MA) and PhD were in anthropology (University of British Columbia). My honors thesis, MA thesis, and PhD dissertation all dealt with the indigenous prehistory of B.C., and generally speaking, relied on the analysis of stone tools and other data to interpret past social and economic organization of Interior and Coast Salish societies. These research projects included considerable excavation and survey of archaeological remains in British Columbia (including Burrard Inlet) and elsewhere. Beyond pure archaeology, this research relied heavily on ethnographic information. My dissertation research identified patterns of pre-contact trade and exchange in British Columbia, specifically focussing on the production and exchange of nephrite/jade tools. This study included artifacts from Burrard Inlet. Additionally, I briefly studied a very specialized technique for interpreting the function of

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stone tools at the Russian Academy of Science, Institute for the Study of the History of Material Culture in St. Petersburg.

38. My education within the streams of anthropology and archaeology have provided me with a background that recognizes the importance of using a diverse array of information to reach conclusions. Anthropology is generally taught in North America as a 'four field approach': cultural anthropology (the study of living societies and their cultures), archaeology (the study of past societies through their material remains), biological anthropology (the study of living people and the fossilized remains of people from a biological perspective), and linguistics (the study of languages). In the course of my undergraduate and graduate education, I completed courses on all of these topics except for linguistics. While I have no background in linguistics, the importance of language and the relationships between languages is always underscored in anthropology. Thus, I do not interpret or re-interpret linguistic data, but rather rely on the conclusions reached by linguists.
39. My undergraduate and graduate coursework primarily focused on anthropological and archaeological method and theory, and the living and past cultures of British Columbia. In addition to core anthropology, I also took a number of courses in history, statistics, geography and GIS. This is typical among graduate research in archaeology, where often very specialized techniques are required to address research questions. Conducting archaeological research not only requires one to be well-versed in archaeology, but also requires knowledge of and familiarity with aspects of the natural sciences, anthropology/ethnography and historical records. For example, in my dissertation research I had to: 1) learn multivariate statistics and near-infrared spectroscopy, 2) undertake detailed review of regional ethnographic records for information relevant to nephrite/jade distribution and use, and 3) review modern and historical mining records/claims to describe the natural distribution of nephrite/jade outcrops. Historical records are commonly used in archaeological research in B.C., to aid in finding archaeological sites of interest, and to interpret archaeological remains.
40. I have published a number of peer-reviewed articles in national and top international archaeological journals and book chapters. These have included: analyses of Coast Salish food harvesting and processing technology (Buchanan et al. 2011; Morin 2004), spatial analyses of Interior Salish settlement patterns (Morin 2010; Morin et al. 2008/9; Sakaguchi et al. 2010), geochemical, spatial, and economic interpretations of Coast Salish (including Burrard Inlet materials) and Interior Salish woodworking tools (Morin 2015a, 2015b), and importantly regional analyses of pre-contact Burrard Inlet resource use (Lepofsky et al. 2007). I have presented my research at numerous regional and international conferences. I have acted as a peer-reviewer for three academic journals and have been the external examiner for a Masters thesis focussing on stone tools from an archaeological site in Burrard Inlet. I have written a number of technical reports describing various research projects in B.C. and elsewhere, including Burrard Inlet (see Appendix "B").

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41. Over the last few years, I have been contracted by Tsleil-Waututh's Treaty, Lands and Resources Department, first to help manage impacts to archaeological sites within their territory, and later to undertake indigenous use and occupancy research for Burrard Inlet. I am not, and never have been a Tsleil-Waututh employee. I am not, and never have been a Gowlings employee. Beyond simply compiling existing relevant archaeological, ethnographic, and historical research, this work has also included original archaeological, ethnographic and historical research. This has included:
- archaeological surveys and discovery of new sites in Burrard Inlet;
 - mapping previously poorly known sites in Burrard Inlet;
 - an intensive radiocarbon dating program for large village sites in Burrard Inlet;
 - faunal (animal) and paleobotanical (plant) analyses of samples recovered from these sites;
 - geochemical sourcing of materials recovered from these sites;
 - an analysis of rock art sites in Indian Arm; and
 - developing a GIS model of traditional Coast Salish travel within Burrard Inlet.
42. The ethnographic aspect to this work has included launching additional interviews with Tsleil-Waututh and other Coast Salish elders and knowledge holders. The historical aspect of this research has included reviewing all relevant materials and obtaining copies of original missionary and explorer accounts that had previously received little or no academic interest.
43. I also note that prior to being contracted by Tsleil-Waututh (spring 2011) I had periodically studied aspects of their archaeology since 2000. Specifically, I had excavated at a major Tsleil-Waututh ancestral village site, surveyed portions of Tsleil-Waututh's reserve, analyzed several thousand artifacts recovered from such investigations, conducted experimental studies of similar tools with Tsleil-Waututh individuals, and undertook mineralogical analyses of stone tools from Tsleil-Waututh ancestral village sites. The results of this research was published (Lepofsky et al. 2007; Morin 2004), or will shortly be published (Morin in 2015a, 2015b) in peer-reviewed academic archaeology journals.
44. I am very familiar with Tsleil-Waututh territory. I have lived in Tsleil-Waututh territory for 15 years. I have travelled all of the Study Area by water and much of it by canoe. I am very familiar with the terrestrial portions of Tsleil-Waututh territory. I have participated in a number of Tsleil-Waututh ceremonial/ritual events. I have visited nearly all of the archaeological, ancestral village, and place name sites within the Study Area. Based on this experience, I am familiar with much of the modern ecological resource structure.

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Based on my experience with Tsleil-Waututh TUS studies and the archaeological record, I can estimate the pre-contact resource structure of the Study Area.

45. For these reasons described above, I am qualified to address these questions as instructed by Tsleil-Waututh's lawyers.

2.3 Certificate of Expert's Duty

46. This report has been prepared in accordance with my duty as an expert to assist: the Tsleil-Waututh Nation in conducting its assessment of the Project; (ii) provincial or federal authorities with powers, duties or functions in relation to an assessment of the Project's environmental and socio-economic effects and impacts on the Tsleil-Waututh Nation's Aboriginal title, rights, and interests; and (iii) any court seized with an action, judicial review, appeal, or any other matter in relation to the Project. A signed copy of my Certificate of Expert's Duty is attached as **Appendix "C"**.

3.0 The Tsleil-Waututh Historically and Today

44. I was asked to provide an expert opinion on the following questions:

Who the Tsleil-Waututh people are as a people historically and today: their origins, culture, language, traditions and connection to Eastern Burrard Inlet and the watersheds draining therein (the “Study Area”).

Whether the Tsleil-Waututh were a distinct Aboriginal group at contact and in 1846, and the relationship of the modern Tsleil-Waututh Nation to this historic group and its territories.

47. I will address these questions by first reviewing the nature of pre-contact Coast Salish societies, especially their economies, histories, identities, kinship and leadership. This context allows for much clearer understanding of the Tsleil-Waututh evidence. The relevant Tsleil-Waututh evidence reviewed includes:

- a) the range of Tsleil-Waututh oral histories, beginning with the account of their creation in Burrard Inlet to events that happened around the time of sovereignty (AD 1846);
- b) the limited evidence of Tsleil-Waututh’s pre-contact language;
- c) the recorded Tsleil-Waututh genealogy;
- d) the Tsleil-Waututh place names;
- e) Tsleil-Waututh systems of resource ownership/land tenure;
- f) the archaeological record;
- g) the historical record;
- h) the ethnographic record; and
- i) the nature of Tsleil-Waututh’s relationships with neighboring First Nations.

48. After reviewing this body of evidence I reach the conclusion that at AD 1792 and AD 1846 Tsleil-Waututh was a distinct aboriginal group that occupied a naturally defined territory—Burrard Inlet and the lands draining therein. Tsleil-Waututh was clearly a Coast Salish group with close relationships with other neighbouring groups. Tsleil-Waututh was also a tribe, comprised of a cluster of affiliated villages. These neighbouring villages were:

- a) linked socially and genetically through kinship connections, shared cultural practices and shared oral histories;

3.0 The Tsleil-Waututh Historically and Today

- b) linked as a speech community whose identity was marked by a distinct dialect of Down-River Halkomelem;
 - c) linked economically and politically through participation in potlatches, and
 - d) linked politically for territorial defense.
49. There is archaeological evidence of this village cluster in the Study Area spanning several millennia into the past.
50. The modern Tsleil-Waututh Nation is the group of indigenous people descended from those encountered in the Study Area at contact and AD 1846. Perhaps most importantly, Tsleil-Waututh's recorded genealogy extends to the mid 18th century, and most of the modern Tsleil-Waututh Nation descends from a single common ancestor (chief Waut-salk I) who lived prior to, as of, and after contact. At First Contact in 1792, indigenous people, and almost certainly Tsleil-Waututh people, were encountered in Burrard Inlet and Indian River, in close proximity to modern Tsleil-Waututh reserves. There is no pre-1846 evidence indicative of a sudden displacement or migration of aboriginal people from anywhere else. The archaeological record can be said to corroborate Tsleil-Waututh histories regarding their origin and continuous occupation of Burrard Inlet since ancient times. Tsleil-Waututh is a distinct Coast Salish First Nation with deep ancestral connections to eastern Burrard Inlet. The time depth of their occupancy of this region extends back 1,000 years at a minimum, and includes occupation here through AD 1792 and AD 1846.

3.1 Tsleil-Waututh, A Central Coast Salish First Nation

51. After a superficial reading of the available literature, including major works on the Coast Salish (e.g., Barnett 1955; Suttles 1951), one could wrongly conclude that eastern Burrard Inlet had no permanent inhabitants in the early contact era. This dearth of readily accessible ethnographic information makes an overview of Tsleil-Waututh's identity, history, use and occupation more difficult than would be the case for other Coast Salish groups. The majority of published and accessible historical and ethnographic information regarding Tsleil-Waututh is derived from non-Tsleil-Waututh sources (e.g., Squamish, Musqueam and Katzie) and must be interpreted in that light. This is due to the simple fact that no early professional ethnographer ever interviewed Tsleil-Waututh people.
52. The richest corpus of information regarding Tsleil-Waututh's history and culture is largely derived from Tsleil-Waututh's own oral histories, TUS data, genealogical records, unpublished manuscripts, archival documents, and the archaeological record. In the scope of this Report, I examine these later bodies of evidence, especially the rich archaeological record, in considerable detail. In light of the key dates of interest, AD 1792 and AD 1846, Tsleil-Waututh's oral histories and the archaeological record of the Study Area, rather than ethnographic or historic documents are actually the most pertinent and informative lines of evidence.

53. Before addressing questions 1–4, I first present a review of the general academic consensus on Coast Salish people and societies, especially regarding economies, histories, identity, kinship and leadership. This background allows for clearer interpretation of the Tsleil-Waututh evidence from multiple sources. After describing the general Coast Salish model I specifically address questions 1–4 with respect to Tsleil-Waututh.
54. The most salient points in this section are:
 - a) Coast Salish tribes have inherited their respective territories from their First Ancestors at the beginning of time; these territories generally conform to watersheds and were marked with a cluster of settlements, and a tribal center.
 - b) Coast Salish people reckon kin bilaterally and are generally exogamous; these practices establish kinship connections in neighboring and distant tribes, and allow individual families to access resources in those non-local areas as part of a seasonal round.
 - c) Coast Salish people recognize collective tribal ownership of broad areas of their territory and house/lineage owned specific highly productive resource patches. Outsiders could access such resources/territories only with permission from the appropriate owner.
 - d) Coast Salish tribes were composed of village clusters that had several leaders or *si?em* who were the wealthiest and most influential heads of houses/lineages. These individuals managed the social and political affairs of the broader village or tribe vis a vis other villages or tribes.

3.2 Pre-Contact Coast Salish Societies at a Glance

55. Coast Salish people were the pre-contact inhabitants of the Gulf of Georgia, Puget Sound, and Lower Fraser regions, now commonly called the “Salish Sea.” They are bound by related languages, cultures, and a very long history of interaction (Barnett 1955; Suttles 1951; 1990). The Salish Sea region has long been considered a distinctive “natural region” (Mitchell 1971:1), and the pre-contact Coast Salish economy and social organization is generally considered as an adaptation to the specific ecological and environmental attributes of that region. Anthropologists describe pre-contact Coast Salish people as marine oriented hunter-gatherers, or hunter-gatherer-fishers.
56. Most notably, the Salish Sea was an extremely rich environment with relatively mild winters. Marine, riverine, intertidal, inland, and upland resources are all available within a few kilometers of one another, and all provided seasonally hyper-abundant sources of foods for the Coast Salish inhabitants here (Barnett 1955; Suttles 1951, 1987). Most famously, this included the rich seasonal salmon runs of the Fraser, and other rivers (Suttles 1987, 1990). Some salmon were available essentially year-round in the Fraser River, while smaller river systems had distinct runs of pink salmon in the summer, and

- chum salmon in the late fall (Duffield and McHalsie 2001). As will be described in relevant sections in detail below, these salmon were mass-harvested using a sophisticated suite of technologies and preserved for future use (Barnett 1955; Morin 2004; Suttles 1951, 1987).
57. Less widely acknowledged were the massive runs of eulachon and schools of herring and smelt that seasonally formed the basis of an entire food chain here (McKechnie et al. 2014; Monks 1987). Herring and eulachon were the first species available in large quantities during the spring. Eulachon, herring, and herring spawn were harvested in huge quantities and dried for future use. (Barnett 1955; Suttles 1951). As Monks (1987) describes, Coast Salish people harvested across the entire food chain that followed herring schools, including spring salmon, seals, sea lions, and a plethora of bird species.
 58. The numerous islands and highly indurated coastline provide innumerable bays and coves that are protected from severe storms and provide ideal conditions for shellfish. Shellfish, especially several clam species, were a very important component of most pre-contact Coast Salish diets (Barnett 1955; Suttles 1951). Some beaches were modified by Coast Salish people creating rock terraces to build “clam gardens” that greatly enhanced the productivity of these resource patches (Lepofsky et al. 2015; Williams 2006). Similar to salmon and herring, clams were also dried for future use and trade (Kennedy and Bouchard 1983).
 59. Terrestrial environments were also intensively utilized for resource harvesting. Specially managed berry patches (Lepofsky et al. 2005), wapato (an edible wetland tuber) patches (Turner et al. 2005), and camas (an edible flower bulb) patches (Suttles 2005) were all enhanced through a variety of stewardship practices. Game, such as deer, elk, and bear were all hunted and trapped in inland areas (Barnett 1955; Suttles 1951).
 60. An important point here is that Coast Salish people were not passive harvesters of the natural bounty of the region. *Coast Salish people were active managers of these ecologies and made conscious decisions and actions to promote the future health and abundance of these resources. This concept is most simply described as a stewardship ethic.*
 61. Recent research has shed significant light on this issue. For example:

Decades of research with local First Nations, however have demonstrated that their traditional subsistence systems, like those of Native Hawaiian agriculturalists, encompass the management of resources and ecosystems from the sub-alpine to the sub-tidal (e.g., Deur and Turner 2005; Lepofsky and Lertzman 2008; Turner 2014; Turner et al. 2013.) (Lepofsky et al. 2015:237).
 62. Lepofsky et al. (2015:237) also cite examples of coastal First Nations in British Columbia making stewardship decisions regarding fishing including “choices about location, timing, gear size and catch limits,” tenure systems “that limit the amount and timing of harvests,” habitat enhancement, transplanting finfish to new areas. And they note “[t]hese

marine management practices are nested within larger social systems that include teachings about ways to behave and oral traditions, rituals, and ceremonies that often promote the well-being of resources and ecosystems” (Lepofsky et al. 2005:237).

63. *That is to say, uncritical use of the term “hunter-gatherer” obscures rather than clarifies pre-contact Coast Salish subsistence economies and underplays the active stewardship and resource management decisions that were taken to enhance the natural ecological abundance. This represents nothing less than a paradigm shift among the people who study these societies (i.e., anthropologists and archaeologists). Recent research has repeatedly indicated that First Nations must be understood as active managers, not passive harvesters of their local ecologies.*
64. With such a rich resource base, sophisticated harvesting and storage technology, and array of ecological enhancement practices, Coast Salish people were able to maintain dense populations housed in large villages. It has often been repeated that the pre-contact population densities of the Coast Salish area were more similar to the densities of farming societies than hunter-gatherers from areas besides British Columbia (e.g., Ames and Maschner 1999; Boyd 1990). Harris (1994:618) suggests a pre-contact (pre-smallpox) Coast Salish population of 50,000–100,000. Boyd (1990:136) suggests a lower value of about 30,000. Based on my experience with the archaeological record of the Salish Sea and accounts of First Contact there, it is my opinion that Boyd (1990:136) has greatly under-estimated the pre-contact Halkomelem and Northern Straits Salish populations, and for this reason, I tend to side with Harris’ (1994) higher pre-contact population estimates.
65. The basic unit of Coast Salish social organization was the house group composed of several related families. Coast Salish houses (shed-roof houses) were large, barn-like structures made of cedar planks that housed between a score and hundreds of people (Coupland et al. 2009; Miller 1999). These houses were also the places for storing the large stores of food relied on through the lean winter months. The largest of these houses were used for hosting potlatches and entertaining hundreds of guests (Miller 1999).
66. Coast Salish villages were composed of one or more houses. Smaller villages of 20–75 people are typically described for the Coast Salish of Puget Sound (Miller 1999), and much larger villages of between 60–1,400 people are described for the Lower Mainland area (Carlson 2001). As will be discussed in detail below, pre-contact Coast Salish village sites leave very clear material traces in the form of archaeological sites.
67. *The pre-contact Coast Salish world was a densely populated place that was supported by a rich subsistence base and held together through a myriad of social, economic, ritual, and trade relationships.*

3.2.1 Coast Salish Identities, Territoriality and History

68. Territoriality, history, and oral traditions figure prominently in shaping Coast Salish concepts of identity. Specifically, individual Coast Salish First Nations are associated with a watershed (or equivalent bounded region) to which they hold collective territorial

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rights and interests. Such territorial associations are derived from members of an individual First Nation's genealogical links to 'First Ancestors' who first populated a region.

69. From a Coast Salish perspective, the world as known today began when the First People (*tel swayel*) appeared into a chaotic and dangerous world and began to set things right (Carlson 2010:64). The First People were designated as leaders of their respective people. In some cases, the First People fell from the sky, in other cases they appeared out of the earth, or were transformed from animals (Boas 1894:1–2; Suttles 1987:104). These First People became the First Ancestors of the social groups we now term First Nations. For example:

- The Squamish First People appeared at the Cheakamus River (a tributary of the Squamish River) (Wells 1966:6-8), Squamish (Wells 1966:8), and Gibsons, where their leader was named *whuhl-AHL-tuhn* (Wells 1966:12).
- The Musqueam First People appeared at Musqueam on the North Arm of the Fraser River; their leader was *c'simlə'nəx^w* (Jenness 1955:10) or *Pä'pkEltEl* (Boas 1894:1).
- The Kwantlen First People appeared at New Westminster; their leader was *KalE'tsEmEs* (Boas 1894:1).
- The Tsawwassen First People appeared at Tsawwassen (just north of Point Roberts); their leader was *sma'k^wəc* (Jenness 1955:10).
- The Katzie First People appeared at Port Hammond (Maple Ridge) and Sheridan Hill (Pitt Meadows); their leaders were *x^wθe'pəctən* and *swa'nəsət* (Jenness 1955:10).
- The Cowichan First People appeared in the Cowichan Valley and around Duncan; their leader was *Syalutsa* (Marshall 1999:9–17).
- The Snuneymux (Nanaimo) First Person appeared at a bluff near Wellington (near Departure Bay) and was named *Slamox* (Jenness 1934–36).
- The Stz'uminus (Chemainus) First Person appeared near Somenos Creek and was named *Swatan* (Jenness 1934–36).
- The Lummi First Person came down from the sky near Garrison Bay on San Juan Island and was named *swetən* (Suttles 1951:33).
- The Tsleil-Waututh First Ancestors were transformed from a wolf and created from the sediments of Burrard Inlet.

70. This oral history will be discussed in more detail below (see s. 3.3.1, *Tsleil-Waututh Oral Histories—From Creation*).

71. Boas (1894:2–3) also describes two other First Nations who are “descendants of slaves of TlpElkē’len, chief of the Koā’ntEl (Kwantlen)” who apparently lack First People origin accounts. There are many more examples of such First People—probably as many as there are self-identifying Coast Salish First Nations— but the trend is clear. Coast Salish tribes or First Nations inherited a particular territory, a territory, from their First People at the beginning of human history here.
72. I am aware of opinions that are very critical of the use of First Nation’s oral histories as sources of historical data (Mason 2000, 2006). I am also aware of Coast Salish oral histories that describe geomorphic events that occurred 2500–3000 years ago, such as the transformation of Roberts Island into the peninsula known as Point Roberts (Ryder 1999:8; Jenness 1955:21). That is to say, in some cases, it is demonstrable that Coast Salish oral histories describe actual events that occurred more than two millennia ago. Given this remarkable ability to orally record and transmit ancient events and temporal depth of actual events, any serious student of the history of Coast Salish peoples must afford Coast Salish oral histories as important sources of historical data (see Carlson 2010; McLaren 2003; Reimer 2011; Thom 2005). Franz Boas (1894:3), the father of modern Anthropology, appeared comfortable in using Coast Salish oral histories as sources of historical data: “[e]vidently historical traditions are preserved relatively faithfully by these tribes.”
73. The epistemology described above is foundational to Coast Salish concepts of identity, territoriality, and the elevated social position of the ‘leader’. As quoted in Arnett (1999:17), Angus Smith (a Cowichan elder) explains, “[w]here you dropped is where you belong...Particular areas were peculiar to certain groups or families, where our ancestors were dropped on earth.” *In short, the location of one’s origin stories ties one to the landscape and gives one particular rights including ownership of that area.* Boas (1889:37-38) summarized the nature of Coast Salish territorial ownership succinctly more than a century ago:
- The Coast Salish derive their claims to certain tracts of land in the same way from the fact that the ancestor of each gens came down to a certain place, or that he settled there after the great flood. The right of a gens to the place where it originated cannot be destroyed. It may acquire by war or by other events territory originally belonging to foreign tribes, and leave its home to be taken up by others; the right of fishing, hunting, and gathering berries in their old home is rigidly maintained.
74. Here, Boas used the term gens in approximately the same manner that we would use the term ‘First Nation’ or ‘tribe’. Early ethnographer George Gibbs (1877:187) clarifies the nature of collective ‘tribal’ ownership of such a territory: “these common lands were owned down to the last remnant of a tribe.” *To be clear, Coast Salish territorial units and collective tribal rights were predicated on deep ancestral connections to specific places, not occasional visits or the location of 19th century Indian Reserves. Further, even if a once numerous tribe was to relocate or to become greatly reduced in number, the*

remaining members of that tribe would maintain the collective tribal rights over the entirety of the traditional tribal territory.

75. Anthropologist Jay Miller (1999:17) has described this relationship to the land with respect to the Lummi, another Coast Salish group located near Bellingham: “[t]hroughout Native America, land use was a sacred trust, derived from ongoing relations with resident immortals...” Along similar lines, Anthropologist Wayne Suttles (1955:14) commented that “[i]ndeed, one of the most striking contrasts in Coast Salish culture is the contrast between the breadth of social and ceremonial relationships that one small community may have with other communities, and the narrowness and intensity of its spiritual and economic relationship to its own small territory.” *Suffice it to say, the relationship between a Coast Salish group and its specific territory is highly significant, and can be characterized as spiritual or religious connection.*
76. Coast Salish tribes could gain or lose territory through conquest, or groups may amalgamate and inherit their predecessor’s territory. There are clear historical examples of this in the early historic era (e.g., Galois 1994:223–235; Miller 1999:17–18; Suttles 1951:8, 26–31, 1990:454–456). There are other examples where major calamities such as floods and landslides triggered the migrations of whole Coast Salish tribes from one location to another (Carlson 2010:80–91, 117–125). Overall, within the last few centuries, the trend has been for general stability of Coast Salish tribal territories, rather than complete realignment.
77. Note that my use of the term ‘tribe’ herein refers to a self-recognizing social group consisting of at least one village, and is decoupled from Sahlins’ (1968) seminal association of tribes as ‘chiefdoms’ with its associated political and economic baggage. Barnett (1955:243) is also critical of the use of the term ‘tribe’ to describe “the aggregate of extended families inhabiting a winter village...because any sense of unity which may have bound the family units together was of a diluted sort and was not the basis for collective action.” Barnett’s (1955) major hesitation in describing such a group a ‘tribe’ is primarily derived from the lack of a clear role of a chief as a well-defined position of leadership ahead the ‘tribe’. Also, Barnett’s (1955) ahistorical approach to Coast Salish social organization seems to fail to recognize that virtually all of the villages he discusses were actually fairly recent aggregations of survivors of several villages across a tribal territory (e.g., Carlson 2010). Suttles (1951:286) on the other hand, indicated that Coast Salish tribes were difficult to define, and had a real basis in a common dialect and a territory shared by a single village or cluster of villages. That is to say, Suttles (1951, 1990:453) was comfortable using the term “tribe” to describe these village clusters that shared a common language or dialect, but specified that such “tribes” were not political units.
78. My view of Coast Salish identity of territorial groupings is completely at odds with those of Dorothy Kennedy (2000:110) and much more aligned with Thom (2005), Carlson (2001, 2010), Suttles (1987), Snyder (1964), and Smith (1940). In my opinion, Kennedy’s (2000:110) assertion that, “today, as in the past, there is continuous social and

territorial realignment as groups merge or assert independence, all the while clinging tenaciously to patterns of speech, fragments of traditions, and symbols of status that allow them to assert specific identities and distinguish themselves as members of groups of differing social complexity” does not accord with Coast Salish oral histories, Coast Salish archaeology, or historical evidence. Instead, Kennedy’s (2000) model extrapolates the chaos of the 19th century (massive depopulation, firearms, endemic warfare, and colonialism) in the Coast Salish world as the norm, rather than the exception to Coast Salish history. Coast Salish identity and territoriality are not “continually realigned” (Kennedy 2000:110), but rather “are firmly wrapped in mythological and other social and historical relationships to the land” (Thom 2009:185). In my opinion, the anthropological work of Thom (2005), Carlson (2001, 2010), Suttles (1987), Snyder (1964) and Smith (1940) pays much more attention to Coast Salish deep-history and relationships to the land. Further, much of this later body of research has been peer-reviewed and published, while Kennedy’s (2000) research along these lines has not. I return to specific relevant issues in Kennedy and Bouchard’s research in later sections.

79. This highlights an issue I identified in the introduction of this report, what I will call here the Ethnographic Problem (also known in archaeology as the “tyranny of the ethnographic record” (Wobst 1978). *That is to say, literally none of the ethnographic literature describes pre-sovereignty Coast Salish societies.* The bulk of this ethnographic information was collected in the 1920s and 1950s. All of the ethnographic data that is relied on so heavily in anthropological discussions of Coast Salish people is one to four generations removed from the era of interest (pre-sovereignty). *The ethnographic record here is not first-hand observation of living traditional societies and cannot be treated as such.* In relation to archaeology, simply fitting ones findings to an already established ethnographic baseline, actually precludes investigation of change or differences in the past (Wobst 1978). These ethnographic characterizations of traditional Coast Salish societies need to be projected backwards in time and interpreted in the light of: 1) massive population loss, 2) a tremendous increase in warfare, 3) conversion to Christianity, 4) colonialism, and 5) economic entanglement with the world capitalist system.
80. In projecting these ethnographic descriptions back in time, one has to carefully balance them in relation to the archaeological record, i.e., empirical evidence of pre-contact and pre-sovereignty indigenous land use. Homer Barnett (1955:252), one of the primary anthropologists to work with Coast Salish people in the early 20th century is explicit about this regarding ownership of hunting areas—“I cannot say whether my Sanetch, Maskwiam, Cowichan informants were at fault in not remembering family hunting-and-gathering land rights, or whether the partitioning of food gathering sites among them was less clearly defined than among other groups.” *That is to say, the lack of such information in the 1930’s does not mean that such cultural rules did not exist prior to AD 1792; that information may have simply been lost as part of the colonial process.*
81. Returning to the modern concepts of Coast Salish territoriality, I introduce the watershed model. Building on the pioneering work of Marian Smith (1940), and Wayne Suttles

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(1987:210-220), ethnohistorian, Keith Carlson (2010:38–57, 109–112), has recently developed what is perhaps the most insightful model of Coast Salish territoriality in relation to the natural environment (also Miller 1997, 1999). The foundation of this model is that individual rivers, watersheds, or their equivalents were populated by clusters of associated settlements that were socially linked to one another (more so than their individual linkages with other clusters)—termed “tribal centers” (Carlson 2001:24, 31; 2010:110, see also Suttles 1987:210). Each cluster of settlements, or tribal center usually had one much larger settlement (headquarters or town) (Carlson 2001) that was populated by the leading hereditary elite and included at least one extra-large “potlatch house” (see Miller 1999:10, 82). Tribal centers were then situated along an owned tribal watershed or watershed equivalent, and members of each tribe or Nation held exclusive acquisition rights to all the resources of that watershed (or watershed equivalent) (Carlson 2001:24–25).

82. The boundaries between adjacent tribal centers were located approximately at the peak of any mountains between such watersheds (Carlson 2010:110). The boundaries of these territorial units were not fixed in the modern sense. Instead, they were somewhat diffuse and consisted of rights of usage rather than possession (Kew 1970:9). Carlson (2010:109), paraphrasing Suttles, states that “Coast Salish tribal territory is better conceived not as an area confined by specific borders, but as an ever decreasing interest in lands as they move farther from their core of tribal lands. This might be best conceived as a series of diminishing rings emanating from a cluster of tribally affiliated settlements within a discrete watershed.”
83. Coast Salish traditional tribal territories are then locales to which a tribe can trace genealogical connections to the First People to appear in such a locale (Boas 1894; Jenness 1955). These locales are typically bounded by a watershed unit or its equivalent. Within such a locale was a cluster of related settlements with one larger town or headquarters. All members of a tribe hold collective territorial and resource rights to such a territory, excepting specific resource patches that were owned by specific households of that tribe (see below). However, Coast Salish people were highly mobile (canoe-borne) and practiced a seasonal round that brought most families beyond their tribal territory for at least part of the year. The most notable examples of this are Straits Salish groups travelling to Point Roberts to harvest sockeye (Suttles 1951) and all Halkomelem-speaking groups (from as distant as Vancouver Island) partaking in the Fraser River sockeye fishery (Barnett 1955). Because of their sophisticated canoe technology (Barnett 1955; Lincoln 1991), Coast Salish peoples could transport their house planks, storage boxes, and extended families considerable distances. Travel from Cowichan to Yale (~200 km) by canoe was not unusual during the late summer sockeye fishing season (MacLachlan 1998).
84. In my opinion, this tribal center within a discrete watershed model (Carlson 2010) is reflected in the archaeological record of the Lower Mainland region. Specifically, archaeological sites are not distributed randomly across the landscape. Instead, the large and consistently occupied (multi-component) archaeological sites cluster at discrete

localities such as the North Arm of the Fraser River, Point Roberts, the Pitt River and its confluence with the Fraser River, and eastern Burrard Inlet. To my knowledge, Ham (1982:359) was the first to comment on this pattern. These are all watershed units and the approximate tribal centers of four discrete Coast Salish First Nations: the Musqueam, Tsawwassen, Katzie, and Tsleil-Waututh. Ham (1982:359–362) suggests that these sites represent both winter villages and seasonal encampments.

85. For example, DhRt 2, DhRt 3, and DhRt 4 are all large village sites and are located within and underneath the present Musqueam community and reserve; DhRs 1, the famous Marpole site, is located about 5 km to the east. These villages were occupied from about 500 BC to present (Burley 1980:32; Matson and Coupland 1995:267–269). Four of these villages are located at a place called Xwmə'θəkwy'em ('Musqueam', 'the grass people'). At Point Roberts, DgRs 2, DfRu 3, DgRs 1, DgRs 9, DgRs 14 (major villages and seasonal encampments) are in or within about 5 km of Tsawwassen First Nation's community and reserve, at a place called—scəwáθən ('Tsawwassen', meaning 'seaward edge') (Suttles 1990:455). These sites were occupied from about 2000 BC through to the contact era (Arcas 1999; Matson and Coupland 1995:200–218). I will elaborate on the example of archaeological sites within Burrard Inlet in detail in later sections.
86. The point of this discussion is that archaeological sites display a highly structured spatial pattern. Major village sites and encampments are clustered in watershed units (e.g., the North Arm of the Fraser, Burrard Inlet, and Pitt River/Lake) or similar features (Point Roberts), and these clusters largely correspond to a tribe or First Nation's tribal center. The pattern in Coast Salish archaeology, for the most part, is one of long term regional stability, either from 1500 BC (Matson and Coupland 1995; Mitchell 1971:68–69; Morin 2012:350–355) or from 500 BC (Burley 1980:35–39) to the contact era. That is to say, the archaeological record is in general agreement with Coast Salish oral histories regarding ancient and long-term association of individual tribes with specific territories.

3.2.2 Coast Salish Kinship, Ownership, and Non-Local Resource Rights

87. Coast Salish people reckon descent bilaterally (i.e., they recognize all kin on both their mother's and father's sides of the family) and were exogamous (i.e., they married outside of their home group), with some preference for patrilocality (living at the husband's natal home) (Kennedy 2007; Kew 1970:10; Suttles 1987:16–18). Bilateral descent means the individual can place importance on the mother's and/or father's line of descent. Because of this, Coast Salish people have considerable flexibility in choosing which descent group they affiliate with (Kew 1970:74; Miller 1989, 2000; Thom 2005:275). Reckoning kinship bilaterally results in recognizing a very large number of kin who are often widely dispersed.
88. Some leading researchers (Kennedy 2000, 2007; Kew 1970; Suttles 1987) have emphasized Coast Salish exogamous marriage patterns. This is a good example of projecting a pattern observed at a particular point in time and projecting uncritically onto

the past. However, this description is based on the social and historical context of the late nineteenth and early twentieth centuries wherein populations were perhaps 10% of what they were in the decades prior to contact (Harris 1994). In this historic era when ethnographic information was being collected, village clusters coalesced and many disappeared entirely (Carlson 2010:98). Whole tribal centers transformed into relatively small individual communities (Carlson 2010:98). In this context, potential marriage partners within one's natal community would be few in number, and exogamy would have been a social, if not biological necessity. In my opinion, prior to the devastating plagues of ~AD 1782 and later, Coast Salish people were likely much more village exogamous but tribally endogamous, with only the elite or leaders being largely tribally exogamous. Tsleil-Waututh's TUS (Traditional Use Studies) interviews include an account that only after the last great plague did people have to go farther afield for marriage partners (Tsleil-Waututh 1999). Ritchie (2010:39–41) has identified this pattern in St'ailes (Chehalis) genealogical information recorded by Boas (1894).

89. Coast Salish society was and is organized by kinship, and kinship relations were the primary means for acquiring access to resource areas beyond one's natal territory. (Thom 2005:289). That is to say, when individual 'A' married into a distant group, that individual gained rights of access (as part of a now local family) to the collective resources of the new territory (Kew 1996; Snyder 1964). The relatives of individual 'A' could now rely on that marriage connection as pretext to visit individual 'A' and their new family and request access to the resource patches of that tribe and family. The reverse pattern would also hold; individual 'A's' new family could travel back to individual 'A's' natal community to visit and request access to resource patches there. Access to such resource patches would always be granted to kin, but the protocol was strict, access had to be requested (see Snyder 1964).
90. Turner and Jones (2000:7) describe central Coast Salish land tenure as "loosely defined, non-exclusive communal land use with family ownership of some specific resource sites and harvesting equipment." Thom (2005:272) disagrees with this characterization ("loosely defined and non-exclusive"). Instead, Thom (2005:272) proposes that "certain lands owned as property by descent groups whose members have exclusive rights to the areas and whose heads are the stewards of corporately held lands on behalf of their co-heirs." Other lands are held in common by the residence group, variously known in the literature as the local group, village, or 'tribe' (Carlson 2010; Suttles 1987:9, 147). Cognatic descent groups (those who can all trace their descent to a common ancestor (*hwunutsaluwum*)) "holds property corporately amongst co-heirs" (Thom 2005:273–74). This may include people from across the Coast Salish area (or beyond), and because of the cultural practice of exogamy, and the flexibility inherent in bilateral descent systems, Thom's (2005) perspective corresponds much more closely to both the ethnographic and archaeological records than that of Turner and Jones (2000).
91. According to Barnett (1955:250), ownership of tracts of lands and particular resource sites are typically inherited by the eldest son, and "it was always understood that he had the right to supervise the use of property nominally owned by him." This individual acts

as the steward of these lands. Both Richardson (1982) and Turner et al. (2005) describe Coast Salish ownership of particular resource patches as being held by individual families rather than individuals. In this case, the discrepancy between their data and Barnett's (1955:250) statement could be interpreted to mean that, while the household head nominally owned the resource patch, that resource patch was, in fact, held in trust for the entire family to use. Turner et al. (2005:155) provide numerous examples of ownership of resource patches by Coast Salish groups including: patches of bog cranberry, bracken ferns, wapato, and camas, horse and butter clam beds, sites for duck nets, sturgeon fishing stations, dip netting stations, and some fishing streams.

92. There were clear protocols regarding accessing family-owned resource patches. Permission had to be asked for in order to access family-owned resource patches/territories (Barnett 1955:252). Access was rarely denied, but the punishment for trespass could be death (Arnett 1999:23). If any person was found unannounced in someone's owned resource patch (i.e., trespassing) it was assumed that they were poaching (i.e., accessing the resources without permission). Snyder (1964:432) describes this system: "[P]rotection of property from looting of game was according to a code of arms known throughout the region, and called *ca'ci'zəl* by Skagit. Under *ca'ci'zəl* any trespasser was expected to be killed and buried on the spot by the first armed native who saw him." The motivation behind this rather extreme response would have been to dissuade other poachers and ultimately to maintain the abundance of resources in one's own patch or territory for one's own use.
93. In the early historic era, relatively few resource patches were family-owned and most were collectively held by the tribes whose territory encompassed such patches. However, these family-owned resource patches were the most productive, and that conferred real economic and social advantage to their owners. As described by Suttles (1951:56):

The ownership of inherited privileges is essential for membership in the upper class. Wealth is needed before inherited privileges can be used. The ownership of fishing locations, root beds and clam beds gives real material advantage. These sites are limited in number, and usually the most productive ones for whatever product is obtained there. While everyone can make a living from the public domain, the real surpluses are produced at owned locations and the owners thus have considerable advantage over the other members of the group. The owners can and in native theory should feed those who are in need, and thus if their surpluses are great can attract the needy to them.
94. That is to say, the ownership of rich resource harvesting locales (the source of economic surplus) was one of the foundations of elite status in the Coast Salish world.
95. However, as noted above, the early historic period as described in the classic ethnographic works of Suttles (1951, 1955), Jenness (1955) and Duff (1955) was not a cultural 'baseline' of Coast Salish peoples. It was a period of recovery, wherein about 90% of the population had perished suddenly (Harris 1994) and social systems were in a

state of flux. As described by Ramenofsky (1987:174) (an archaeologist specializing in identifying pre-contact demographic changes):

The historical record of Native Americans, therefore, must be approached from an assumption of change rather than stability. The applicability of the direct historic approach or any other sort of analogical framework to even the late prehistoric period cannot be presumed. Although traits may have survived across the contact border, survival of traits cannot and should not imply survival of systems.

96. Most anthropological researchers in the Coast Salish region (e.g., Duff 1952a, 1952b; Kennedy 2000, 2007; Snyder 1964) make the exact assumption Ramenofsky (1987:174) cautions against. That is, they assume the survival of cultural systems through these periods of catastrophic change. They describe a cultural system as it existed in the late 19th century and assume it was identical a century or millennium earlier. In my opinion, this position is entirely untenable.
97. Barnett (1955:252) is much more explicit about the possibility of the loss of cultural information before it was recorded. Specifically, Barnett stated, "*I cannot say whether my Sanetch, Maskwiam, Cowichan informants were at fault in not remembering family hunting-and-gathering land rights, or whether the partitioning of food gathering sites among them was less clearly defined than among other groups*" (Barnett 1955:252, emphasis added). Thus, one of the lead anthropologists researching traditional Coast Salish land/resource ownership (as of the 1930s) was clearly uncertain regarding the nature of past land/resource ownership. *Any conclusions regarding pre-sovereignty land/resource ownership based on ethnographic information is similarly open to multiple interpretations and cannot be taken as definitive.*
98. Based on my understanding of the late 18th and early-mid 19th century epidemics, population densities were up to 10–20 times higher in pre-contact times than those described ethnographically (e.g., Harris 1994). It follows then that ownership of resource patches and tracts of lands was almost certainly much more widespread and rigid than has been described. *Specifically, it is my opinion that effective ownership or control over resource patches would have been necessary in the context of such high population densities to ensure that resource patches were not over-exploited (the tragedy of the commons).* This is part of the cultural adaptation of indigenous peoples to the Northwest Coast culture area and is found among Coast Salish, Wakashan, Tsimshian, Haida, Tlingit and people. *In my opinion, ownership of resource patches is as much a cultural adaptation to the Northwest Coast as is smoked salmon. Given this cultural context, ownership of resource patches should be anticipated as the norm.*
99. The sections above described the general outline of collective tribally-owned territory (watershed units) and family or lineage-owned resource patches, and the basic mechanisms of exogamy and establishing access to non-local resource patches. A major additional feature of traditional Coast Salish economies was the seasonal round (Barnett 1955; Suttles 1951). A seasonal round is a description of a pattern of residential mobility

wherein individual family groups would relocate from their winter village to seasonally productive resource patches. Archaeologists describe this as a pattern of 'logistic mobility' (Binford 1980). A typical Coast Salish seasonal round would involve several such residential moves (Kelly 1983).

100. Depending on the nature of the resource being harvested, families would disperse across the landscape in small task groups (such as alpine berry picking and hunting), or aggregate in very large numbers at discrete locations (such as late summer sockeye fishing at Point Roberts) (Mitchell 1983; Suttles 1951). Importantly, in almost every case, a group's seasonal round took them beyond their territory and brought them into the territory of another group (usually in relation to the Fraser sockeye fishery). In some cases, specific resource harvesting patches were owned by particular families in another group's territory (e.g., Suttles 1951:195–204). I suspect this phenomenon is primarily a result of an historic era population crash, rather than a tradition with any time-depth. In most cases, however, families traveling into another group's territory would have to request permission to do so (Kennedy 2000:216; Snyder 1964). It should be emphasized here that I have come across no examples of a non-Tsleil-Waututh lineage owning resource sites within the Study Area.
101. Permission requesting protocols were strictly enforced. In at least one case, territory boundaries are reported as being temporarily 'opened' or 'lifted' to outsiders, but permission for access was still required (Point 1996a:35–38, 1996b:7–8). Significantly, save for Kwantlen territory, most accounts describe the main branch of the Fraser River as being 'open territory', potentially accessible to all Coast Salish peoples (Carlson 2001:24–25). A Coast Salish seasonal round brought members of individual tribes into the broader Coast Salish world, but was always undertaken according to traditional Coast Salish protocols of access.
102. Snyder (1964:74) summarizes this succinctly for the Skagit:

Outside sources often contributed more heavily to the prosperity of a village than its own grounds. So a headman had to allow for visits to outlying areas, as well as seeing to it that grounds within his own jurisdiction were used efficiently and protected from uninvited campers. It was only practical that villagers whose connections with host bands were the closest exercise exchange prerogatives. They were the ones most familiar with the geography, resources and techniques used in those places. And because reciprocal privileges between local groups were recognized only in theory it was a breach of etiquette, if not wholly unauthorized, to send as guests persons in the name of a village or band, and not of a particular family.
103. Individual families had to ask the local tribal or lineage leader for permission to visit their territory and access their resources. Requesting permission of access from the appropriate property owning group appears to be a fundamental attribute of Coast Salish protocol.

The act of requesting permission is tacit acceptance of the other group's ownership of that territory or resource patch.

104. Barnett's (1955:25) map of Coast Salish seasonal rounds summarizes this model of land use succinctly, although, as will be discussed later, not entirely accurately. In that map, Barnett (1955:25) illustrates how groups would travel from their winter village bases to procure foods from disparate environments, and return back to their winter villages with such preserved foods. That is, Barnett (1955:25) presents a short hand illustration of a seasonal round.

3.2.3 Coast Salish Leadership—*Si?em* and Potlatching

105. Traditional Coast Salish societies have been described as being stratified and class-based (Suttles 1987:4–13). At the apex of the Coast Salish social system were the 'leaders' or *si?em* (siyam); these were household or lineage heads who were generous, ambitious, had received the appropriate moral instruction ("advice"), had obtained powerful spirit helpers, had inherited rich resource patches, held notable names, and had held successful potlatches (Barnett 1955:245–249; Kew 1970:78–79; Suttles 1987:6–9). Recall from above, that Coast Salish people recognize leaders since the beginning of time. The First Ancestors were recognized leaders, and thus the role of the leader in Coast Salish culture is deeply embedded in their epistemology. (Jeness 1955:10). Below this limited stratum was a much larger population of 'good people', "whole lineages strongly linked by tradition to village sites and natural resources, possessing wealth (due to spirit powers and ritual knowledge), inherited privileges, and "advice," and producing "leaders"" (Suttles 1987:12).
106. Below this stratum were the likely numerically fewer 'worthless people' or *steseem* (*stacem*). These were people who "had lost their history," were orphans, the offspring of slaves or other outcasts (Suttles 1987:6). When *steseem* became too numerous in a given village, they would often hive-off and establish a new *steseem* village that would be vassal to the former village (Jeness 1955:86; Suttles 1987:5–12). Below the 'worthless people' were the slaves or *sk'wəyəs*, who were chattels obtained in war or by purchase (Suttles 1987:12). Suttles (1987:6) has famously described this social structure as an "inverted pear." Within the past two centuries, the role of the *si?em* has evolved into the contemporaneous positions of the elected and hereditary chief. There does not seem to be a direct translation of the word "chief" (meaning an inherited position of authority or a political office) within any of the Coast Salish languages (Suttles 1987, 1989). "One could say *si?em* of the village, but the title did not imply a political office" (Suttles 1987:6). While there were no formally defined political offices in traditional Coast Salish society, the *si?em* or leaders, for all intents and purposes fulfilled such roles. Again, I note that while the formal office of chief or leader is not known ethnographically, there is absolutely no reason to presuppose such a role did not exist prior to contact. Indeed, the Coast Salish archaeological record provides several examples of exceedingly wealthy adolescent burials (e.g., Arcas 1999:56), who were likely the children of chiefs.

107. *Si?em* were highly influential people in traditional Coast Salish society, they were the wealthiest people and had the most social clout. *Si?em* were the leaders of individual households and occasionally villages (Barnett 1955:243; Suttles 1987:6). The largest villages or tribal centers, were usually also the home of the most powerful local *si?em* (Miller 1999:88–89; Snyder 1964:76–79), and very successful *si?em* would maintain houses at several sites. The *si?em* were specialists in managing human affairs (Snyder 1964:74–78). They managed the affairs of the local group and coordinated affairs with distant groups. The clearest example of this would be the role of the *si?em* in preparing for and hosting a potlatch. Hosting a potlatch required both accumulated wealth and skills in negotiating and coordinating the labor of others. First, a *si?em* would have to build or maintain a large potlatch house capable of hosting a large influx of visitors (Miller 1999:82). Second, a *si?em* would have to attract the labor of others to create a surplus of food and goods for distribution at potlatches. A *si?em* living in the largest villages could draw upon the largest number of supporters and their labor, and thus host more potlatches and larger potlatches than their rivals in smaller villages. As described by Snyder (1964:77), inheritance of lineage-owned resource patches (usually the most productive) ensured inter-generational continuity in an individual lineage raising its successive members to the status of a *si?em*. It was the *si?em* and their management of the potlatch circle that were the traditional pillars of the political economy of traditional Coast Salish societies.

3.3 The Tsleil-Waututh Historically and Today

108. Presently, Tsleil-Waututh is a Central Coast Salish First Nation in the Vancouver area with three reserves: IR No. 3 (the primary community) in North Vancouver, IR No. 4 and IR No. 4a on the banks of the Indian River. Membership stands at about 500 persons. Tsleil-Waututh's Consultation Area (Figure 2) encompasses much of the Lower Mainland region, Howe Sound, and the Squamish Valley. The Tsleil-Waututh Consultation Area was defined on the basis of a TUS study (Tsleil-Waututh 2000) and in negotiations with the Provincial Crown. More specifically, the Tsleil-Waututh Consultation Area includes most of the modern Tsleil-Waututh TUS data (Tsleil-Waututh 2000) collected in 1999 following the methods established by Terry Tobias (2000, 2009). That is to say, resource harvesting sites, occupancy sites, and other cultural sites were elicited in map-based interviews and were spatially delineated using points, lines and polygons and integrated into a GIS database. Aside from ancient occupation sites, such sites were only recorded if the informant had actually partaken in the activity, but not recorded if they had heard of someone or knew of someone else who had partaken in the activity. All major projects within the Tsleil-Waututh Consultation Area undertaken or permitted by the Crown are then referred to Tsleil-Waututh to assess their potential impact on Tsleil-Waututh's aboriginal interests.
109. The Tsleil-Waututh Consultation Area represents an approximation of Tsleil-Waututh's recent or modern harvesting area, including both Tsleil-Waututh territory, and the territories of other First Nations. Tsleil-Waututh access to the resources of other First Nation's territories was predicated on kinship connections to those other communities

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and permission seeking along Coast Salish protocols. The Tsleil-Waututh Consultation Area represents an area of Tsleil-Waututh's aboriginal interests and includes all of Tsleil-Waututh's territory, but the Consultation Area is not coterminous or equivalent to Tsleil-Waututh territory.

110. The current Tsleil-Waututh Nation is a federally recognized First Nation governed by an elected chief and four councillors. The current Tsleil-Waututh Nation recognizes a hereditary chief—Chief Ignatius Ernest George Sla-holt—who can trace his genealogy and the Tsleil-Waututh hereditary chieftainship back to the mid 1700s. Additionally, Tsleil-Waututh Nation has a Traditional Council of family heads (8 such family heads) who meet periodically to discuss major issues and relay these discussion back to their respective families.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
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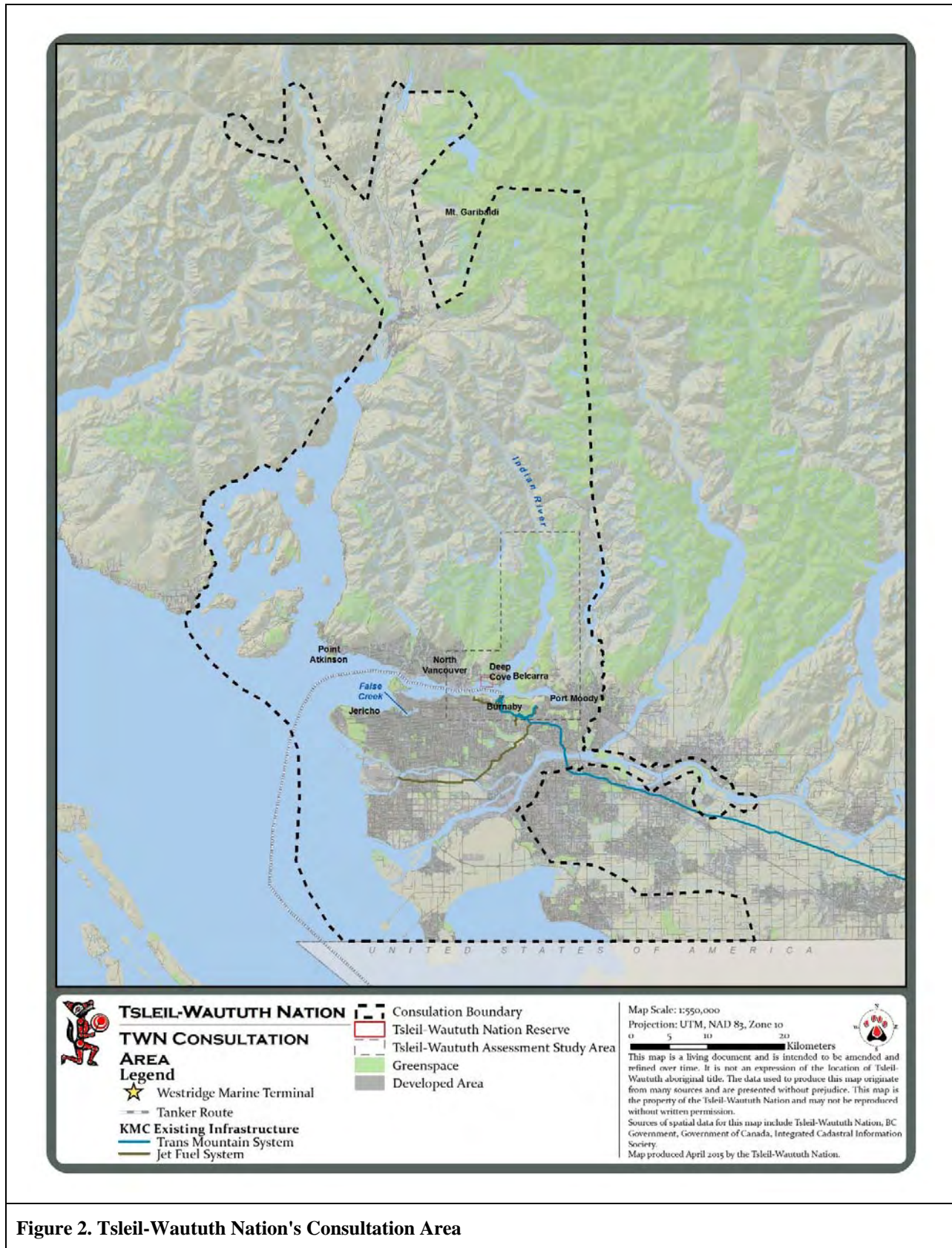


Figure 2. Tsleil-Waututh Nation's Consultation Area

111. Tsleil-Waututh's territory is centered on Burrard Inlet and the lands draining therein—a natural watershed unit. As described by Leonard George (respected elder and former Tsleil-Waututh elected chief):

According to my oral history, through my father and my mother, the territory of Burrard Inlet that my people used to live and provide for themselves started with the headwaters of Mount Garibaldi, coming down the Indian River, Indian River Valley, taking in Belcarra and Port Moody area. On the south side encompassing all of Burnaby and Gastown, False Creek to Jericho, and on the west side, all of Deep Cove—Deep Cove area, North Vancouver, Seymour, Capilano, to Point Atkinson (sworn evidence of Leonard George given on February 10, 1997, p1470 Mathias).

112. Tsleil-Waututh's oral history regarding the scope of their territory is highly significant because most major anthropological works either ignore Tsleil-Waututh entirely (e.g., Barnett 1955:31–34), subsume them under Musqueam (e.g., Duff 1952:25–27) or Squamish (e.g., Boas 1887), or reduce their territory to Indian Arm rather than all of Burrard Inlet (e.g., Suttles 1990). I expand on the reasons for this variable association of Tsleil-Waututh with their neighbors in detail in later sections.
113. The Tsleil-Waututh Nation translates the name 'Tsleil-Waututh' as meaning "the people of the inlet," referring to Burrard Inlet (Tsleil-Waututh 2001:1), and refers to Burrard Inlet at 'Tsleil-Wat' or 'Tsleil-Waut' (**Figure 3**). Gabriel George, a Tsleil-Waututh *shxwla:m* (ritualist/Indian Doctor) who holds many Tsleil-Waututh oral histories, songs, and traditional knowledge, stated that:

And we speak about war, but it speaks to something else as well. Now, after this time then the peace came. But go back into this time of fighting and our families, where we call ourselves Tsleil-Waututh, People of the Inlet. Tsleil is the inlet.

Tsleil-Waututh is the people of the past and people that belong or own. We belong or we own. English isn't the same as how we translate it. It's an attempt to translate it. That ending "uth", something that's long gone, something that we own. Tsleil is the water, the salt water (Gabriel George 2014:100, 2948–2949).

114. So according to the Tsleil-Waututh perspective, the Tsleil-Waututh people, are the people that belong to this salt water, Tsleil-Wat, Burrard Inlet.
115. The Tsleil-Waututh have, in the past, been identified by a number of additional names including: 'Slilloet', 'Saleelwat', 'Tsla-a-wat', 'Seli'lweta'lh' 'Leletot', 'Seleelwat', 'Slelouet', 'Selilwet', 'Silouette', 'Lilloet', 'Sel'il'wet', 'Liloten', 'Slilloet', 'Lilloetoul', and 'Burrard' (Tsleil-Waututh 2000a:39). Outside of the Tsleil-Waututh community, there is no consensus as to what place the name Tsleil-Waututh/səl'ɪlwətəl signifies. There is the more restrictive use of the name used by the primary

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anthropologists (e.g., Suttles 1990, 1996a, 1996b, Galloway 1996 and Bouchard 1996b) to describe Indian Arm and Indian River, and there is the more expansive use of the name by some Tsleil-Waututh, Musqueam, and Squamish individuals to describe all of Burrard Inlet (e.g., Mathews 1932).

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Figure 3. The earliest known aboriginal place name map of the Vancouver area (Mathews 1932, City of Vancouver Archives AM1594: Map 56.02). Note that the name 'Slailwit-tuth' for all of Burrard Inlet is indicated

116. The following sections describe the body of evidence relevant to determining “[w]ho the Tsleil-Waututh are as a people historically and today.” The following sections are presented in chronological order. First, beginning in the period well-before contact (‘Deep Time’, spanning about 1000 BC to AD 1792), I present Tsleil-Waututh’s oral histories regarding their origins and major pre-contact events, Tsleil-Waututh’s language, place names and the archaeological record of eastern Burrard Inlet. Second, I present Tsleil-Waututh’s genealogy, linking their pre-contact ancestors with the modern Tsleil-Waututh population (spanning from about AD 1750 to the present day). Third, I present the range of historical and ethnographic information relevant to Tsleil-Waututh’s identity (spanning from about AD 1792 to about 1930). I emphasize that, in addition to anthropological interpretations, this information should be considered from Coast Salish perspectives of identity and territoriality as outlined in the introduction to this Report.

3.3.1 Tsleil-Waututh Oral Histories—From Creation

117. As described in detail above, following Coast Salish concepts of identity and territoriality, tribes or groups inherit their territories from their ancestors who were created or dropped from the sky there. Tsleil-Waututh’s oral histories regarding their origins follow that cannon. The following sections (*Tsleil-Waututh Origins*) describe three distinct Tsleil-Waututh oral histories that recount their origins as a people.

3.3.1.1 Tsleil-Waututh Origins—Leonard George

118. As described in detail in Appendix “A”, Leonard George is a respected Tsleil-Waututh elder, holder of traditional knowledge, and former elected chief. The following account is taken verbatim from his sworn evidence during the Mathias trial (see also Gabriel George 2014). I note here that many Tsleil-Waututh oral histories have only been recorded in any form as evidence within Mathias, and thus I rely heavily upon that body of evidence. In 1997, Leonard George recounted the Tsleil-Waututh origin story:

And the idea, starting from our story of creation leading all to where I am at today, is that – is that it was God given and that it was our responsibility to take care of it; from the points that I mentioned to the heartland where we’re at today.

And so that in the creation of our first – of our first father, what the – what God or the Great Spirit did was transform our first young boy from a wolf into a man, giving us the family linkage of being belonging to the wolf clan.

When your first father was a – was just a child-man, that he used to roam throughout the inlet and he learned from all of the animals in the environment around him. He learned from the salmon the cycle of life and the highways of the ocean and why they would go out and the times they did and why they would return. He learned from the bird when the berries were ripe on the top of the mountain.

And any time that he learned something new he returned to this cliff that overlooked the inlet and he would stand there at sundown and he would tell the Great Spirit to share with him all the wonderful things he had learned about his life, and this carried through time.

But when he became a young man and went through the change of life, it was like he woke up for the first time after one winter and he was frustrated and he felt things in himself that he never felt before, because he was frustrated and he never felt that, and he was angry and he never felt that before, and he was also lonely and he never felt that. And it bothered him that everybody else in his community, all the animals could re-give life but there was nobody exactly like him that walked on two feet.

And so he was going to the cliff where he used to stand and he would always wait until the end of the day there until all of his thoughts had been given to him for that day. And he got there and he was just going to start to talk to the Great Spirit, but the Great Spirit gave him an image of himself, a vision of himself leaping from this cliff down to the water. And he had no reason – he had no knowledge of why he was going to do that, but he knew that if he did it he would receive the answer that he was looking for.

So he leapt from the cliff and landed down into the water, and when he hit the water, he kept on going down to the bottom of the ocean. And it was hard because it was cold but when he got down there he grabbed two handfuls of sediment and he began to swim upward with them. And when he broke surface he started to feel good already on his work and so he swam ashore and when he got up on shore he went and collected some cedar boughs and then he drew a large circle in the sand and then he cleaned all the circle out of all the debris and sticks and patted it down and made it good. And then he took the cedar boughs and he placed them in the centre and he placed these handfuls of sediment on that.

By that time the sun was gone down and so he went to sleep. The next morning when the first sun came up, he looked up to see what had happened to his work and there was a beautiful lady sitting there. And the Great Spirit spoke to him then directly and said, 'I've sent this woman to be your wife and the mother of your children and the grandmother of their children. But you must treat her with love and respect because she is a direct gift from the womb of mother earth, and with her common knowledge of earth and if you don't love and respect her, they won't flourish and be able to go forward and share their knowledge with all the other nations of people (Sworn evidence of elected Chief Leonard George, February 10, 1997, p1476–1480).

119. Thus, following this Tsleil-Waututh oral history, after the first Tsleil-Waut man (i.e., single Tsleil-Waututh individual) was transformed from a wolf into a person, the first Tsleil-Waut woman was created from the sediments of Burrard Inlet (**Figure 4**). In this

way, the Tsleil-Waututh, the People of the Inlet, trace their ancestry to the wolf, have an intimately close cultural connection to their territory (i.e., Burrard Inlet), and are inextricably anchored to their unique identity as Coast Salish people. The names of these Tsleil-Waututh 'First Ancestors' have been forgotten. The names Sla-holt and Waut-salk are recalled in Tsleil-Waututh oral histories as being the oldest Tsleil-Waututh names, but it is uncertain what the first Tsleil-Waututh man was named. Following the general pattern of Coast Salish First Peoples accounts, the Tsleil-Waututh oral history places the Tsleil-Waututh First Ancestors in Burrard Inlet, and they inherit the responsibility for that territory.

120. In 2014, Tsleil-Waututh provided their traditional oral evidence to the National Energy Board (NEB). There, Gabriel George provided a near identical account of the Tsleil-Waututh origin story as that provided above by his father Leonard George (Gabriel George 2014). At the 2014 NEB proceedings, Leah George-Wilson, former elected Tsleil-Waututh chief, provided interpretations of the Tsleil-Waututh traditional oral evidence to the NEB panel. There, Leah George-Wilson described how this story framed Tsleil-Waututh's association with their territory

In the creation story, we want to also reiterate that that story established Tsleil-Waututh presence in this territory, there were no other people here. You heard that it was the wolf *steqó:ya* that was transformed into the first Tsleil-Waututh and you heard that he had no wife, and that wife was created, and that wife was given to him, and if he took care of that land then his following generations would flourish. That establishes Tsleil-Waututh's presence in our land (Leah George-Wilson 2014:96, 2920).

3.3.1.2 Tsleil-Waututh Origins—Ignatius Sunrays George

121. Tsleil-Waututh's ancestral relationship to the wolf was first recorded more than 80 years ago by Ignatius Sunrays (Ginny) George, son of Chief George Sla-holt, and a recognized traditional knowledge holder within the Tsleil-Waututh community (George 1930:7) (see Appendix "A"). Ignatius George recorded the following account in a notebook now held at the Tsleil-Waututh archives:

But as far as the Tse-lail-waut Indians are concerned, we originated from the wolf and not from those that inhabited trees. Many years ago when the Great Spirit was going around transforming different things to human persons the wolf was metamorphosed into the first Tse-lail-waut Indian and today we regard the wolf with great {respect?} and not with fear or danger for it {is?} our belief that we came from the wolf (Ignatius Sunrays George 1930:7).

122. This brief account from 1930 corroborates the sworn evidence provided by Leonard George (1997) and Gabriel George (2014) described above.

3.3.1.3 Tsleil-Waututh Origins—Joseph Thomas

123. An additional brief published account of Tsleil-Waututh ancestral origins in Burrard Inlet was recounted by Joseph Thomas (a Tsleil-Waututh person, see Appendix “A”) to Captain Charles Warren Cates, who then related it to Major J.S. Mathews (1955:441). This oral history is located near New Brighton Park at a place known as Kha-Nah-Moot.

At one time a small stream wended (*sic*) its way down through the woods from the direction of Burnaby Lake, and emptied into the sea where Hastings Park is now. One day a man and a woman appeared from out the creek waters; it is supposed that the flowing water conceived them. The descendants of this man and woman lived there until the coming of the white man, and their village of cedar slab huts on the shore at the mouth was known as “KHA-NAH-MOOT”. Apparently the word interprets the story (Mathews 1955:441).

Herbert (Paddy) George indicated that this was a Tsleil-Waututh village (George 1990:3).

124. It is possible that these two stories relate the origin events for two different Tsleil-Waututh lineages: the first located broadly in Burrard Inlet (the Leonard George, Gabriel George, and Ignatius George accounts), and the second (the Joseph Thomas account) located specifically at Kha-Nah-Moot/New Brighton Park, a different, and now forgotten lineage. Recall above that the Cowichan First Nation's oral histories regarding their origins included several First Ancestors dropping from the sky at various locations across their territory (Marshall 1999). Multiple First Ancestor accounts for a single First Nation is therefore not atypical among Coast Salish.
125. It is worth mentioning here that, to my knowledge, no other First Nation holds First Ancestor accounts located in Burrard Inlet. Indeed, elders from other First Nations have specifically disavowed that they had First Ancestors within Burrard Inlet (see Miranda 1979:54, 104, 132, 154). So along these lines of evidence, Tsleil-Waututh's oral histories place their ancestors as being created in and of Burrard Inlet. And, following Coast Salish concepts of territoriality, it is this connection to ancient First Ancestors by which Tsleil-Waututh can claim the lands and waters of Burrard Inlet as their birthright.

3.3.2 Tsleil-Waututh Oral Histories—From Creation to Contact

126. Following the time of creation, Coast Salish Nations carry a variety of oral histories that describe how the world came to be shaped as it is today (Carlson 2010; McLaren 2003). The most widely known of these oral histories are ‘Transformer’ accounts, but there are also general oral history themes of encounters with other supernatural beings, of a time of terrible sickness and depopulation, of the origin of ceremonial regalia and practices, and of course events that involve only human actors (Carlson 2010; Jenness 1955). The following sections briefly describe the extant oral histories of events involving Tsleil-Waututh and other aboriginal people in Burrard Inlet that shed light on whether or not Tsleil-Waututh was a distinct society prior to contact.

3.3.2.1 Transformations

127. Most published accounts of the activities of the Transformers (*Xexá:ls*) indicate that they did not enter inner Burrard Inlet (meaning east of the Second Narrows) (Carlson 2001:6–7; Jenness 1955). However, given the fact that no Tsleil-Waututh people were interviewed in the early 20th century by ethnographers, it is unclear if the Transformers did not enter the Study Area, or that cultural information has simply been lost.
128. Oral histories regarding the Transformers vary from teller to teller and seem to emphasize the teller's local territory (e.g., Old Pierre emphasizing the Transformers activities in Katzie territory and George Chehalis emphasizing the Transformers activities in Chehalis territory) (Carlson 2001:6–7; Jenness 1955). A few well-known transformation sites do occur near the entrance to the First Narrows at Stanley Park (Carlson 2001:6–7; Johnson 1911; Mathews 1955:86, 404–405).
129. In 2014, Tsleil-Waututh presented traditional oral evidence to the NEB regarding a Transformer story located in the North Vancouver area (Gabriel George 2014). This account described *Xexá:ls* transforming two sisters into the mountain tops now known as The Lions (Gabriel George 2014:99) (**Figure 4**). These sisters had insisted that their father, the chief, invite a war chief from the north to a feast to end their raiding. This oral history is particularly relevant here because it is clearly based in pre-contact times. I have also heard one variant of a Transformer story associated with Siwash Rock at Stanley Park elicited from a Tsleil-Waututh participant in a TUS interview (Tsleil-Waututh 2000). This account differs from the other more well-known accounts of Siwash Rock (e.g., Mathews 1955:86, 404–405). Additionally, Suttles (1963–65; Roy 2011) recorded information that Qey:scam (the stone person) was originally a woman from Inlailawatash who was turned to stone by the Transformer. To me, these fragments of Transformer accounts within Burrard Inlet suggest that the Transformer did travel Burrard Inlet, but that those oral histories have been largely lost.
130. Tsleil-Waututh, like many Coast Salish groups, carry oral histories regarding their ancestors' encounters with supernatural beings and gaining power or ritual prerogatives from them. The significance of these events are the location where they are said to have occurred. I present two examples below: the serpent and the *x^wáyx^way* (*xway-xway*).

3.3.2.2 The Serpent

131. Several Coast Salish Nations share narratives of a dangerous two-headed serpent. *Seelthkey* (Musqueam/Down-River Halkomelem), *siin'lhqui* (Hulqumínum'), *Say Nuth Kway* (Halkomelem), and *sahnoski* or *te sinotkai* (Squamish) are names given to a powerful *stleluqum* (something dangerous, fierce, powerful) in the form of a large two-headed snake (Peter and Hukari 1995:76, 84; Van Eijk 2001:177–197). In Hul'q'umi'num' the word *siin'lhqui* translates literally as 'being afraid of snake' or 'fearful snake'. These beings are thought to possess extraordinary and ambivalent powers and are able to unleash destructive or creative forces. People who encountered these serpents without the proper spiritual training could then be contorted and twisted by the

creature, leading to extreme blood loss and death. However, these serpents also facilitated the acquisition of extraordinary power by shamans who used their new powers for the benefit of the community. Musqueam, Stó:lō, Squamish and Tsleil-Waututh people each have their own versions of the story that are very specific to place and time.

132. The Musqueam serpent stories are located near Musqueam village (Suttles 2004:539-548). The Squamish serpent stories are located in Howe Sound near the mouth of the Squamish River (Barnett 1955:32; Maud 1978b:73-76; Mathews 1955:23, 199; Wells 1966:26). Stó:lō versions of the serpent story occur in a lake near Chilliwack, and various sloughs in the central and upper Fraser Valley (Wells 1970:27-31). While some Squamish individuals have recounted serpent oral histories in Indian Arm (e.g., Dominic Charlie cited in Wells in 1965, 1966), most of the serpent oral histories in Indian Arm are from Tsleil-Waututh individuals (e.g., Dan George in Mortimer (1981:161-163), Herbert (Paddy) George (1988), John L. George in Talbot (1952:2-5)) or people married into the Tsleil-Waututh community (Annie George in Thornton (1966:171-172)) (see also Gabriel George 2014). Most importantly, these oral histories are all located in Indian Arm (**Figure 4**), either opposite the present location of the BC Hydro generation station near Buntzen Lake about 7 km north of Tum-tumay-wheuton (Annie George in Thornton (1966:171-172), John L. George in Talbot (1952:2-5)), or at a place called Kapulpaqua between Deep Cove and Belcarra (Dan George in Mortimer (1981:161-163)).

Figure 4 has been redacted from this version of the report because it contains confidential information.

133. While these aforementioned oral histories all differ slightly in detail the general accounts are very similar (see Gabriel George 2014). Briefly, an enormous serpent comes to block Indian Arm somewhere north of Tum-tumay-whueton (Belcarra), Tsleil-Waututh's primary village site, and kills all those that try to pass it. This is highly significant because Tsleil-Waututh's main fall fishery and source of much of their winter food was located at the north end of Indian Arm at Indian River. Finally, a man who was raised at Tum-tumay-whueton and had undergone special training kills the serpent and opens up Indian Arm for travel again. This man becomes a great chief of Burrard Inlet. These oral histories describe a specifically Tsleil-Waututh version of a widespread theme in Coast Salish culture—the encounters with the serpent. I have come across several different names of the individual reported to have killed the serpent in Indian Arm—Hoquayeton (John L. George and Lillian C. George June 25, 1998:32–34), Whi-why-ten or Quiet*en (Lillian George 1997a:110; Gabriel George 2014), Tewalten (Leonard George pers. Comm. to Jesse Morin, Oct 28, 2013)—it is possible that these oral histories actually describe several such encounters with serpents, rather than a single one (Gabriel George 2014).
134. In her sworn evidence to the NEB, Leah George-Wilson (2014:96) compared the serpent to the TMX Project, as a threat to the Tsleil-Waututh people. The serpent was vanquished by a shxwla:m who had returned to the Tsleil-Waututh community and thus ensured the survival of the Tsleil-Waututh people.

3.3.2.3 The x^wáyx^wáy

135. Another common theme in Coast Salish oral histories describes the origin of the x^wáyx^wáy (*xway-xway*, *Sxwai xwe*, *Whoi-whoi*, *sx^wáyx^wáy*, *sxwayxwey*) mask/dance and ceremony (Carlson 2010). The x^wáyx^wáy dance is a “cleansing instrument” (Suttles 1987:113). According to some accounts, individual Coast Salish groups received the x^wáyx^wáy dance at the beginning of time (Jeness 1934–1936, 1955:11–12). For others, the mask appears to them much more recently (Duff 1952b:123–126; Mohs 1987:103–105). And finally, many groups obtained the x^wáyx^wáy mask/dance through marriage connections with a lineage that had received from other means (McHalsie 2007).
136. Tsleil-Waututh holds an oral history regarding how they obtained the x^wáyx^wáy mask. All Tsleil-Waututh oral traditions about the origin of the x^wáyx^wáy mask/dance complex occur in Burrard Inlet or Indian Arm (**Figure 4**). To my knowledge, the analogous dominant or orthodox oral traditions held by Musqueam and Squamish occur in their respective core territories (Duff 1952b; Mathews 1955:153; McHalsie 2007:117; Wells 1966:12) (note some less commonly recounted Musqueam oral histories of x^wáyx^wáy do occur in Burrard Inlet—see (Rozen 1979:25), and Squamish individuals may claim rights of inheritance of the x^wáyx^wáy from Syetximeltxw, see below). Unlike the Musqueam and Squamish First Ancestors, the Tsleil-Waututh First Ancestors do not arrive bearing the x^wáyx^wáy mask/dance complex.

137. The Tsleil-Waututh versions of the origin of the *x^wáyx^wáy* occur sometime before first contact with Europeans. I present the only published (to my knowledge) accounts of the *x^wáyx^wáy* at Stanley Park below:

The man Syetximeltxw he was falling tree in the lake in that little lake. When the tree hit the ground, and it split from the bottom, the butt, right up the top, and soon as that tree split, and that thing, that rattle we've got is in there with the mask, inside of the cedar. And this man is named Syetximeltxw he get funny, you know, get nervous, and he didn't know what to do, and he run home to Lumberman's Arch. Her run down and he come to Xwayxway, and come and told his wife, 'It's funny happen to me,' he tell his wife. 'As soon as the tree hit the ground it split right in half, right up the top,' he said, 'and there's something in there,' he said, 'a rattle and a mask,' he said. We call that sch'etxw (a mask), see; this here is sch'etxw. And the woman told her husband, 'You better go back. Take something good, your blankets, and go up and get that thing. Get 'em, go get 'em. That thing help you,' that woman say that. This man say, 'Well, all right.' And he got something blanket, and he run back; got back there, and that thing still still going that, yes, that rattle, that shell, you know. And he brought it home, brought it home, and carry a blanket and it covered with the blanket; the woman seem to know. She said somebody help her husband to get everything easy, easy, see. And when he make that canoe, oh I don't know how long he make a canoe and few days he's finished; make another one just a few days; he get big lined up with canoe in Lumberman's Arch. That's his business because that swayxwi help him. He don't know where that come from, but its in the tree. Dominic Charlie (Squamish) quoted in Wells (1987:41).

138. This oral tradition was later recounted by former Elected Chief Leonard George, who indicated that Dominic Charlie was his source for this tradition, and that Dominic Charlie insisted it was a Tsleil-Waututh man (Syetximeltxw, 'See-yik-clay-mulk'), who had found the mask.
139. *An important point of this sworn evidence, reiterated several times by Leonard George, is that while he obtained some of his oral traditions through his Musqueam and Squamish relatives, they specifically indicated to him the origin and context of these traditions to his Tsleil-Waututh ancestors. That is to say, while Musqueam and Squamish people passed these traditions to former Elected Chief Leonard George, they emphasized that they were Leonard George's peoples' traditions (i.e., they were Tsleil-Waututh oral traditions). Leonard George described this process of cultural transmission and the cultural origin of specific oral histories during his sworn evidence during Mathias v. HMTQ (sworn evidence presented on February 10, 1997, p1484):*

Q (Stan Ashcroft): How did you know that it was your people's oral history as opposed to somebody else's, such as Squamish?

A (Leonard George): According to my oral history, they were always very – they were always very precise in who they were talking to,

because native people take great value in their family lineage and generally that lineage is described in the family tree of how people are related to certain people and what areas that they come from, based on – either on their dialect, or their linguistics; the place that they inhabit. So that when you went in a direction away from what was considered your home, you knew who you were heading to and what – what, if any, kind of relationship that you had with them.

140. In this case, former elected Chief Leonard George described how he was taught a Tsleil-Waututh account of the origin of the $x^wáyx^wáy$ from a non-Tsleil-Waututh person:

...as a matter of fact, the, the Seone mask, the Seone has a mask that's attached to it and it's called Sxwai xwe. And it was told to me by Dominick Charley (*sic*) that, and his wife, Josephine, outside the back of their house, that it was a Tsleil-Waututh man and his Squamish wife, who was gifted with the first Sxwai xwe in our inlet. And the man was gathering wood in Stanley Park and, and the tree, the tree that he was next to began to shake and it shook so hard that it fell down, and when it hit the ground it split open and halfway in the middle of the tree was a mask. And he was overwhelmed with that and he went home and told his wife and when they finished talking about it, they planned that he would go back and get it, wrap it up in, in some blankets. He brought it home and when he got home, they talked about it further and they decided that they would put the mask under his sleeping quarters and he did that. And the result of doing that is that he received some, some very vivid dreams, and in the dreams they were telling him that, showing him all the different ways of how the Seone, how the Sxwai xwe mask could be used in time of need for, for our people and – well, that's it (Transcript of sworn evidence provided by Leonard George, February 10, 1997, p1563, Mathias v. HMTQ).

141. Buffalo Joe Mathias (Squamish) described a very similar oral history regarding the origin of the $x^wáyx^wáy$ at Beaver Lake in Stanley Park (Bouchard and Kennedy 1986:65). However, in the Mathias version, two $x^wáyx^wáy$ masks appear from the water for Syetximeltxw and his sister (unnamed), and the specific types of masks are indicated (sawbill duck and raven) (Bouchard and Kennedy 1986:65). It is worth noting that Syetximeltxw appears in other Tsleil-Waututh and Squamish oral histories that corroborate his role as a leader of a village at Stanley Park (i.e., $x^wáyx^wáy$).
142. A recorded oral history of unknown provenience describes the origin of the $x^wáyx^wáy$ at Lumberman's Arch (Stanley Park) and specifically attributes it to a "Tsla-a-wat head man" named Si-tai-a-much (nearly identical to Syetximeltxw, 'See-yik-clay-mulk') (Tsleil-Waututh 2001:102). After this man (a wealthy and skilled canoe maker) obtained the mask from inside of a tree he was felling, he changed his name to "Squai-Squai, for— such was the name of the mask" (Tsleil-Waututh 2001:102). It is worth noting that in another Tsleil-Waututh oral history a man named Quai-Quai/Squia-Aqua (exceedingly similar to "Squai-Squai") becomes a leader of the people of Belcarra and

in such esteem was he held by all the lesser tribes of the Inlet that he became a kind of Great Chief to all the tribes within Burrard Inlet and Indian Arm to Buntzen. It was a sad day when he finally passed away, and in his honour a beautiful and moving "Dance of the Mask" was created, depicting the life and death of this great leader" (Carter 1966:62, interviews with Tsleil-Waututh members Annie George and Paddy (Herbert) George).

143. Based on my current understanding of Tsleil-Waututh's genealogy, this individual Quai-Quai/Squia-Aqua is the earliest named leader of Tum-tumay-whueton (Belcarra) and Sleil-Waututh (Burrard Inlet). Thus, Tsleil-Waututh holds a distinctive oral history regarding how a lineage at their main village, and a leader to the whole inlet came to hold the rights to the $x^wáyx^wáy$.
144. It is my opinion that, in Coast Salish terms, this is profoundly important statement intangible ancestral prerogatives, that is, ritual power. Because $x^wáyx^wáy$ is an inherited possession, tracing historical and genealogical connections to original $x^wáyx^wáy$ owners is an important aspect of validating one's right to use the ritual (see Suttles 1951:55-56, 302, 305, 406-413). It is such knowledge of one's ancestral prerogatives that forms a key pillar of Coast Salish conceptions of class (Suttles 1951:305). In a TUS interview, Tsleil-Waututh individuals indicated that the $x^wáyx^wáy$ came down through the George lineage via Quay-qwI-iten(?) (Tsleil-Waututh 1999:6) (at least the last 6 sequential Tsleil-Waututh hereditary leaders come from this lineage) from the first man who found it at Stanley Park (Tsleil-Waututh 1999). It is important to note that rights to the $x^wáyx^wáy$ are passed maternally. Further, the setting for these oral histories is within Tsleil-Waututh territory at two major ancestral Tsleil-Waututh village sites. It is my opinion that oral history has to be taken as evidence of Tsleil-Waututh as a distinctive group or tribe prior to contact.
145. To my knowledge, the only other recorded accounts of the origins of $x^wáyx^wáy$ in Burrard Inlet recounted are very Spartan in comparison to the previous. In my opinion, like the example above, the August Jack Khatsalano (Squamish) is recounting a specifically Tsleil-Waututh oral history:

Wells: "It is the same mask, like is it?"

Jack: "Same mask, yeah."

Wells: "But different people got the mask, different stories."

Jack: "Yeah. Up the Indian River, fellow was jigging. He got one. He pick it up; when it come up it was a mask. So he put him in a canoe. Well, them fellows forgot it. They never thought about this, this mask. I guess they don't use it anyway (August Jack Khahtsahlano (Squamish), quoted in Wells (1987:177)).

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146. Note that here, August Jack Khahtsahlano is describing the accounts of another people—“*them* fellows forgot it. *They* never thought about this, this mask. I guess *they* don't use it anyway” (emphasis added). To me, it appears that Khatsahlano is describing someone who is not Squamish here, someone who is likely Tsleil-Waututh.
147. Sonny McHalsie (2007:117) provides a similar account, but in his version, the $x^wáyx^wáy$ is hooked by a man fishing from a canoe in Burrard Inlet, rather than Indian River. These may reflect two distinct $x^wáyx^wáy$ accounts (one in Burrard Inlet and one in Indian River), or it may be one account where the location is confused. Some of this confusion appears to derive from the variable use of the term ‘Tsleil-Waututh’, as described above, to sometimes describe the Indian River and the settlement there, and sometimes all of Burrard Inlet and the Tsleil-Waututh Nation included therein.
148. The importance of this discussion to the topic of Tsleil-Waututh as a distinct society lies not in the details of the oral history of the $x^wáyx^wáy$, but rather the locations where those oral histories occur. As described above, the Tsleil-Waututh $x^wáyx^wáy$ oral histories all occur within Burrard Inlet or Indian Arm, Tsleil-Waututh's territory. This distinctive body of oral history again supports the notion that Tsleil-Waututh was a distinct society or group prior to contact.

3.3.2.4 Depopulation and Rebirth

149. Many Coast Salish Nations carry historical narratives of a time of terrible sickness and depopulation prior to the Great Flood (Carlson 2010:86-88)—“a mighty conflagration spread all over the earth, from which but a few people and animals escaped” (Maud 1978a:69–70). Some have interpreted this to be the result of a major volcanic eruption (Maud 1978a:69–70). This event is followed by an extremely long winter, the consumption of all the stored food, and a prolonged starvation (Carlson 2010:85-86). Very few people survived this event, and these individuals reformed their communities. I do not think that these accounts describe the major smallpox epidemic of AD 1782 (Boyd 1990, 1999; Harris 1994) (except perhaps in some highly metaphorical rather than literal way) because other apparently recent oral histories describe populous villages prior to, and just after contact. McLaren's (2003) analysis of sequences in Central Coast Salish oral histories also places these other events earlier to and separate from the contact-era smallpox epidemic. I think these terrible sickness oral histories describe some much earlier calamitous event, perhaps a highly disputed circa AD 1520 smallpox pandemic (Campbell 1990; Dobyns 1966, 1983; Henige 1998; Ramenofsky 1987), or an especially severe winter during the Little Ice Age (McLaren 2003:200–201).

3.3.2.5 The Story of the Wolf

150. Tsleil-Waututh holds a distinctive oral history in the genre described above—depopulation and rebirth—that describes their close and ongoing relationship with the wolf. Variants of this oral history have been recorded on at least three occasions (unknown informant in MacDonald et al. (1998:16–17), unknown informant in Carter (1966:6) (possibly Dan George, Herbert George, or Annie George), and Dan George

cited in Sparks and Border (1989:1)). In each case, everyone had died from some plague or calamity, save for a baby boy. The baby boy is found by a she-wolf and raised as a wolf. As the boy reaches manhood, he leaves his wolf family and travels over the mountains to obtain a bride (in one case this is the Fraser Canyon, in another it is to the "Plains people" and in another it is simply "inland"). The man returns with his wife and repopulates Burrard Inlet. Only the account by Carter (1966:6) provides any timeframe for this event ("centuries ago"):

From these two people centuries ago the tribes, as we know them today began. They are the "Wolf tribe" of the "Tsla-a-wat," and the wolf packs of the head water river are the ancestors of the she-wolf long ago. Little wonder the warm bond that still exists today between these people and the silent wolves of the Valley.

151. I do not think that this oral history describes the AD 1782 smallpox epidemic, but rather describes a much more ancient event (see McLaren 2003). Along similar lines to the Tsleil-Waututh oral histories regarding their origins, these oral histories regarding depopulation and rebirth describe the distinctive identity of the Tsleil-Waututh people *vis a vis* their neighbors. The specific motif that is drawn on again here is that of the wolf, a symbol still used by the Tsleil-Waututh Nation today.

3.3.3 More Recent Tsleil-Waututh Oral Histories

152. There are a wide array of Tsleil-Waututh oral histories that speak to Tsleil-Waututh as a distinctive aboriginal group prior to contact and later. Several of these involve the defense of the Tsleil-Waututh homeland against raiders; I discuss those examples in detail in a later section (*Exclusivity of Occupation*). I provide examples of Tsleil-Waututh oral histories that speak to their unique identity below. These oral histories speak to a distinctive Tsleil-Waututh identity because they are geographically very specific to Tsleil-Waututh territory and they describe practices that, to my knowledge, are unique to Tsleil-Waututh.

3.3.3.1 The Fish Predicting Rock

153. Tsleil-Waututh oral history indicates that there used to be a large rock on a ledge on a cliff in Indian Arm (**Figure 4**). When this rock was in a certain position salmon would be running in Indian River. If the rock was not in this position the salmon would not be running in Indian River (Tsleil-Waututh 1998:44). This oral history is widely known amongst Tsleil-Waututh people and appears repeatedly in Tsleil-Waututh TUS interviews. I do not know of similar "predicting features" among other Coast Salish peoples.

3.3.3.2 The Freshwater Spring at Tum-tumay-whueton

154. Tsleil-Waututh oral history indicates that after the man who killed the serpent at Indian Arm another man (Qwee-qwi-iten) took a tooth or bone from the serpent (a *stl'aleqem*, or

powerful being) and struck a rock in front of the Tsleil-Waututh village of Tum-tumay-whueton at Belcarra (Tsleil-Waututh 1998:32–33, 1999:5; see also Gabriel George 2014). Fresh water sprung from the rock, and at low tide fresh water can still evidently be seen coming out of the rock (**Figure 4**). This event occurred during a drought (Tsleil-Waututh 1999:5), and supplied water for the people of Tum-tumay-whueton (Gabriel George 2014:96). Qwee-qwi-iten was an ancestor of Tsleil-Waututh's former hereditary chief John L. George (Tsleil-Waututh 1999:5–6).

3.3.3.3 Skalkemstak/Silver Falls Taboo

155. Tsleil-Waututh oral history indicates that a waterfall in Indian Arm known as Silver Falls is taboo to look at (**Figure 4**). This is a *stl'aleqem* place that is charged with power (see McHalsie 2007). Bad things happen to people who look at this place; “you get dizzy and all twisted up if you look at it” (Tsleil-Waututh 1998:10). This oral history is widely known amongst Tsleil-Waututh people and appears repeatedly in Tsleil-Waututh TUS interviews. The description of getting dizzy or twisted up is commonly associated with *stl'aleqem* places (Oliver 1966: 1970; McHalsie 2008:128; Van Eijk 2001). These *stl'aleqem* places are spiritually charged places that allowed one to draw “power” from the place in their training to become a *shxwla:m* (e.g., ‘ritualist’, ‘Indian Doctor’). These *stl'aleqem* places were either owned by individual families or protected family resource areas (McHalsie 2007:128).

3.3.3.4 Waut-salk and the Fish

156. Tsleil-Waututh oral history describes an event where their leader Waut-salk (unclear if Waut-salk I or II, see s. 3.5, *Tsleil-Waututh Genealogy*, below) ensures respectful treatment of natural resources (Tsleil-Waututh 2001:105–106; see also NEB 2014). In this account, two boys are mistreating salmon in Indian River. Waut-salk scolds the boys and then the salmon disappear. Everyone is terribly frightened that their primary food source is gone and they plead with Waut-salk to make the fish return, which he does (**Figure 4**). This oral history widely known amongst Tsleil-Waututh people and appears repeatedly in Tsleil-Waututh TUS interviews. This sort of description of special power is typical for those in possession of very strong spirit powers associated with fishing (see Kew 1970; Snyder 1964:211; Suttles 1951:330).
157. During the Tsleil-Waututh presentation to the NEB of their traditional oral evidence, Leah George-Wilson explained the “Waut-salk and the Fish” story in terms of Tsleil-Waututh's stewardship responsibilities. More specifically:

And in that telling, he established Tsleil-Waututh management of our resource, how we took care of the fish, took care of the way that we harvested the fish and ensured that there would be enough for the next generations. He shared Waut-salk's connection to the fish and to the marine life that shows our responsibility to manage that resource (Leah George-Wilson 2014:85, 2823–2824).

3.3.3.5 Waut-salk and the Wolves

158. Waut-salk II was said to have a close relationship with wolves; he kept two as pets and hunted with them (he likely had the wolf as a spirit power as a hunter) (George 1930; Mortimer 1981:78; Suttles 1951:330). Wolves would drive deer to the water's edge for him. Whenever he would make a kill, Waut-salk II would leave meat behind for the wolves (George 1930). Killing wolves is taboo for Tsleil-Waututh people. This oral history is widely known amongst Tsleil-Waututh people and appears repeatedly in Tsleil-Waututh TUS interviews. When Tsleil-Waututh people speak of their relationship to wolves, this example with Waut-Salk is often given.

3.3.3.6 The Death of Waut-salk

159. Waut-salk II (circa AD 1770–1840) was leader of the village of Tum-tumay-wheuton and all the Tsleil-Waututh people shortly after contact. He was killed in battle with “Northern Raiders” from “an overplus of arrow wounds” at Indian River (Chief George Sla-holt, cited in Menzies 1934) and laid to rest on Boulder Island (**Figure 4**). Around AD 1874, Tsleil-Waututh leader James Sla-holt collected the remains of Waut-salk II and other bones there and brought them to the cemetery at Sleil-Waututh (Burrardview, IR No.3) for reburial (see Gabriel George 2014). As the canoe carrying Waut-salk's remains left Boulder Island, two blackfish (orcas or killer whales) appeared and escorted the canoe to Sleil-Waututh (MacDonald et al. 1998:15; Tsleil-Waututh 1999:7). To this day, Tsleil-Waututh people associate whales in Burrard Inlet (a rare occurrence) with death in the community. This oral history widely known amongst Tsleil-Waututh people and appears repeatedly in Tsleil-Waututh TUS interviews (see also Gabriel George 2014).

3.3.3.7 Boulder Island

160. Tsleil-Waututh oral history indicates that Boulder Island was a burial ground (i.e., tree interments) for the chiefs of Tum-tumay-whueton (Belcarra) and that the rest of the Tsleil-Waututh inhabitants of that village were buried at Tum-tumay-whueton (Herbert George 1990:5; Gabriel George 2014). Waut-salk (I and II) and earlier leaders were laid to rest here. This oral history widely known amongst Tsleil-Waututh people and appears repeatedly in Tsleil-Waututh TUS interviews (see also Gabriel George 2014).

3.3.3.8 The Man From Yekw'ts

161. This oral history is Squamish in origin (Dominic Charlie), but recounts events in Tsleil-Waututh territory and villages (Tsleil-Waututh 2001:104). In this oral history, an unnamed man from Yekw'ts on the Squamish River travels to Burrard Inlet via Indian Arm to marry a Tsleil-Waututh woman from Tum-tumay-whueton (Belcarra). It takes this man two years to arrive (he was “training for power” on the way) and when he arrives the woman is married. He then travels to $x^w\acute{a}yx^w\acute{a}y$ (Lumberman's Arch at Stanley Park) to marry the daughter of Syetximeltxw (the man who found the $x^w\acute{a}yx^w\acute{a}y$ mask). The couple are then married at $x^w\acute{a}yx^w\acute{a}y$ and guests from a number of named Tsleil-Waututh villages are invited. This man from Yekw'ts died shortly thereafter and his wife

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remarried a Musqueam man and thus, transferred the rights of the $x^wáyx^wáy$ to Musqueam.⁶

3.3.3.9 Sisba-qo-Chatum—The Port Moody Chief

162. Tsleil-Waututh oral histories describe the only known named leader of a village in Port Moody Arm—Sisba-qo-Chatum or Sisba-qo-Chatum (Carter 1966:68, George 1930). Sisba-qo-Chatum was the brother of Waut-salk I and likely lived around AD 1750–1800 (see s. 3.5, *Tsleil-Waututh Genealogy*, below, and **Figure 4**). Sisba-qo-Chatum captures a woman from either Tum-tumay-whueton (Belcarra) or Sleil-Waututh (Burrardview) (depending on the account) as a slave. Her brothers Zauts-la-chaw and Tus-lunwhoe (sons of Waut-salk I) travel to Port Moody and kill Sisba-qo-Chatum with arrows (placing this event well before about AD 1830 when muskets became common in Coast Salish territory, and very likely before contact).

3.3.3.10 The Plague

163. There are a number of Tsleil-Waututh oral histories that describe both pre- and post-contact plagues. Two distinctive plagues or epidemics are recalled that are separate from a much earlier plague described above (*the Story of the Wolf*). The first plague is recalled in only general terms (often called the “Black Plague”), but is said to have decimated the once numerous Tsleil-Waututh population (George 1997:51; George 1990). The second plague occurred much later (circa AD 1858–62) and is specifically described as a smallpox epidemic almost annihilating the Tsleil-Waututh living at Tum-tumay-whueton (**Figure 4**). According to Tsleil-Waututh oral histories, this second plague resulted in Tsleil-Waututh gifting the stone person, Qey:scam, to their Musqueam cousins for helping them bury their dead (Tsleil-Waututh 1998:21) and then relocating the majority of the survivors to Sleil-Waututh (Burrardview) (John L. George cited in Lugg 1985; George 1997:1507–1508; George 1990:5). The oral histories regarding this second plague and relocation occur repeatedly in Tsleil-Waututh TUS interviews and have been corroborated by Musqueam individuals (Borden 1951; Point 1996b:57–58; Roy 2010:2–4).

164. This interaction between Musqueam and Tsleil-Waututh deserves specific comment. First, this event occurred before Squamish had begun to over-winter in Burrard Inlet in large numbers. Tsleil-Waututh probably went to their nearest neighbors for help, and at that time, their nearest neighbors were Musqueam. Second, after helping the few Tsleil-Waututh survivors, the Musqueam returned home with a present, the stone person Qeysca:m (**Figure 5**). They did not occupy Tsleil-Waututh territory. They recognized Tsleil-Waututh territorial rights.

⁶ It should be note that the $x^wáyx^wáy$ privilege is passed matrilineally. Thus, this Tsleil-Waututh woman brought this privilege to her new Musqueam family. It is not clear if this meant that this particular $x^wáyx^wáy$ (there are several varieties) then left the Tsleil-Waututh community. Another Tsleil-Waututh oral history links Tsleil-Waututh's rights to the $x^wáyx^wáy$ to the individual who killed the serpent.

3.3.3.11 Qeysca:m: The Stone Person

165. Tsleil-Waututh oral histories indicate that the stone person, Qeysca:m, currently residing in the Musqueam Indian Band Council Chambers, originally belonged to Tsleil-Waututh (**Figure 4, Figure 5**, Gabriel George 2014:106). Indeed, Qeysca:m was a Tsleil-Waututh woman from Inlailawatash who was turned to stone (Suttles 1963–65). Qeysca:m may be associated with Transformers (*Xexá:ls*). According to the Tsleil-Waututh oral histories, Tsleil-Waututh gifted Qeysca:m to Musqueam in thanks for burying all of their dead at Tum-tumay-whueton after the second smallpox epidemic (George 1990:5; Gabriel George 2014:106). A Musqueam oral history regarding Qeysca:m ('Kaystsam') indicates that Musqueam obtained it from Tsleil-Waututh as a prize during a victory in a game called Tsukwele (Barnett 1935–36; Roy 2010:1–4; Suttles 1963–65). I have been told by Coast Salish people that Tsukwele was a very rough game for warriors, somewhat akin to capture the flag. Other similar stone figures are among the most valuable possessions of individual Coast Salish First Nations, and are often viewed as living ancestors who were transformed into stone by the *Xexá:ls*/Transformers (Boas 1916:618; Mohs 1987:79; Thom 2005:113).
166. T'xwelátse (or Stone T'xwelátse), the ancestor of the Ts'elxwéyeqw, is perhaps the best known example of this (Schaepe 2007).⁷ Tsleil-Waututh's oral histories regarding Qeysca:m are a local representation of a broader Coast Salish cannon. The fact that these Tsleil-Waututh oral histories are corroborated by another First Nation (i.e., Musqueam), and 'materialized' in the figure of Qeysca:m herself, speaks to the veracity of these accounts and the cultural importance of the objects/people.

⁷ See also <http://www.srrmcentre.com/StoneTxwelatse/1Home.html>.



Figure 5. Qeysca:m the stone woman from Inlailawatash given to Musqueam from Tsleil-Waututh for their aid at Tum-tumay-whueton

3.3.3.12 First Contact

167. A number of Tsleil-Waututh oral histories describe First Contact with the Spanish and English in AD 1792. Leonard George recounted Old Tom Abraham's description of hearing (or describing his father hearing) the booming of the cannons and noted that these "white men" (probably Spanish) were actually darker skinned than the Tsleil-Waututh (see Gabriel George 2014, **Figure 4**). It is said that Waut-salk (probably I) met Captain George Vancouver in AD 1792, and that is why his descendants took the surname 'George' (MacDonald *et al.* 1998:19).

3.3.3.13 The Defeat of the Haida

168. A Tsleil-Waututh oral history describes how a party of Haida raiders was decisively defeated in Burrard Inlet (MacDonald *et al.* 1998:13; Menzies 1934, **Figure 4**). The account cited by MacDonald *et al.* (1998:13) specifies these raiders as Haida, rather than 'Northerners' or Lekwiltok. In this account, the Haida were observed from a look-out near Admiralty Point (just south of the village of Tum-tumay-whueton), and when they paddled through the Second Narrows, their canoes were pummeled with boulders by Tsleil-Waututh warriors stationed along the cliff there. The Haida that made it ashore were slaughtered. After this battle, a great celebration was held at Tum-tumay-whueton.
169. This account can be dated with some accuracy because the Haida only raided Coast Salish territory for a relatively short period of time from the late 1840s to 1862 (Angelbeck 2009:84; Arnett 1999:54; Blackman 1990:255). The Haida were drawn into the area at this time by the establishment of Fort Victoria, and were escorted out of Victoria in 1862 while infected with smallpox. Haida, and other 'northern Indians,' were devastated by the 1862 smallpox epidemic. *It was only during this period that the Haida would visit territory this far south. It follows then that Tum-tumay-whueton was still occupied up until this time (i.e., late 1840s to 1862).*

3.3.4 Ancestral Tsleil-Waututh Villages

170. The following sections briefly summarize some of Tsleil-Waututh's oral histories regarding their ancestral villages. This discussion only includes evidence of villages east of the Second Narrows; Tsleil-Waututh oral histories also describe several villages west of the Second Narrows (e.g., Xway-xway/Lumberman's Arch, False Creek, Jericho, and Gastown), but these are not discussed here (**Figure 6**). The oral history evidence for such villages needs to be considered in association with the archaeological and historical record (discussed in a later section). For the most part, it will be seen that these lines of evidence are mutually reinforcing.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
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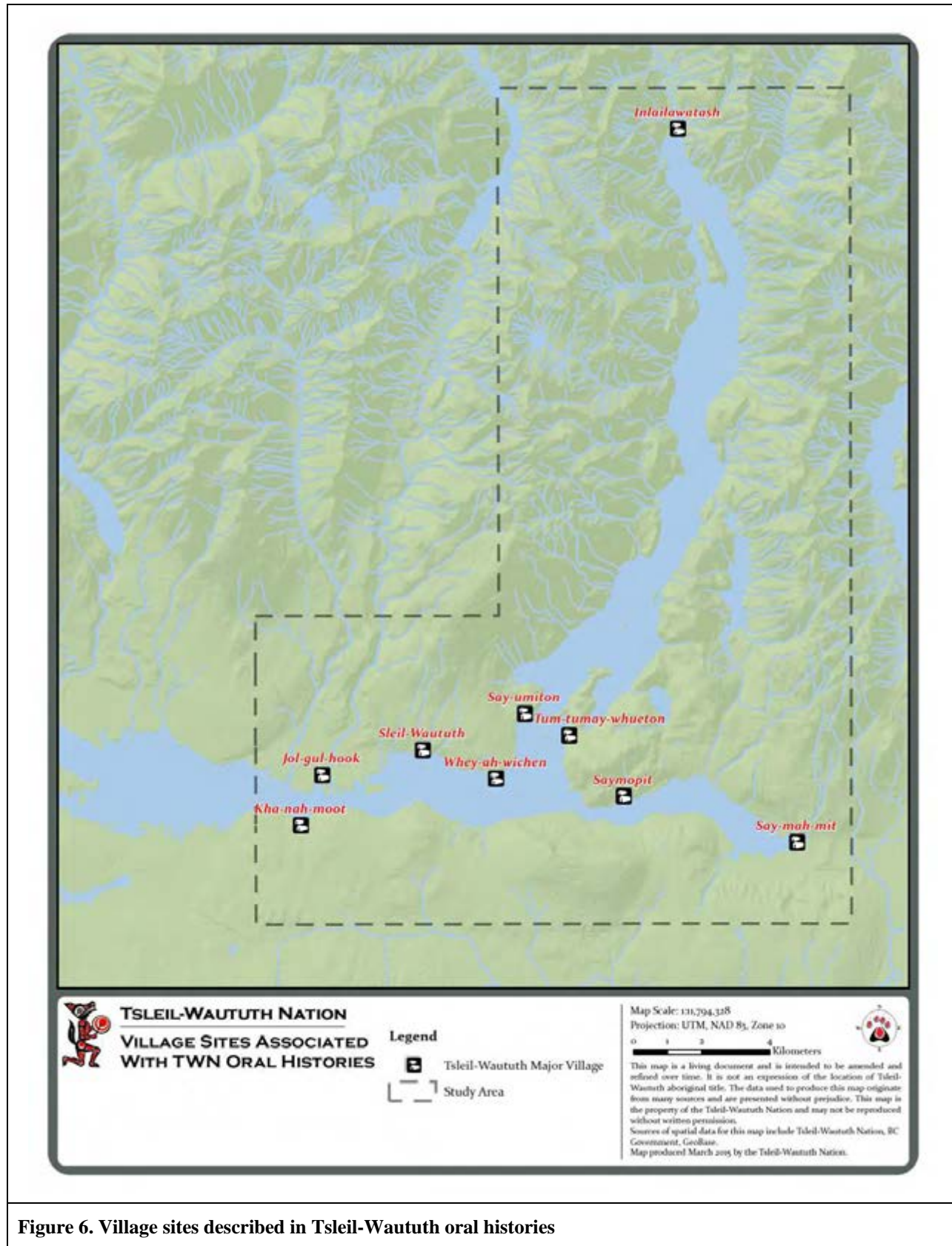


Figure 6. Village sites described in Tsleil-Waututh oral histories

3.3.4.1 Belcarra/Tum-tumay-whueton

- a) Chief George Sla-holt indicated that the Tsleil-Waututh tribe used to be located at “Balcarra” at a village called “Tom-to-mai-etum” (‘big place of people’) (Menzies 1934) (**Figure 6**).
- b) Paddy George indicated that Belcarra is where the Tsleil-Waututh chief used to live and that the original preemptor’s (John Hall) wife was from here (George 1990:1).
- c) The people living at Belcarra moved to Burrardview (IR No.3/Sleil-Waututh) (Paddy George 1990:4).
- d) The “rock at UBC” (Qey:scam) belonged to the Tsleil-Waututh people from Belcarra; it was used in contests of strength (Paddy George 1990:5).
- e) Tsleil-Waututh gave Qey:scam to Musqueam “because they buried the Burrard’s at Belcarra when they all died of ‘Black Plague’” (John and Lillian George 1998; Paddy George 1990:5).
- f) Quai-Quai/Squia-Aqua is the earliest known named leader of the people of Belcarra and “in such esteem was he held by all the lesser tribes of the Inlet that he became a kind of Great Chief to all the tribes within Burrard Inlet and Indian Arm to Buntzen. It was a sad day when he finally passed away, and in his honour a beautiful and moving “Dance of the Mask” was created, depicting the life and death of this great leader” (Carter 1966:62).
- g) Waut-salk I and II lived at Tum-tumay-whueton and were buried on Boulder Island, just offshore (Paddy George 1990).
- h) James Sla-holt was born at Tum-tumay-whueton, lived much of his life at Burrardview/Sleil-Waututh, and was buried at Mission IR No.1 (Tsleil-Waututh Genealogy 2014).
- i) The “Man from Yekw’ts” oral history was said to have been traveling from Yekw’ts (in the Squamish Valley) to Tum-tumay-whueton to marry a woman there (Tsleil-Waututh 2001:104).
- j) Most of the oral histories regarding the serpent in Indian Arm are told in relation to the inhabitants of Tum-tumay-whueton (e.g., Thornton (1966:171-172), Talbot (1952:2-5), Mortimer (1981:161-163)).
- k) Chief Dan George indicated that “legend is that shaman (?) touched rock and water gushed forth or something” and “has rock with spring” (DhRr 6 1972 BC Archaeological Site Form). This account refers to Quai-Quai/Squia-Aqua (above).

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- l) Louis Miranda (Squamish) said that the village was so large here that the people would all yell together at a flock of ducks and stun them out of the air (Bouchard and Kennedy 1986:114).
- m) After a battle with the Haida at Second Narrows, the victorious Tsleil-Waututh warriors return to Tum-tumay-whueton (MacDonald et al. 1998:13).
- n) August Jack Khatsalano (Bouchard and Kennedy 1986:119) provided an oral history of a man finding a *xway-xway* mask near here.
- o) In Tsleil-Waututh's TUS interviews, there are many references to Belcarra as an ancestral Tsleil-Waututh village site (Tsleil-Waututh 1998, 2000, 2011). This appears to be 'common knowledge' among the Tsleil-Waututh community.

3.3.4.2 Port Moody/Say-mah-mit

- a) Paddy George described this Tsleil-Waututh village location at the 'head of Port Moody' (George 1990:6) (**Figure 6**).
- b) Tsleil-Waututh individual, Sisba-qo-Chatun, was the chief of this village (see *Tsleil-Waututh Genealogy* section). This individual was the brother or cousin of Chief Waut-salk (I), chief of Tum-tumay-whueton (George 1930). In one version of this oral tradition, Sisba-qo-Chatun is described as a 'lesser chief' in relation to Waut-salk (Carter 1966:68). Sisba-qo-Chatun was killed by Zauts-la-chaw and Tus-lunwhoe.
- c) Several TUS interviews with Tsleil-Waututh community members indicated that there were one or more Tsleil-Waututh villages in the Port Moody area.

3.3.4.3 Strathcona/Say-umiton/DhRr 18

- a) The Tsleil-Waututh name for this place is Say-umiton (Lillian George 1991) meaning "place of good water" (Lepofsky et al. 2007) (**Figure 6**).
- b) Chief Dan George indicated "[t]his area was an early waters source for the Indians at Belcarra (Lake was taboo)" (DhRr 18 BC Archaeological Site Form 1972), possibly explaining the source of the name.
- c) Paddy George indicated that this location was an ancestral Tsleil-Waututh village location and its inhabitants were killed in a "Black Plague" (1990:6). This plague could refer to any of the three major periods of epidemic to sweep the region (1780, 1830 or 1860), but most likely it refers to the circa 1780 or 1860 epidemics (see Harris 1994).
- d) Paddy George (1990) provided the name Si7em7úmet for this village—very similar to both Say-umiton and Say-mah-mit (the name typically used by Tsleil-Waututh for Port Moody).

- e) It is notable that while other First Nations have a name for the island (composed of white granite) in front of this village (e.g., Spucka-nay , 'white rock'), no other place names for the village itself or any oral histories regarding the village located here have been presented by other First Nations (e.g., Bouchard and Kennedy 1986:132).

3.3.4.4 Cates Park/Whey-ah-wichen

- a) Chief Dan George provided the name Whey-ah-wichen for this place and translated it as 'facing both directions' (BC Archaeological Site Inventory Form for DhRr 8, 1972) (**Figure 6**).
- b) Chief Dan George recounted that this site was said to be the primary village of the Tsleil-Waututh before Tum-tumay-whueton (Belcarra) (BC Archaeological Site Inventory Form for DhRr 8).
- c) Chief Dan George noted that battles had taken place at Whey-ah-wichen, a fortified palisade and tower were built at or near the site, and that there was a wooden cannon that accidentally blew up during use (BC Archaeological Site Inventory Form for DhRr 8).
- d) Several TUS interviews with Tsleil-Waututh community members indicated that there was an ancestral village site at Roche Point/Cates Park. This appears to be 'common knowledge' among the Tsleil-Waututh community.

3.3.4.5 Burrard IR No.3/Sleil-Waututh

- a) Sleil-Waututh was "always a village site" (George 1983:26) (**Figure 6**).
- b) Sleil-Waututh was described as an old village site that extended from IR No.3 to Roche point, inclusive of the shipyards in between (Tsleil-Waututh 2000).
- c) Note other names for the village—Tat-ose ('facing out', George 1968) átsenach ('bay', Squamish, "a relatively recent name" (Bouchard and Kennedy 1986:133)), k'iyáxn ('fence', 'palisade', Squamish).
- d) Tsleil-Waututh people from Belcarra moved here following the second smallpox epidemic (John L. George cited in Lugg 1985).
- e) Zauts-la-chaw and Tus-lunwhoe, the two Tsleil-Waututh men who killed Sisbago-chatun, were from Sleil-Waututh (George 1930).
- f) There was a large fort or palisade here; James Sla-holt lived in it for some time (Herbert George 1990:4; Thornton 1966:168).
- g) A battle with the Haida occurred here. The Haida were slaughtered and left on the beach (Gabriel George 2014).

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- h) There were lots of battles with northern raiders here; “that’s why there are so many arrowheads on the beaches here” (Tsleil-Waututh 2000).
- i) There were ghosts here from the northerners killed in battle here (Tsleil-Waututh 2000).

3.3.4.6 New Brighton/Khah-Nah-Moot

- a) There was a Tsleil-Waututh village here (George 1990:3) (**Figure 6**).
- b) Tom Abraham used to live here (he later moved to Seymour IR No.2, then Sleil-Waututh IR No.3) (George 1990:9).
- c) This village was occupied until ‘the coming of the white man’ (Joseph Thomas, cited in Mathews 1955:441).
- d) This may be a Tsleil-Waututh First Ancestor site (Joseph Thomas, cited in Mathews 1955:441).

3.3.4.7 Seymour Creek/Jol-gul-hook

- a) The earliest known chief of this village was Souwhna-am or Sis-who-na-um; Souwhna-am/Sis-who-na-um was the brother or cousin of Waut-salk II (AD 1770-1840) (Ignatius Sunrays George notes, n.d., see s. 3.5, *Tsleil-Waututh Genealogy*, below, and **Figure 6**).
- b) Around the turn of the 18th century, Souwhna-am was captured by ‘northern Indians’ (probably Lekwiltok) and enslaved. After many years in captivity, Souwhna-am was given his freedom and returned to live at Sleil-Waututh (Ignatius Sunrays George notes, n.d.).
- c) This was an old Tsleil-Waututh village site (Tsleil-Waututh 2000).
- d) Tsleil-Waututh people had houses here (Lillian George 1997). Tsleil-Waututh families went to fish here (Tsleil-Waututh 1999:9).

3.3.4.8 Caraholly Point/Say-mopit

- a) Tsleil-Waututh oral histories indicate that there used to be a Tsleil-Waututh village near what is now known as ‘Imperial Oil’ (Ioco) (George 1990:2) (**Figure 6**).
- b) This is one of the three Tsleil-Waututh villages that Paddy George stated existed in the Port Moody area (George 1990:7).
- c) There used to be a village at the “entrance to Port Moody” called “Saymopit”; the people of Saymopit were set apart because they weren’t ambitious (John and Lillian 1999:40). Note, being ‘not ambitious’ or ‘lazy’ is the ‘polite’ or ‘upper

class' Coast Salish way of describing low class people (Carlson 2010). This corroborates Jenness' (1955:86) account of a stacem (vassal) village at Ioco, "which was tributary to the Squamish Indians of North Vancouver." In my opinion, the term "Squamish" here actually refers to the Tsleil-Waututh; there were no Squamish villages in North Vancouver when Saymopit was occupied, only Tsleil-Waututh villages.

- d) The name "Salkaten" is traditionally from the village of Saymopit (Tsleil-Waututh 1999:40) and now occurs across much of the Salish Sea.

3.3.5 Oral History Evidence Summary

171. Unlike many Coast Salish First Nations, no professional anthropologists ever undertook detailed studies of or documented Tsleil-Waututh culture. This has resulted in a relative dearth of well-documented oral history information compared to other Coast Salish groups. Despite that fact, Tsleil-Waututh oral histories have been recorded in a number of contexts, and, as presented above, these provide a unique window into Tsleil-Waututh's past and culture. More specifically, it is clear that many of these oral histories follow a general Coast Salish cannon, especially regarding creation, encounters with supernatural beings, and depopulation and rebirth. These accounts are typically Coast Salish, but are very specific to Burrard Inlet and Tsleil-Waututh people and culture.
172. These oral histories provide evidence for considerable time depth of Tsleil-Waututh as a distinct Coast Salish group within Burrard Inlet. These oral histories describe the actions of Tsleil-Waututh ancestors in the centuries before contact, at contact, and into the historic era. The additional Tsleil-Waututh oral histories described above describe the actions of specific Tsleil-Waututh people and leaders that broach the pre-contact and contact eras and thus provide evidence in continuity of Tsleil-Waututh occupancy of Burrard Inlet spanning the pre-contact and contact eras. And importantly, to my knowledge, no other First Nation holds a comparable body of oral histories relevant to eastern Burrard Inlet. All of this oral history evidence strongly supports the conclusion that the ancestors of the Tsleil-Waututh Nation lived on, and relied on the resources of the Study Area to the exclusion of others prior to contact. There is no information in this oral history evidence to suggest that Tsleil-Waututh people came to settle in the Study Area in recent history. Instead, all of this oral history evidence supports the conclusion of a very ancient Tsleil-Waututh association with the Study Area, probably extending prior to contact (AD 1792) by many centuries at least.
173. I should note that my conclusions regarding Tsleil-Waututh's history and identity are completely at odds with Dorothy Kennedy's (2000:142). Kennedy (2000:142) begins a review of Tsleil-Waututh's oral histories beginning at the time of Waut-salk I (who she mistakenly calls Sla-holt), and concludes that this abrupt beginning left "an earlier presence in the Inlet ambiguous, and certainly irrelevant, to the contemporary construction of an independent Tsleil-Waututh identity." As Kennedy was an expert witness for Squamish Nation in *Mathias v. HMTQ*, she was almost certainly aware of the Tsleil-Waututh Origin Story as provided in sworn evidence by Leonard George (1997)

during Mathias and cited in full above. Similarly, as co-author (with Randy Bouchard) of *Squamish Indian Land Use and Occupancy* (1986), she was aware of several of the Tsleil-Waututh oral histories described above.

174. Purposeful exclusion of pertinent and new evidence from consideration is not normal practice in anthropology or any related discipline. Typical practice in anthropology and any related discipline would be to review and assess all relevant evidence. Such selective presentation of relevant evidence inevitably leads to inaccurate conclusions.

3.4 Tsleil-Waututh's Language

175. Previous to contact, Tsleil-Waututh spoke a dialect of Down River Halkomelem, often called *Hun'qumyi'num* (Alexander and Grier 2000:7–8; Suttles 1990; Tsleil-Waututh 2004:60–61). Halkomelem consists of “a long continuum of intergrading dialects showing considerable diversity, but with mutual intelligibility throughout” (Thompson and Kinkade 1990:37, see also Gerdts 1977). Tsleil-Waututh's traditional language and shift from *Hun'qumyi'num* to Squamish then English was described by elected Chief Leonard George (George 1997:1510–1511):

Q (Stan Ashcroft): Prior to this happening, were you ever told in your oral history what language your people spoke?

A (Leonard George): The language of the Tsleil-Waututh people in itself, the term Tsleil-Waututh, it comes from the linguistic body of Halkomelem. And the dialect of Halkomelem that we speak was known as Tsleil-Waututh. My grandfather, Wautsuk, and Sla-hult and all of my – all of my ancestry come from that language. It's the same linguistic body that the Musqueam people come from and approximately 56 other tribes of Coast Salish people is held together by the Halkomelem language. The distinctiveness of each of these tribal groups falls into their dialect that they spoke.

Q (Stan Ashcroft): So, was your people's dialect different from the Musqueam?

A (Leonard George): Absolutely.

Q (Stan Ashcroft): Now, after the great plagues what happened with your language?

A (Leonard George): From my oral history the change of our language – and I may say it today, that our dialect of Halkomelem is gone, its no longer there. We can learn from the linguistic body of Halkomelem still because there are many people who are still fluent in Halkomelem, but it began to – it began to move from us during the marriages and the renewal of our people through marriage into the Squamish people. Because as I stated earlier, my last three grandmothers consecutively were of Squamish ancestry. And using Annie as an example, my

understanding from my mother was that all that she spoke was Squamish. My grandfather could speak Halkomelem and Squamish, of course, and he could speak many, many different dialects of Halkomelem. But the mother is the keeper of our life and she handles the transformation of our teachings of your history and your philosophy through to the children, and through the teachings the Tsleil-Waututh people, because of daily contact and rearing would have come through my grandmother. And the discussions between my grandfather and my grandmother would have to have taken place in Squamish, being that my grandmother couldn't speak Halkomelem. As a result, my father and his six brothers and their sisters all grew up speaking Squamish.

176. Prior to about 1910, before Down-River Halkomelem (*Hun'qumyi'num*) was so-named by linguists/anthropologists, it was often called "Cowichan" (Suttles 1990:473, 2004:xxiv). Later, and more colloquially, Down-River Halkomelem was often simply referred to as "Musqueam" (see Kew 1970:9–10). This trend has really continued essentially to the present, as Suttles' (2004) final publication was titled *Musqueam: A Reference Grammar of Downriver Halkomelem*. This conflation of Musqueam the people versus Musqueam as a Down-River Halkomelem dialect causes considerable confusion in interpreting historical records wherein people or places are described as "Musqueam." Examples of such confusion are described in detail in later sections.
177. Wayne Suttles', perhaps the most influential anthropologist and linguist to have worked extensively with Coast Salish peoples (1996a and 1996b), etymological research on place names indicated to him that Burrard Inlet was occupied by Halkomelem speakers previous to the migration of the Squamish into the area in the middle of the 19th century. Suttles (1996a, 1996b) never explicitly named these previous inhabitants as Tsleil-Waututh or Musqueam people. While the Tsleil-Waututh dialect was linguistically most closely related to other *Hun'qumyi'num*-speaking groups such as Musqueam, Katzie, Kwantlen, and Tsawwassen, Squamish is most closely related to Nooksack and Lushootseed in Washington State (Thompson and Kinkade 1990:37). It is worth emphasizing that from an anthropological perspective, shared language implies a history of much greater social interaction and probable genetic affinity with co-speakers rather than with speakers of another language (see Renfrew 1987). Gerds (1977:32) notes that within Downriver Halkomelem, she was able to identify sub-dialects from each community she had linguistic information on (e.g., Musqueam, Katzie and Kwantlen). If she had linguistic data for Tsleil-Waututh and Tsawwassen, it is possible that she would have identified a sub-dialect there as well.
178. Along these lines, ethnographer/anthropologist Wilson Duff (1952a:36–37) indicates that there were only two non-Stalo (probably meaning not living on the Fraser River, but rather living along the coast proper) First Nations groups that spoke Down River Halkomelem: the Tsawwassen and the *təmtəmi'ux^wwtən*. As is discussed in detail below, Tum-tumay-whueton was the largest Tsleil-Waututh village and headquarters. I provide Duff's (1952a:37) description in full below.

19. təmtəmi'ux^wwtən

This is the name given by a Musqueam informant for the group that formerly inhabited Burrard Inlet. It was said to speak Halkomelem and be closely associated with the Musqueams. Squamish occupation of Burrard Inlet he considered to be post-white.

The whole question of pre-white occupation of Burrard Inlet needs further investigation. Barnett gives evidence that both Squamish and Musqueam claimed summer camping areas in the inlet, but mentions no permanent occupants (ms. pp.31, 34). It is possible, of course, that there were no permanent occupants, but from reports such as the one I obtained, I am inclined to the opinion that a Halkomelem speaking group closely allied to Musqueam formerly lived in Burrard Inlet.

179. It appears that Duff's (1952a) Musqueam informant had used the name of the primary Tsleil-Waututh village—Tum-tumay-whueton—to apply to the Tsleil-Waututh Nation. Based on the archaeological evidence presented below, Burrard Inlet was permanently, rather than seasonally, occupied. This information was only presented in Duff's (1952a) Masters' Thesis and not his more widely available and often-cited publication (1952b). Carlson (2010:100) picks up this line of evidence from Duff (1952a), referring to the 'Tamtami'uxwtan' as the original Halkomelem-speaking group in Indian Arm and suggests that the 'Tamtami'uxwtan' later merged with a Lil'wat or St'at'imc group (or individuals) following the great plague to form the basis of the Tsleil-Waututh Nation in the centuries before contact. This may account for the apparent dialectical difference in Halkomelem formerly spoken by Tsleil-Waututh. As will be described below, Tsleil-Waututh oral traditions do not distinguish a separate 'Tamtami'uxwtan' people, or distinguish the Tsleil-Waututh inhabitants of Tum-tumay-whueton as distinctive from Tsleil-Waututh living elsewhere. They do however, recall an event whereby the sole survivor of a plague traveled to the 'Lillooet area' and returned with a bride to repopulate the Tsleil-Waututh homeland (see Gabriel George 2014). It is possible that Tsleil-Waututh were commonly referred to as the 'Tamtami'uxwtan' by Stó:lō peoples in reference to what was the main village of the Tsleil-Waututh for centuries before about 1850–60. The key point is that all these lines of evidence support the conclusion that previous to contact, Tsleil-Waututh spoke Down-River Halkomelem, not Squamish. The social and cultural significance of this is elaborated below.
180. The fact that Tsleil-Waututh were Halkomelem speakers bears directly on their history, as well as to their social, cultural, and economic connections to the Fraser River and other Halkomelem-speaking First Nations along the Fraser River, and to their larger nested Coast Salish identity. Down-River Halkomelem in particular, aside from the Tsleil-Waututh and Tsawwassen, is restricted to the Lower Fraser River (after Suttles 1990). Shared language implies one of two historical conditions: shared ancestry (i.e., genetic descent), and/or particularly close social relationships (usually paired with intermarriages) (Foster 1996; Renfrew 1987). With regards to Tsleil-Waututh, both these historical conditions hold. Tsleil-Waututh people certainly share ancestral/genetic

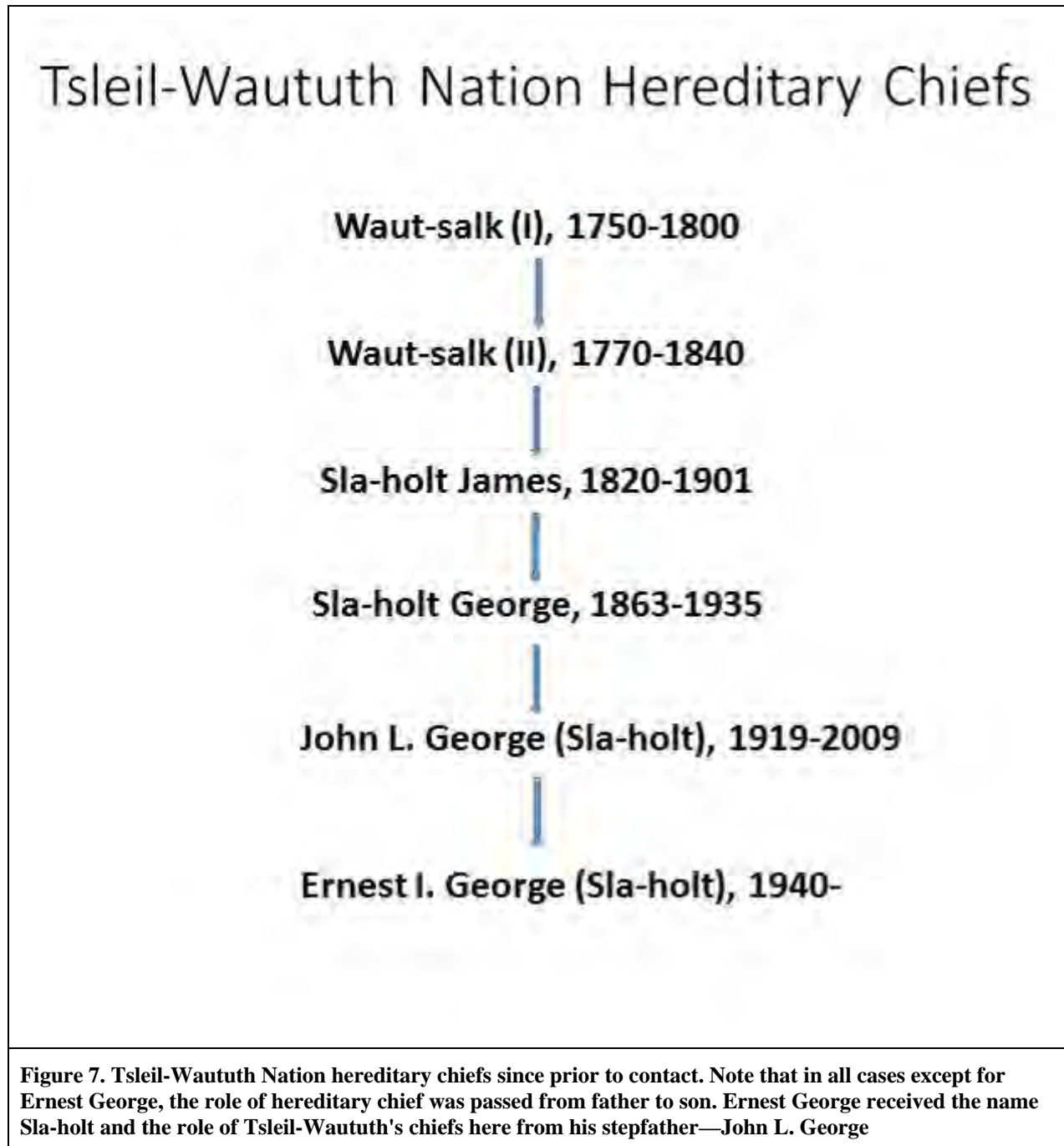
connections to other Coast Salish peoples, especially Halkomelem-speakers, and a long history of social relationships and interactions with other Halkomelem-speaking peoples.

181. Following the second bout of smallpox to strike Tsleil-Waututh communities around AD 1858–1862 (Boyd 1999:22), Tsleil-Waututh increasingly began to use the Squamish language. Tsleil-Waututh oral traditions place the second wave of smallpox after AD 1840 (the death of Waut-salk II), but before AD 1863. Adoption of the Squamish language was largely a result of an influx of Squamish people into Burrard Inlet, and increasing intermarriage of Tsleil-Waututh men and Squamish women. The hereditary line of Tsleil-Waututh chiefs in particular married many Squamish women, since the time of Waut-salk II (~AD 1770–1840, who was polygamous and had four wives). It is notable that of Waut-salk II's four wives, three of the four were from Halkomelem-speaking areas (Cowichan, Musqueam and 'Big River' (Fraser River)) (see s. 3.5, *Tsleil-Waututh Genealogy*, below). This implies a far greater concern for family alliances and resource access towards the lower Fraser River, than for the Squamish Valley or Howe Sound.
182. While many of these older individuals were bilingual, speaking Halkomelem and Squamish, the Squamish mothers tended to use Squamish when speaking to their children, especially after the deaths of their husbands. Thus, each successive generation came to increasingly understand Squamish at the expense of Halkomelem. This, combined with the colonial context of increasing use of English, the ignorance of colonial officials to the complex ethnology of the area when setting aside Indian Reserves (discussed in detail in later sections), and the severe repression of indigenous languages in residential schools, led to a rapid loss of the use of Halkomelem by Tsleil-Waututh.
183. In summary, the vast majority of available evidence indicates that prior to the late nineteenth century, Tsleil-Waututh spoke a distinct dialect of Down-River Halkomelem. Only after the late nineteenth century did Tsleil-Waututh people begin speaking Squamish. As of yet, there have been no linguistic analyses of Tsleil-Waututh place names, 'Indian names' or recorded oral histories. However, based on an etymological analysis of Squamish and Musqueam place names, the foremost Coast Salish linguist, Wayne Suttles (1996a and 1996b) determined that Halkomelem was spoken in Burrard Inlet prior to Squamish. This corroborates Tsleil-Waututh's oral histories regarding their traditional language.

3.5 Tsleil-Waututh's Genealogy

184. In this section I summarize Tsleil-Waututh's genealogical information with the goal of identifying whether or not they were a distinctive group at contact and AD 1846. To do this, I relate a brief synthesis of the Tsleil-Waututh genealogy based on the genealogy constructed to date (February 26 2015) and supporting documentary records. Tsleil-Waututh's genealogy of named chiefs likely reaches back to the mid-1600's or earlier, but the direct connections between individuals is vague until about AD 1750. By no means can this information be taken to be an exhaustive documentation of all individuals

who lived through the period in question. On the other hand, it makes the most of relatively sparse information to document genealogy that is as accurate as possible without over-reaching the available evidence. It must be stressed that the decade before contact (smallpox epidemic at AD 1782) was perhaps the most devastating in Coast Salish history and a major disruption in the transmission of oral histories and genealogical information should be expected with a 90% mortality.



185. Nearly all living Tsleil-Waututh people can trace their ancestry to Chief Waut-salk (I) (~AD 1750–1800), or are married to one of his offspring. The fact that nearly all living Tsleil-Waututh people can trace their ancestry to Waut-salk (I) speaks to how closely the Tsleil-Waututh Nation was pushed to the brink of annihilation due to AD 1782 smallpox epidemic and the following decades of raiding. Waut-salk (I) is described in Tsleil-Waututh oral histories as the chief of all of Burrard Inlet and all Tsleil-Waututh people whose primary residence was at Tum-tumay-whueton. Waut-salk (I) married a Musqueam woman named Whi-whyloat and had the following children (~AD 1770–1800): Siswhonaum, Zauteslacha, Tasawlonwhoe/Ha-ma-que-ya, Jut-wha-lum, Waut-salk (II), and a daughter (name not known) (Tsleil-Waututh Genealogy 2014). Waut-salk (I) also had two brothers, or perhaps cousins (note in Halkomelem, the kinship term for brother also includes first cousins) named Sisba-go-chatum (Sisb-go-Chatun) and Souwh-layw-chatun. Sisba-go-chatum was a “lesser chief” of a village in Port Moody (Carter 1966:68). Waut-salk (I) is said to have met George Vancouver in June 1792. He died around AD 1800 and was interned on Boulder Island.
186. Souwh-layw-chatun (~AD 1750–1800, brother/cousin of Waut-salk I) had a son who was probably alive at contact named Qa-naywlel-waut. Qa-naywlel-waut married Qua-tun-kium (George, n.d.). Siswhonaum (~AD 1790–1870, son of Waut-salk I) became the leader or chief of the village at Jol-gul-hook/Seymour Creek, until he was captured in a raid by northerners (George 1930). His son, Siskayhaylum/Tom Abraham (~AD 1813–1924), married a woman named Sarah, and his names appear on numerous census records and was a witness at the Stanley Park Squatters trial (AD 1923). Siswhonaum's other son was named Sis-yamaku or Seamouk (~AD 1810 to unknown). Seamouk married Sisya-ama and had the following children: Sawana, Zauts-lacha, and Ta-saw-lonwhoe. These individuals also appear on the AD 1876 Blenkinsop Census. Therefore, it is near certain that all these individuals (Siswhonaum, Siskayhaylum, Seamouk, Sarah, Sawana, Zauts-lacha, and Ta-saw-lonwhoe) were alive and living in and off their territory, including the Study Area, around AD 1846.
187. Waut-salk (II) (~AD 1770–1840) took over the leadership of the Tsleil-Waututh people following the death of his father, Waut-salk (I), around AD 1800. Waut-salk maintained numerous residences around the Inlet (perhaps as far away as Musqueam), but his primary residence was at Tum-tumay-whueton (George 1990). Waut-salk had four wives, one from Cowichan, one from Musqueam, one from Squamish (N-Sie-Tsar or Siseytseul), and one from the Fraser River (details unknown). It is notable that 3 out of 4 of Waut-salk's wives were from other Halkomelem-speaking groups. This suggests two things: 1) a stronger social affiliation with other groups living along Fraser River rather than the Squamish Valley, and 2) a stronger motivation for establishing and maintaining rights of resource access to the fisheries of the Fraser River rather than the Squamish River. Waut-salk (II) died around AD 1840 in battle at Inlailawatash (Indian River) (Menziess 1934). He was interned on Boulder Island then relocated to Sleil-Waututh around AD 1874. His tombstone is clearly visible in Tsleil-Waututh's cemetery on IR No.3.

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188. Waut-salk (II) and his wives had the following children: Tewalten (unknown, lived to 20), James Sla-holt (~AD 1820–1901), Sisy-a-ama (~AD 1800 to unknown), Siswh-mail-towh/Jim Leo (~AD 1800 to unknown), Unsakaloat/Catherine (~AD 1830–1907). Sisy-a-ama married Seamouk and had three children. All these individuals were alive and living in their traditional lands at AD 1846.
189. Unsakaloat/Catherine married Thomas Stareten (Squamish) and had five children born after AD 1846. James Sla-holt married Marie Quall-tanaut (Squamish), Nsarkaleston, Kouessiat, and Tektenat. All of the children from these relationships were born after AD 1846. The vast majority of present Tsleil-Waututh people trace their descent to either Unsakaloat/Catherine (i.e., most of the Thomas Family) and James Sla-holt and his wives (i.e., the George Family and Guss Family).
190. James Sla-holt inherited the hereditary leadership of the Tsleil-Waututh community from his father, Waut-salk (II). He also maintained multiple houses around the Inlet, including: Sleil-Waututh, Inlailawatash, Mission, and perhaps at Musqueam. James' son, George Sla-holt (AD 1863–1935), became hereditary leader after James' death in 1901. He too maintained multiple residences around the Inlet, including: Sleil-Waututh, Inlailawatash, Mission, and Musqueam. George Sla-holt's son, John L. George (AD 1919–2009) became the hereditary leader (and took the name Sla-holt) after his father George's death in 1935. After John L. George's death, his stepson, Ernest Ignatius George (AD 1940 to present), became Tsleil-Waututh's hereditary leader and took the name Sla-holt.
191. The Tsleil-Waututh genealogy describes a chain of descent from Waut-salk (I) (~AD 1750-1800), chief of Tsleil-Waututh and Burrard Inlet whose primary residence was at Tum-tumay-whueton to present Tsleil-Waututh Hereditary Chief Ernest Ignatius George (born 1940), and the most current Tsleil-Waututh band members. James Sla-holt, grandson of Waut-salk I, was the leader or chief of the Tsleil-Waututh community at the time of reserve allocation in AD 1869 (Lauders 1869a), and is the signatory of a number of petitions dating to the 1860s (e.g., Petition to Governor Seymour 1864, 1867, and 1870). Additionally, a pre-contact 'chief' related to Waut-salk (I) can be associated with a village in Port Moody (i.e., Sisba-go-chatum), and a post-contact but pre-sovereignty 'chief' descended from Waut-salk I can be associated with a village at Seymour Creek (i.e., Siswhonaum). To my knowledge, no other First Nation's genealogies can identify 'chiefs' or leaders of villages in eastern Burrard Inlet around the times of contact or sovereignty. Based on this genealogical evidence, one must conclude that the current members of the Tsleil-Waututh Nation are descendants of a distinctive group of people that occupied eastern Burrard Inlet at contact and sovereignty.

3.6 Tsleil-Waututh's Place Names

192. Tsleil-Waututh has a relatively rich inventory of place names within the Study Area, many of which are held by Tsleil-Waututh only and have never been published (**Figure**

- 8). I emphasize that given that no professional ethnographer has ever worked with Tsleil-Waututh people to record place names in the early 20th century or earlier. This is a dense body of place names for a small relatively small area. If an ethnographer, linguist, or historian had actually worked with Tsleil-Waututh people in earlier times, many more such place names would have been recorded. **Figure 8** does not include indigenous place names from non-Tsleil-Waututh sources (i.e., Musqueam, Squamish or Stó:lō sources) (Mathews 1955; Suttles 1996a, 1996b). Some of these place names correspond to village locations, resource harvesting sites, supernatural creature locations, and to other general geographic features.
193. Perhaps most importantly, these likely include a name recorded by the Spanish in AD 1792 as the aboriginal name for Burrard Inlet.

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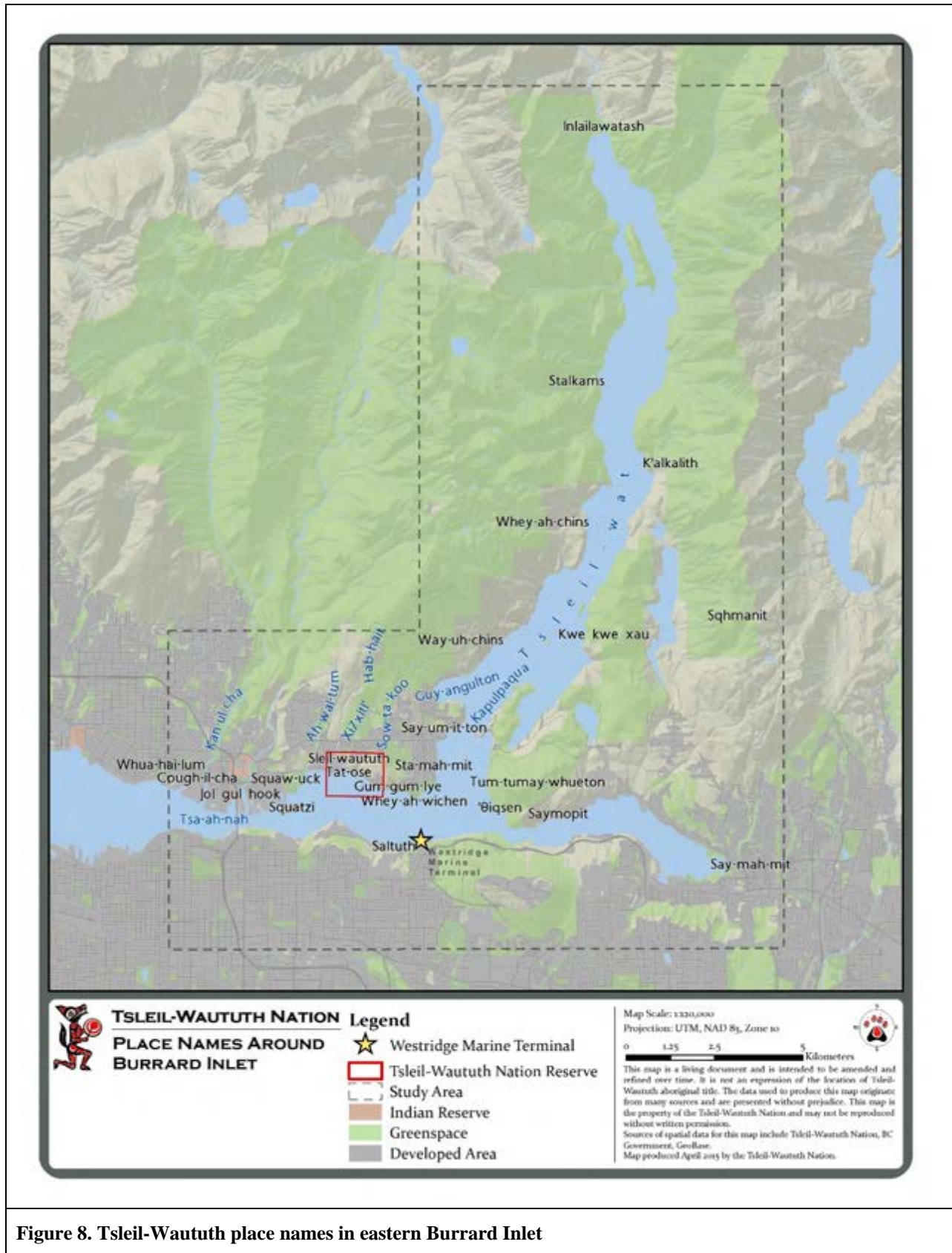


Figure 8. Tsleil-Waututh place names in eastern Burrard Inlet

194. Before delving into this discussion of Tsleil-Waututh place names, I note that I have no formal training in linguistics, and I am not analyzing any linguistic data here. Instead, I am simply providing a body of Tsleil-Waututh place names, commenting on their geographic distribution, and relying on the conclusions of professional linguists. Linguistic data such as place names is commonly used by anthropologists and archaeologists in interpreting the social and cultural connections of indigenous peoples to the landscape.
195. Place names are important because they demonstrate a deep local knowledge of, and cultural connection to, the landscape—"how people know their country" (Basso 1996:xvi). "Place names are a part of a people's relationship to the land; for indigenous peoples, they can also provide proof of ties to traditional lands" (Richardson and Galloway 2011:201). Named places remind people of past events, the availability of local resources, and features geographical or navigational importance (McHalsie 2001:134). Place names can change, and multiple names can exist for a single location (McHalsie 2001:134). Such patterns are evident in the body of Tsleil-Waututh, Musqueam, and Squamish place names described below. For example, the Tsleil-Waututh village of Sleil-Waututh (IR No.3) is known in Musqueam as ?ácnáč ('bay'), and in Squamish as Haaats-nich ('bay'). This is a physical description of the landscape here (i.e., a bay) rather than a highly culturally-loaded term connoting the history of events or people there. Such trends are evident in a number of the Squamish and Musqueam place names in eastern Burrard Inlet; they describe physical setting of the place as one would approach it by canoe (e.g., 'white rock', 'bay', 'stockade', 'arbutus trees', 'maple trees'), rather than any substantive cultural meaning associated with experiencing the place.
196. In some cases, the spatial distribution of place names from different languages or dialects demonstrates a clear boundary between adjacent First Nations (e.g., Sterritt et al. 1998:70–71). This is not the case with Tsleil-Waututh or with Coast Salish nations more generally (Richardson and Galloway 2011:203). Instead, a clinal distribution of place names is evident, meaning that east of the First Narrows, the frequency of both Squamish and Musqueam place names drop off dramatically towards the east. Suttles (1996a) and Galloway (1996), focusing primarily on western or outer Burrard Inlet, independently provided evidence of extensive intermingling of both Halkomelem and Squamish place names. But Suttles (1996a and 1996b) concluded that the original inhabitants of Burrard Inlet spoke Halkomelem, and that Squamish names were introduced more recently. This evidence is entirely consistent with a late Squamish relocation to Burrard Inlet from the Squamish Valley.
197. The overlapping nature of place names from Squamish and Musqueam within Tsleil-Waututh core territory is best explained in relation to Coast Salish social organization. Namely, although tribal territories were recognized (primarily by watershed units), individuals from other groups could access resources from other Coast Salish nations territories through their marriage and kinship connections (Snyder 1964; Suttles 1987; Thom 2009). For Coast Salish nations, such boundaries were not rigid and exclusive, but rather, permeable and contingent on individuals' kinship (Richardson and Galloway

2011:203). Following Richardson and Galloway (2011:202): "...we take the view that group territories were real in the sense of identifiable landscapes, reinforced in many places by place names known from a certain language or dialect, but that the boundaries were not rigid and extensive sharing of resources occurred." Given that Musqueam, Squamish, and other non-Tsleil-Waututh people periodically visited Tsleil-Waututh territory (e.g., for potlatches), it makes sense that they would have names for places within Tsleil-Waututh territory. In some cases, these would be names borrowed from Tsleil-Waututh, while in other cases they could be completely different names.

198. Bearing this long introduction in mind, the following section will: 1) review the various opinions on the name 'Tsleil-Waututh', 2) review the body of all recorded Tsleil-Waututh place names within the Study Area, and 3) review one specific place name that was recorded at contact.
199. Wayne Suttles, the eminent Coast Salish anthropologist and linguist described sə́lilwətał (Tsleil-Waututh) as being the name for the "Burrardview People," and Indian Arm, and Indian River (Suttles 1990:455) (Burrardview is one of the names for Burrard IR No.3, Tsleil-Waututh's primary community since about AD 1853 or so). *It should also be emphasized that there is very strong evidence of long term continuity in occupation of Sleil-Waututh, spanning about 3000 years. There is eye-witness evidence of contact-era occupation here, and there is material evidence of early 19th century occupation here. All that to say, whichever Tsleil-Waututh families relocated to Sleil-Waututh from Tumtumay-wheuton after the second smallpox epidemic, they joined other Tsleil-Waututh families already living there, rather than establishing a new community.*
200. During his sworn evidence during the Mathias trial, Suttles described his understanding of the name Tsleil-Waututh (January 20, 1997:42–43):

And my opinion is that this river at Indian Arm was named for these people called by Boas – whose name Boas recorded as Lel'elot, and that includes the processes that is Halkomelem, not Squamish. I might add that the – I believe the earliest recordings of the name of that river in – by the reserve commissioners ends in a-s-h, which suggests that they heard it from a Halkomelem speaker who would have said Seli'lweta'lh, and if they heard it from a Squamish speaker who would have said Seli'lweta'lh they would have written 'ulh' and not 'a'lh' at the end of it and – end of the word, but that's not part of the argument here. That's pointing out that the Halkomelem form was – must have been in use in the 1870s (Note Suttles is referring to Boas 1887).

201. Suttles explicitly denied that Tsleil-Waututh was the name for all of Burrard Inlet, despite the fact that one of his Musqueam informants (Andrew Guerin) had told him this (Suttles January 20, 1997:77) (see **Figure 3**). Suttles' rationale for not believing Andrew Guerin's more expansive use of the name Seli'lweta'lh for all of Burrard Inlet is not clear. Another of Suttles' primary Musqueam informants, Dominic Point, said that Seli'lweta'lh refers to Indian Arm and means 'facing towards Lillooet' (Point, December 3, 1996:22) and

later said that it was the name for all of Burrard Inlet (Point, December 5, 1996:63). Suttles (1996a:11; 1996b) also analyzed the etymology of versions of Tsleil-Waututh elicited from Musqueam (*Hun'qumyi'num*-speaking) (səl'ílwətəl), and Squamish-speaking individuals (səl'íl'utúł), and concluded that this word was Down-River Halkomelem in origin. Thus, in Suttles opinion, Tsleil-Waututh was the name of the community of people living at IR No.3, the indigenous name for Indian Arm and Indian River, and was Down-River Halkomelem in origin.

202. Brent Galloway, a linguist and expert on Coast Salish languages, on the other hand, holds a very different opinion of the name/word səl'íl'utúł. Galloway's (1994:7–8) etymological analysis of səl'íl'utúł indicated to him that it was a word of Squamish origin literally meaning “belonging/pertaining to piled up (spun) blankets.” This likely pertains to wealth (goat wool blankets) that the Tsleil-Waututh people would have been well positioned to harvest and produce (discussed in detail in later sections). Galloway (1996:8) does not comment on the location of səl'íl'utúł (i.e., Indian River, Burrard Inlet etc), other than indicate it is “also a name for the Burrardview people.”
203. Randy Bouchard, a linguist with wide ranging experience with Salish languages, has discussed the name ‘Tsleil-Waututh’ with knowledgeable Squamish, Lil’wat and at least one Tsleil-Waututh elder. Bouchard and Kennedy (1986:124) associate the name ‘Selilwetulh’ (‘Tsleil-Waututh’) with Indian River only and the Tsleil-Waututh people, and also suggest that *selil*, the Squamish root for ‘piled up blankets/valuables,’ may be embedded within the word ‘Tsleil-Waututh’ (Miranda 1979:160; Bouchard and Kennedy 1986:125). Squamish Elder, Louis Miranda, insisted to Bouchard that there was no name for Burrard Inlet (Miranda 1977:12, 42). August Jack Khatsalano (Squamish Elder) indicated that the name “Slail-wit-tuth” was the name for Indian River (Mathews 1955:30). Andy Paull (Squamish member and Secretary for Council) also indicated that “Slail-wit-tuth” was the name for Indian River (Mathews 1955:411). Bouchard and Kennedy (1986:124–125) hold the most restrictive view of the name Tsleil-Waututh, applying it to Indian River only.
204. Tim Moody (Squamish) defined ‘Slail-wit-tuth’ as meaning the ‘go inside place’ referring to all of Burrard Inlet and Indian Arm within the First Narrows at Stanley Park (Mathews 1955:411) (see **Figure 3**). Tsleil-Waututh elder, Herbert (Paddy) George, told Randy Bouchard that the name “Selilwet” is the “name applied to whole area” (probably meaning all of Burrard Inlet) and means ‘calm water’ (1990:2). Based on interviews with Chief Dan George Carter (1966:5), he used the word “Tsal-a-Wat” as the name for all of Burrard Inlet and Indian Arm. Tsleil-Waut (literally “a single Tsleil-Waututh person”) is the name that the Tsleil-Waututh people use for Burrard Inlet and Indian Arm. Bouchard and Kennedy (1986:124) mistakenly indicate that no other sources corroborate using the name “Slailwit-tuth” for all of Burrard Inlet.
205. The use of ‘Tsleil-Waututh’ as a place name for all of Burrard Inlet has been repressed. Consider the following chain of events. In 1923, Tsleil-Waututh rejected an offer of merger of the various Squamish bands into one Squamish Nation (Burrard Petition to

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Scott 1923). Earlier, from 1876–1923 Burrard IR No.3 was administratively described as an independent “Squamish Reserve,” but its leadership and overwhelming majority of inhabitants have always been Tsleil-Waututh in identity. This identification of Tsleil-Waututh as a Squamish Band was probably due to the extensive adoption of the Squamish language by Tsleil-Waututh people, as discussed above. After the Tsleil-Waututh rejection of the 1923 Squamish Amalgamation, Tsleil-Waututh and their three reserves were administered as the Burrard Band.

206. In the 1920s to 1930s, Major Mathews (Archivist for the City of Vancouver) developed a body of place names from many Squamish informants. A cropped version of Mathews (1932) draft version of his place name map is presented above (**Figure 3**). On this map, the name “Slailwit-tuth” denotes all of Burrard Inlet. On January 13, 1933, Squamish Council reviewed Mathew’s place names, and adopted all of them, except for Slailwit-tuth (Mathews 1955:386). The adopted meaning of Slailwit-tuth was “Indian River” (Mathews 1955:389). Andy Paull was present for discussions of these place names with Squamish elders (Mathews 1955:385) and the secretary for adoption ratification meeting (Mathews 1955:389). In my opinion, Squamish leadership effectively censored out official use of the name ‘Tsleil-Waututh’ for all of Burrard Inlet.
207. Given all this contradictory evidence, it is my opinion that the place named Tsleil-Waututh (and variants) refers to the Tsleil-Waututh people and their relationship with the territory including all of Burrard Inlet, Indian Arm, and Indian River. Etymological analyses of the word Tsleil-Waututh by linguists appear to be equivocal.
208. As with many avenues of cultural research with Tsleil-Waututh, no professional linguists or ethnographers have ever worked with Tsleil-Waututh, and no substantial directed effort towards recording traditional Tsleil-Waututh place names has ever been undertaken. Therefore these names are rendered in English rather than the International Phonetic Alphabet (IPA). As discussed in greater detail above, Tsleil-Waututh’s original language, a variant of Down-River Halkomelem, was never recorded and its differences from other Down-River dialects are presently unclear. The primary sources for the Tsleil-Waututh place names below are hereditary Chief John L. George (Sla-holt), and his wife Lillian C. George. Additional information regarding place names was elicited from a range of TUS and other interviews with Tsleil-Waututh elders. These Tsleil-Waututh place names are mapped in **Figure 8**.

3.6.1 Description of Tsleil-Waututh Place Names

209. In the following section I describe all of the recorded Tsleil-Waututh place names within the Study Area:
 - Guy-angulton—location: Deep Cove; meaning: “sheltered place”; (Lillian/ Unsakaloate C. George August 1991; John L. George August 1991).
 - Whey-ah-wichen—location: Roche Point/Cates Park; meaning: “faces the wind,” “facing both directions,” ancestral Tsleil-Waututh village site (Archaeological Site

Form: DhRr 8, Dan George 1972; Tsleil-Waututh 2001; John L. George August 1991).

- Өiqsen—location: Admiralty Point; meaning: “big nose,” “long nose,” point of land (Rose Thomas and Chief Ernest George March 2012).
- Kapulpaqua—location: the entrance to Indian Arm between Belcarra and Deep Cove; meaning: unknown (Mortimer (1981:161–163), based on interviews with Chief Dan George).
- Ah-wal-tum—location: IR No.3, McCartney Creek; meaning: unknown (John L. George August 1991).
- Tla-mau-ulk—location: Mosquito Creek; meaning: unknown (Lillian/Unsakaloate C. George August 1991).
- Kan-ul-cha—location: Lynn Creek meaning: unknown (Lillian/Unsakaloate C. George August 1991).
- Jol-gul-hook—location: Seymour Creek; meaning: unknown (Lillian/Unsakaloate C. George August 1991; John L. George August 1991).
- Sow-ta-koo—location: IR No.3, “John’s Creek”; meaning: unknown, “John’s Creek”; (Lillian/Unsakaloate C. George August 1991; (John L. George August 1991).
- Hab-hait—location: IR No.3, “our creek”; meaning: unknown (Lillian/Unsakaloate C. George August 1991; John L. George August 1991).
- K’alkalith—location: eastern shore of Burrard Inlet, creek near Bunzten Lake BC Hydro generator; meaning: unknown, possibly referring to an ogre-woman, “place where the say-nuth-kway/serpent’s head was” (Hebert (Paddy) George interviewed by Randy Bouchard 1990).
- Way-ah-chins—location: Camp Jubilee, western Indian Arm; meaning: unknown; (Participant—TWN 2011 TUS interviews).
- Way-uh-chins—location: Sunshine; meaning: unknown; (Lillian/Unsakaloate C. George August 1991).
- Kwe kwe xau—location: hill/mountain north of Belcarra, familial hunting ground; meaning: unknown (Chief Ernie Ignatius George 2012).
- Say-um-it-ton—location: Strathcona; meaning: “place of good water,” ancestral Tsleil-Waututh village site (Lillian/Unsakaloate C. George August 1991; Lepofsky et al. 2007; John L. George August 1991) Herbert (Paddy) George told Randy Bouchard that the name for this village was “si7em7úmet” (George 1990:6).

- Tsleil-Wat—location: Burrard Inlet and Indian Arm; meaning: Burrard Inlet and Indian Arm, literally “a single Tsleil-Waututh person” (Carter 1966:5, based on interviews with Chief Dan George).
- Gum-gum-lye—location: McKenzie’s Barge; meaning: maple trees; (Lillian/Unsakaloate C. George August 1991; John L. George August 1991).
- Jol-gul-hook—location: Seymour Creek; meaning: unknown, ancestral Tsleil-Waututh village site (Lillian/Unsakaloate C. George August 1991).
- Sleil-waututh—location: Burrardview IR No.3; meaning: “the People of the Inlet,” “the people belonging to Indian Arm/Indian River” (Suttles 1990; 1996a).
- Whua-hai-lum—location: former Moodyville, Longsdale area North Vancouver, meaning: unknown (Lillian/Unsakaloate C. George August 1991).
- Say-mah-mit—location: Port Moody area, village at head of Port Moody, Noon’s Creek; meaning: unknown, ancestral Tsleil-Waututh village site; (Lillian/Unsakaloate C. George August 1991; John L. George August 1991).
- Tsa-ah-nah—location: Second Narrows; meaning: unknown (John L. George August 1991; Lillian/Unsakaloate C. George August 1991).
- Tum-tumay-whueton—location: Belcarra Peninsula; the former primary or largest Tsleil-Waututh village in and around Belcarra Park; meaning: literally, plural “land/earth”, “much land/earth,” “lots of land,” “the biggest place for all the people,” (Lillian/Unsakaloate C. George August 1991; Chief George Sla-holt (Menzies 1934); Lepofsky et al. 2007).
- Xi7xatl—location: IR No.3, creek beside the church; meaning: unknown, “creek beside the church” (Paddy George interviewed by Randy Bouchard 1990).
- Squaw-uck—location: adjacent to IR No.3, “Deek’s Gravel Pit”; meaning: unknown (Lillian/Unsakaloate C. George August 1991).
- Cough-il-cha—location: lower Lynn Creek; meaning: unknown; (Tsleil-Waututh TUS 2011 participant).
- Sqhmant—location: eastern Indian Arm, Shoemaker Mountain; meaning: mountain/rock (John L. George and Lillian C George, Tsleil-Waututh 1998).
- Stah-mah-mit—location: Dollarton Cedar Mill; meaning: unknown (Lillian/Unsakaloate C. George August 1991; John L. George August 1991).
- Squatzi—location: Maplewoods Flats, just east of Second Narrows; meaning: literally “sea urchins”, place to get sea urchins (Chief Ernie Ignatius George 2013).

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- Saymopit—location: Carraholly Point; meaning: unknown, ancestral Tsleil-Waututh village site (Chief John L. George to John Pritchard 1998:40).
- Saltuth—location: south shore of Burrard Inlet, north Burnaby; meaning: unknown (Leonard George, pers. comm. to Jesse Morin, Nov. 4, 2013).
- Tat-ose—location: IR No.3 beach near Dollarton Highway; meaning: 'facing out' (Dan George to Alsop (1968).
- Inlailawatash—location: Indian River Valley, village near Indian River estuary; meaning: unknown (Sproat 1876).

210. This geographically dense body of Tsleil-Waututh place names is evidence that past Tsleil-Waututh people were very familiar with and knowledgeable about the lands and resources of the Study Area. To my knowledge, no other First Nation has presented more than a fraction of names for the Study Area (see Galloway 1996; Mathews 1955; Suttles 1996a, 1996b).

3.6.1.1 Sasamat—The Only Indigenous Place Name Recorded in the Eighteenth Century

211. In AD 1792, the Galiano and Valdez expedition recorded the name 'Sasamat' as the indigenous name for Burrard Inlet (Bartoli 1997:165). "The northern branch of the Canal that we call after Floridablanca and the Natives call Sasamat ends in a River..." (Bartoli 1997:165). Galiano and Valdez then renamed the *Boca Del Floridablanca* the *Canal De Sasamat*, as is indicated on their AD 1792 map (**Figure 9**). Wagner (1933:235–244) indicates that the Galiano and Valdez expedition had picked up an indigenous guide named Tetacus in Neah Bay. Layland (2013:51) indicates Tetacus was "understood to be a chief from the village of Esquimalt" was a native Straits Salish speaker, and was almost certainly familiar with Halkomelem. According to Wagner (1933:240), Tetacus recognized the bodies of waters indicated on the Spanish nautical charts and provided the name Sasamat for the body of water the Spanish called Boca de Floridablanca (Burrard Inlet).

212. A small lake east of Belcarra is now called Sasamat Lake, a name derived from this contact-era name recorded by the Spanish (Akrigg and Akrigg 1973:87). Notably, August Jack Khatsahlano (Mathews 1955:30) did not know what the term Sasamat meant, nor that it referred to an area in Burrard Inlet. It is also not included in Suttles' Musqueam and Squamish derived (1990, 1996a, 1996b) lists of place names.

213. There are two possible Halkomelem origins for the term Sasamat. First, Old Pierre (an extremely knowledgeable Katzie elder working with Diamond Jenness) described a village at Ioco (Imperial Oil Company, located on the north shore of Port Moody) as 'sa'ma.mat' (Jenness 1932–34:320). He described these people as 'stacem', meaning either 'vassal' or 'tributary', (Jenness 1955:86), or were 'low class' and had 'forgot their history' (Suttles 1987:6–8). Carlson (2010:49, 134-141) indicates that stacem people were descendants of slaves and their high class masters, and that stacem communities

formed out of the reorganization of populations following the AD 1780 smallpox epidemic. Tsleil-Waututh Hereditary Chief John L. George indicated that the name for the Port Moody area was Say-mah-mit, and this was echoed later by Leonard George, former Tsleil-Waututh elected Chief and respected elder. It is probable that John L. George, Leonard George, and Old Pierre remember a name for a place in Port Moody that was pronounced sa'ma.mat, or Say-mah-mit in Halkomelem, and that this name, or a variant of it, was told to members of the Galiano and Valdez expedition in AD 1792 by Tecatus (Layland 2013:51; Wagner 1933:345). In my opinion, it is probable that Sasamat was a Spanish transcription of Say-mah-mit the Tsleil-Waututh name for the Port Moody area and the village there.



Figure 9. Galiano and Valdez AD 1792 expedition map, published in AD 1802 (Bartroli 1997). Note "Canal de Sasamat" indicated for the eastern Burrard Inlet and Indian Arm area

214. Suttles (1996a and 1996b) and Galloway (1996) undertook independent etymological analyses of 59 indigenous place names in Burrard Inlet from Musqueam and Squamish sources, no Tsleil-Waututh place names were included in these analyses. Suttles (1996b:20) identified 20 of the 59 as probably or certainly Halkomelem in origin or having features that cannot be accounted for in Squamish. Suttles further noted (1996b:20) that these names of Halkomelem origin included “some of the more important village sites and resource sites.” Galloway identified 20 such names as “clearly or probably Halkomelem in origin” and “more likely Halkomelem than Squamish in origin” (Galloway 1996:29). Of the 9 names they analyzed in eastern Burrard Inlet, Suttles (1996b:25-26) identified 2 of the 9 as “probably or certainly Halkomelem in origin”, and Galloway also identified 2 of the 9 as “probably or certainly Halkomelem in origin” (Galloway 1996). Comparable analyses have not been undertaken to date for the Tsleil-Waututh corpus of place names. It must be noted that only a very few Squamish and Musqueam names were available for the area east of Second Narrows (roughly corresponding to the present Study Area), indicating that these informants (i.e., the Squamish and Musqueam people who had supplied the body of place names) had relatively little knowledge of this area.
215. Based on my review of all available data, Tsleil-Waututh Nation holds the greatest concentration of place names in the Study Area. This density of place names within the Study Area supports a conclusion of a long history of Tsleil-Waututh affiliation with the Study Area. The Tsleil-Waututh place names demonstrate their unique deep knowledge and familiarity of this landscape. It is very difficult to assess time depth from these place names, but it is worth noting that in several cases, these named places appear to have been village locations for about 3,000 years.

3.7 Tsleil-Waututh Resource Ownership/Land Tenure

216. In the introductory sections of this Report, I described general Coast Salish concepts regarding territorial rights and resource ownership. Recall that:
- Coast Salish tribes’ territorial rights are defined by one’s connections to the First Ancestors to inhabit the area.
 - Tribal members have an exclusive right to use the resources of the territory.
 - Others had to ask permission to use the resources of the territory.
 - Productive resource patches and facilities, such as fish weirs, were the owned, inherited property specific lineages or villages.
 - Stewardship and proper management of resource patches is a key aspect of ownership of those sites.
217. As described in detail below, Tsleil-Waututh culture has not been well-documented by professional anthropologists and Tsleil-Waututh systems of land tenure, laws and social

organization have rarely been explicitly documented. It should go without saying that Tsleil-Waututh's systems of resource ownership within the Study Area have evolved considerably since the period of interest. To reconstruct or project Tsleil-Waututh's pre-contact and sovereignty era systems of resource ownership and land tenure, one must draw upon disparate historical references, recorded Tsleil-Waututh oral history, and general models of Coast Salish social organization. This exercise is complicated by the profound changes that beset Tsleil-Waututh society around the time of contact. That is to say, the nature of Tsleil-Waututh's system of governance, land tenure, and social organization differed markedly in the years prior to AD 1780 (the first smallpox epidemic), AD 1792, and AD 1846. *A single 'traditional' system of such Tsleil-Waututh social organization does not exist. Instead, one needs to realistically anticipate that there were variable formations of Tsleil-Waututh social and economic organization over the millennia.*

218. Based on general models of Coast Salish concepts of territory and resource ownership, and a range of ethnographic, historic, and Tsleil-Waututh oral history information, I describe what I think is best characterized as a nested hierarchy of territorial rights. At the lowest level of the nested hierarchy is the ownership of discrete resource patches by individual lineages or households. At the highest level is the collective territorial interest of the tribe to the whole of the tribal territory.

3.7.1 A Collective Territorial Interest

219. All members of a particular Coast Salish group hold a collective interest in their group or nation's territory (Suttles 1955:27, 1987:9, 147). It is really this perception and exercise of resource rights within a specific territory that defines a Coast Salish group's territory. Despite Barnett's (1955:19) oft-quoted and usually misinterpreted statement that "most of the land was unclaimed" (i.e., un-owned), this refers to specific ownership rights by lineages. It does not mean that such land was available to anyone to use. Quite the opposite, "[l]and and resource use was not at all casual or random, nor were lands and resources 'freely accessible to all' (Turner et al. 2005:153). "Within tribal territories, ownership of land and resources was, in general, inclusive for all group members" (Turner et al. 2005). And Suttles (1955:14) noted the marked "contrast between the breadth of social and ceremonial relationships that one small community may have with other communities, and the narrowness and intensity of its spiritual and economic relationship to its own small territory."
220. There very well may have been tracts of land with little productive value distant from village sites that was relatively 'open' for use by all Coast Salish. But speaking generally, Coast Salish groups had definite notions of ownership of the resources within their territories. The boundaries of these territories were much more diffuse than is indicated on linguistic distribution maps (Kew 1970:9).
221. The Coast Salish "Ethnic Divisions" outlined by Barnett (1955:18–34) describes the collective tribal interest in each groups' respective territory (i.e., a number of winter

villages and seasonal hunting, fishing and gathering areas). Similarly, the Straits Salish tribal territories outlined by Suttles (1951:8–45) describe the environs from which each tribal group would live in for the majority of the year (i.e., village sites) and procure much of their daily sustenance. These territories were essentially defined by the daily and seasonal foraging territories practiced by the inhabitants of individual villages or groups of villages (Smith 1940:24–25; Snyder 1964:63–75). This collective territorial interest can be described as a birthright inherited from 'First Ancestors' (e.g., Arnett 1999:17; Boas 1889:37–38; Suttles 1951:9, 1955:10). Aside from particular owned resource patches (see below), the whole of a groups' territory could potentially be accessed by all members of that group (Carlson 2010:110; Turner et al. 2005). This has been described as communal land use (Turner and Jones 2000:7). As described above, Gibbs (1877:187) and Boas (1889:37–38) emphasized that the right of a member of a group to that groups territory cannot be alienated by any means. Non-locals could not freely access another groups territory, they would draw upon kinship connections to the local group and request permission to camp/harvest resources there (George 1996:58; Kennedy 2000:216; Ritchie 2010:29; Snyder 1964.; Suttles 1951:221, 1955:26–27). The penalty for not requesting permission from the appropriate rights holder would be death (Arnett 1999:23; Snyder 1964:432).

222. For Tsleil-Waututh, this would mean that all Tsleil-Waututh people could camp and harvest resources from all of Burrard Inlet and the waters draining therein (approximately the Tsleil-Waututh Statement of Intent as submitted for treaty negotiations (**Figure 10**)), except for those resource patches specifically owned by villages or lineages, where permission would be sought. Non-Tsleil-Waututh people would have requested permission from their Tsleil-Waututh kin to harvest resources within Tsleil-Waututh territory. The name 'Tsleil-Waututh' for Burrard Inlet and/or Indian Arm and Indian River reflects this relationship.

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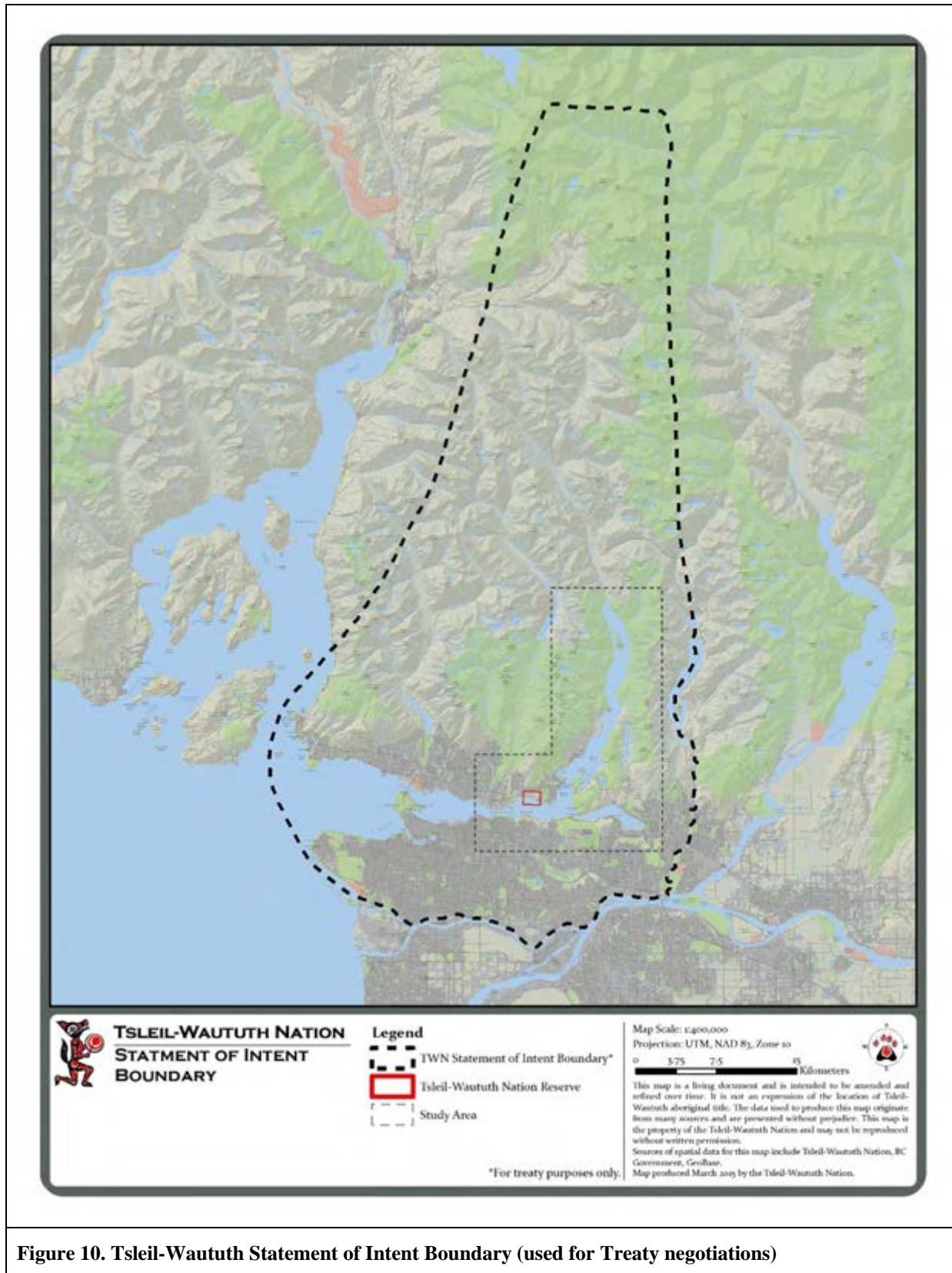


Figure 10. Tsleil-Waututh Statement of Intent Boundary (used for Treaty negotiations)

223. Some of the evidence collected by Bouchard and Kennedy (1986) sheds light on the nature of 'tribal ownership' of resources in Burrard Inlet held by Tsleil-Waututh. For example, one of Bouchard and Kennedy's Squamish informants (Adeline Billy) told them that "when non-selilwet Squamish Indians went to Indian Arm to dig clams, they were told by the Burrard people to leave because "this wasn't their land" (Bouchard and Kennedy 1986:149). This passage specifies that the Squamish individuals were disinvited from Tsleil-Waututh land because of their tribal affiliation, not their specific village or lineage.
224. An example of such permission seeking behavior was described by Tsleil-Waututh elder, Rosemary Thomas, in January of 2015. Regarding those who lived in the small cabins adjacent to her grandfather's (Chief George Sla-holt) longhouse on Indian River (Inlailawatash) in the 1930s, she commented, "[B]ut the cousins from the other reserves, they talked to my grandpa and he'd say sure. And then they—just like that, there would be another little house built" (Rosemary Thomas Interview 2015). These cousins were people from the Mission Reserve (IR No.1), where Chief George Sla-holt had another residence (in addition to Inlailawatash, Musqueam, and Sleil-Waututh). Although not specified, this strongly suggests that through kinship connections ("cousins"), Squamish people asked Chief George Sla-holt (the recognized spokesperson and steward of the Tsleil-Waututh territory) for permission to seasonally reside at Inlailawatash to partake in the rich fall salmon fishery there. This is a textbook example of Coast Salish permission seeking behavior implying a recognized tribal ownership of a resource area with the leading chief acting as steward or owner of the resource patch on account his tribe (Suttles 1951, 1987).
225. In my opinion, the collective territorial interest by all Tsleil-Waututh people to all of Tsleil-Waututh territory would have remained relatively constant (save from a later increase in un-owned resource patches because of depopulation) from the decades preceding contact to AD 1792 and AD 1846. The entire Study Area falls within an area near the center of Tsleil-Waututh territory (see **Figure 1** and **Figure 10**).

3.7.2 Village Tracts

226. In addition to collective tribal territorial interests, there is Coast Salish ethnographic evidence of ownership of more localized territories surrounding individual villages (Barnett 1935–36; Kew 1970). In my opinion, there has been considerable conflation between tribal and village territorial interests because, in the late 19th and early 20th centuries, many Coast Salish First Nations consolidated several villages into a single village on a single reserve (Kennedy 2000:123–127). But, prior to AD 1792 and 1846, when most Coast Salish First Nations had several simultaneously occupied villages, multiple villages of the same tribal affiliation would have likely had specific territorial rights within that larger tribal territory. It stands to reason that the most proximate inhabitants to resource patches would have the greatest interest in ensuring their viability and not over-exploiting them; this is a basic principle of stewardship.

227. Kew (1979:4) stressed a general proprietary interest in lands around their village site to 'unowned sites'. That is, even resource sites that were not owned by specific lineages were not open to all; local villagers felt that they had the greatest interest and rights to those sites. As described by Kew (1997:9):

Not controlled by villages. Well, I'm suggesting that in the vicinity of villages and where it was in the interest of the villagers collectively to – since they share interest in those specific resource sites that are close by, when it was in their common interest to – to look after those sites, and perhaps not to accept presence of strangers, that they would – they would share their common interest and protect it. I think this is the reason that we see in historic records that villages as villages opposed strangers coming into their area.

228. Suttles (1951:88) provides ethnographic evidence from a Semiahmoo informant that the locations suitable for using deer nets were owned and available for use by the local community. Suttles (1955:26) also provides ethnographic evidence from a Katzie informant (Simon Pierre) while “the bog south of the Alouette belonged to the whole Katzie tribe, but those north of Sturgeon Slough and on Widgeon Creek belonged to the Pitt Lake people...” In my opinion, lineage-owned sites existed as a patchwork within larger areas of village-owned sites and tribally-owned sites.
229. In my opinion, prior to AD 1792 and at 1846, all of the occupied Tsleil-Waututh villages would have had an emphasized proprietary interest in the tracts of land surrounding each village. This area would have likely extended in a radius around each village, to a distance of 1–2 hours travel time from each village; that is, well-within the documented daily foraging range for hunter-gatherers (Kelly 1995:132–137; Morin and Hunt 2014). Ownership would have been very probable for productive resource locales, such as salmon streams, clam beds and berry patches. With regards to Tsleil-Waututh villages such as Sleil-Waututh, this would have certainly included the Maplewoods mud flats, the opposite (southern) shore of Burrard Inlet, and lower reaches of the North Shore Mountains to the north. This concept is greatly elaborated upon in a later section.
230. An example of this village-level ownership is evinced in protocol between Squamish and Tsleil-Waututh people described by Bouchard (1996b:94). Specifically, Bouchard (1996b:94) cites Ted Band “people from Burrard No.3 going to Capilano to hunt ducks in exchange for the Capilano people going to dig clams around Dollarton.” This account seems to demonstrate a recognized level of village ownership, as it specifies the “Capilano people” not the Squamish as the recognized social unit, obtaining access to resources of Tsleil-Waututh territory.
231. Prior to contact, Burrard Inlet was inhabited by Tsleil-Waututh people inhabiting several contemporaneously occupied villages (Morin 2014). Throughout the millennia of occupation of Burrard Inlet, some villages were periodically uninhabited for periods of centuries (Morin 2014). In such periods when a village was not inhabited, it is probable that the previously village-owned resource patches would pass to the larger tribal

collective. If this were not the case, instead of the contiguous territories as always described by Coast Salish First Nations, we would see a very complex patchwork of inter-digitated territories. I suggest that the same principle of reversion would hold for lineage owned resource patches when lineages died out, especially around the first smallpox epidemic (AD 1782).

3.7.3 Lineage-Owned Resource Patches

232. The Coast Salish ethnographic record is clear that some resource patches were owned by individual lineage groups (Barnett 1935–36, 1955:251; Richardson 1982; Thom 2005:281; Turner et al. 2005). These owned resource patches also tended to be the most productive, so that the owners of such patches would derive substantial economic advantage from them (i.e., production of food surpluses) (Snyder 1964:66-67; Suttles 1951:56, 58). “While everyone can make a living from the public domain, the real surpluses are produced at owned locations and the owners thus have considerable advantage over the other members of the group. The owners can and in native theory should feed those who are in need, and thus if their surpluses are great can attract the needy to them” (Suttles 1951:56). Examples of owned resource patches include:

- clam beds (Arnett 1999:248; Kew 1996:9; Suttles 1951:55, 68–69);
- wapato patches (Suttles 1955:27);
- cranberry patches (Suttles 1955:26-27);
- camas patches (Suttles 1951:60; Turner et al. 2005);
- sealing rocks (Barnett 1955:251);
- bird rookeries (Barnett 1955:251);
- deadfalls (Barnett 1955:251);
- fish weirs (Richardson 1982); and
- fishing stations/rocks (Richardson 1982; Suttles 1951:212-218) (see Turner et al. 2005).

233. Note that these resource features are highly productive, but relatively limited in size or scope. Larger resource patches such as whole rivers or bays are not described as lineage-owned property; they would more likely be tribally-owned.

234. Beyond resource patches, there is ethnographic evidence of family-owned spiritual sites, that is, locations where people would go to fast, meditate, and gain spirit power (McHalsie 2007; Chief Ernest George Sla-holt, pers. comm. to Jesse Morin 2014). These locations, and more specifically the powerful spirits associated with them, were of central importance to Coast Salish religious and spiritual life (see Kew 1970, Snyder 1964;

- Suttles 1951). The spirit power that people would obtain from these locations would not be limited to the religious domain, they would determine an individuals' later occupation, specialization and success (Barnett 1955). For example, specialized hunters, warriors, or ritualists would obtain the powers that gave them the ability to succeed in those roles from the spirits of a particular place (Barnett 1955). These family-owned spiritual places must be considered of central religious and economic importance to Coast Salish people.
235. Prior to the devastating population loss towards the end of the 18th century, even more resource patches and spirited places would have been lineage owned property in Coast Salish territory. I say this because: 1) many if not most lineages were entirely wiped out in these epidemics, and 2) such mechanisms of resource management (i.e., stewardship principles) would very likely have been in place to avoid over-exploitation by large populations. Such carefully delineated owned resource patches are generally a feature of all peoples of the Pacific Northwest from Oregon to southern Alaska (Boas 1921:1345–1348, 1966:36; Curtis 1915:25–28; Drukcer 1951:247; Swanton 1905; Turner et al. 2005). In my opinion, ownership of resource patches in this cultural area is part of a cultural adaptation to specific ecological conditions (e.g., Suttles 1968). It is as common and perhaps as important as the practice of smoking salmon to preserve it for future use. In my opinion, practically all productive resource patches in pre-contact Tsleil-Waututh territory would have been owned by a lineage, village, or the tribe. Any exceptionally productive resource patch was likely owned by a lineage. As mentioned above, it stands to reason that if a local lineage that owned a particular resource patch died out, then those resource rights revert and pass up the nested hierarchy to a local village or the larger tribal collective.
236. Based on my review of all Tsleil-Waututh TUS data and place names, there are several examples of Tsleil-Waututh lineage owned resource sites: hunting territories, clam beds, and perhaps creeks and spirited places/pictograph locations. In my opinion, these examples are but a remnant of an earlier much wider system of lineage ownership. As no ethnographers ever asked Tsleil-Waututh people about such issues, it is not surprising that this system is largely undocumented.
237. Two examples of ownership of property or resources by individual Tsleil-Waututh cognatic descent groups were described by Lillian George, the wife of Hereditary Chief John L. George on June 23, 1998 (Tsleil-Waututh 1998). First, Lillian George described a system of Tsleil-Waututh land tenure regarding parcels of the beach in front of IR No.3 (Tsleil-Waututh 1998:23–24). Specifically, she indicated that each family had their own areas of the beach to dig clams on, and that the older generation emphasized to children that they were not to harvest clams from other families' areas. Adults did not need to be reminded of these rules, because they already knew which parcels belonged to which families. In a similar vein, the individual creeks on IR No.3 were owned by individual families (Tsleil-Waututh 1998:33-34), and that is why these creeks bear the names of the primary Tsleil-Waututh families (i.e., George Creek, Thomas Creek, and Guss Creek).

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238. Another possible example of a lineage-owned resource patch is a hunting territory on a mountain just north of Belcarra. The Tsleil-Waututh name for this place is Kwe kwe xau ('Kokokal'). In recent generations, this was exclusive hunting territory that was passed down through a branch of the George family (Tsleil-Waututh 1998:17; Chief Ernie Ignatius George pers. comm. to Jesse Morin December, 2012). This place was evidently a very productive area for hunting deer.
239. It was indicated to me by Tsleil-Waututh's hereditary chief Ernest George (Sla-holt) that the locations where people would fast and meditate to gain spirit power were also owned by families (Ernest George pers. comm. to Jesse Morin 2014). In Tsleil-Waututh territory, some of these locations are also marked with pictographs (Arnett 2013), likely representing the visions individuals received while meditating there. Several of these locations are also *stl'aleqem* sites, which McHalsie (2007:128) indicated were often owned by particular families. In my opinion, the pictograph sites of Indian Arm were very likely owned by particular Tsleil-Waututh families/lineages. Importantly, the pictographs themselves are not the most culturally significant aspect of these locations, rather it is the powerful spirits that are believed to inhabit such places (Arnett 2013; Jenness 1955).
240. In my opinion, the few documented instances of Tsleil-Waututh lineage-owned resource patches offers just a glimpse at what was once a highly-complex system of resource tenure. It is reasonable to conclude that the lineage-owned creeks and stretches of beach on Sleil-Waututh/IR No.3 represent a microcosm of a system that once covered many of the productive locales around Burrard Inlet. It is exceedingly difficult to estimate the extent of lineage-owned resource patches at contact and at sovereignty. One of the major reasons for this is that the nature of Tsleil-Waututh lineages is always evolving. It is unknown how many distinct lineages there were at AD 1792 or 1846. What are now considered 5–8 distinct Tsleil-Waututh lineages, a century ago were about 3 distinct lineages. What is relatively certain is that the most productive resource patches were the owned property of high-ranking lineages. This pattern can be projected back to AD 1792 and 1846 with some degree of confidence.

3.8 Accessing Resources Outside of Tsleil-Waututh Territory

241. As described above, the foundation of non-local resource access among Coast Salish people is kinship connections. Coast Salish are traditionally highly exogamous (marrying to outside communities) and reckon descent bilaterally (through both parents). In the past, elite men (*si?em*, *siyam*, chief) would have many wives, usually all from different communities. Waut-salk II, for example, had wives from Musqueam, Cowichan, Squamish, and the Big River (Fraser River, Sto:lo?) (note here that the majority of Waut-salk II's wives are from Halkomelem-speaking areas with direct access to the Fraser River fisheries). The patterns resulting from this system of marriage is a very widespread kinship network, and a very large number of recognized kin (Kennedy 1995, 2000; Suttles 1987).

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242. A fundamental part of the pre-contact Coast Salish seasonal round, which is the series of residential moves or relocations by families as they harvest specific locally available resources, consisted of visiting kin and harvesting resources alongside them (Snyder 1964:74). Permission would still be sought from kin (the appropriate property owner) to access those resources (Suttles 1951:221). Large polygamous households would be at an advantage then, in that they could then potentially access the resources of a very wide range of kin. Waut-salk II's wives, for example, created the connections for Waut-salk's Tsleil-Waututh family to visit each wife's home territory, and request permission to visit and access resources there.

3.9 Pre-Contact Tsleil-Waututh Leadership

243. As described above, there is limited direct information on Tsleil-Waututh leadership roles. To describe pre-contact Tsleil-Waututh leadership, I rely both on direct Tsleil-Waututh evidence and generalized Coast Salish patterns. The earliest Spanish accounts of Tsleil-Waututh *si?em* (*siyam*), in my interpretation, is at least partially at odds with that of Suttles (1989, 1990). The Galiano and Valdez (1792) encounter with Tsleil-Waututh at Inlailawatash (Indian River) on June 22, 1792 describes the apparent *si?em* thusly: “[s]ome of the men embarked in their canoes and came closer to us, especially a *young man who seemed to be the tayee who was giving orders and was obeyed by the Indians in a way that we had not noticed in other parts*” (emphasis added, Mss 144, folio 497, Museo Naval, Madrid (Bartolli 1997:8102–103). There is, of course, nothing recorded in this brief encounter to indicate whether or not the ‘tayee’ (chief) was a leader of multiple villages, but this local ‘tayee’ exercised a degree of authority over his kinsmen that was more notable than other Coast Salish chiefs. The ‘tayee’ in question was likely Waut-salk (II) (AD ~1770–1840) (Tsleil-Waututh 2004:40), ancestor of nearly all of the current Tsleil-Waututh Nation, and through whose descent line the hereditary chieftainship of Tsleil-Waututh is still traced.
244. Another line of evidence from Tsleil-Waututh oral traditions suggests that the *si?em* of Tsleil-Waututh villages were hierarchically ranked *vis a vis* one another. In the story of the ‘Port Moody Chief’ (see above), the chief of the village, Sisba-qo-Chatun, is described as “one of the lesser chiefs of the Tsla-A-Wat” Carter (1966:68). Sisba-qo-Chatun was the brother or cousin of Waut-Salk (I) (Hereditary Chief Ernie George [Sla-holt], personal communication to Jesse Morin, January 2012, Ignatius Sun-Rays George 1930, Tsleil-Waututh 2014), and therefore, were approximately contemporaneous *si?em* of separate villages around the middle of the 18th century (~AD 1750–1780). It is unclear if Sisba-qo-Chatun was a “lesser chief” compared to Waut-Salk (I) because of his personal attributes *vis-á-vis* Waut-Salk (I), or because Sisba-qo-Chatun was the leader of a subordinate village.
245. Along similar lines, the Tsleil-Waututh oral tradition *Quai-Quai* concludes with the renamed Squai-Aqua becoming chief of Tum-tumay-whueton. And, because of Squai-Aqua's personal abilities: “[i]n such esteem was he held by all the lesser tribes of the Inlet that he became a kind of Great Chief to all the tribes within Burrard Inlet and Indian

Arm to Buntzen” (Carter 1966:62). Again, one “Great Chief” based at Tum-tumay-whueton, was elevated above all other tribes of Burrard Inlet. It is possible that the Quai-Quai oral history actually recounts the origin of the Tsleil-Waututh system of regional *si?em*. It is unclear if the *si?em* of individual Tsleil-Waututh villages ranked against one another based on the status of the village itself, or some other cultural factor. In any case, this evidence does suggest that individual Tsleil-Waututh village *si?em* were not equals, but does not necessarily imply a political hierarchy.

246. An additional line of evidence that may indicate that Tsleil-Waututh villages were ranked against one another comes from the description of the village at Ioco as *stacem*, or serfs. Several villages around the Coast Salish world are similarly described as *stacem* (*st'exem*, or *st'ε'xəm*) (Carlson 2010:134–141). Suttles (1987:5–6) and Carlson (2010:134–141) describe a number of low-class villages around the Coast Salish world that were tributaries to other villages. Jenness (1955:86), relying on interviews with Katzie elder Old Pierre, listed the village at Ioco, near Port Moody, as tributary to the “Squamish Indians of North Vancouver.” This could be taken as a statement that, in Old Pierre’s view, all Tsleil-Waututh were *stacem*, or that this particular village (Say-ma-mut or Saymopit) was *stacem* in relation to the Squamish.
247. One of the bases for the differences in rank, prestige, and status between Tsleil-Waututh *si?em* is probably their relative success in potlatching (Suttles 1987:7–13, 15–25). Potlatching was the means by which *si?em* would transform material wealth into prestige by feasting and gift-giving:

By potlatching, a group established its status vis-à-vis other groups, in effect saying “we are an extended family (or village of several extended families) with title to such-and-such a territory having such-and-such resources. And when a leading member assumed a name that harked back to the beginning of the world when the ancestors of the group first appeared on the spot, this not only demonstrated the validity of the group’s title but perhaps also announced in effect “*this is the man in charge of our resources*” (Suttles 1987:21, emphasis added).

248. Snyder’s ethnographic research explained the relationship of class maintenance, and potlatching among the Skagit (1964). Only headmen who lived in large villages could successfully compete in potlatching with other wealthy headmen (also from large villages) at a regional, rather than local scale (Snyder 1964:76). The reason for this is that large villages: 1) always had the richest resource base (or rights to such resources), and 2) always had higher populations. Thus, a headman in a large village would be more likely able to direct more labor than a headman in a small village. In relation to the Tsleil-Waututh Study Area, *si?em* from the largest village (Tum-tumay-whueton), would therefore likely have the most success in regional level potlatching, and would then be the wealthiest or most prestigious *si?em* in Burrard Inlet. In the following section, these issues of Tsleil-Waututh ‘chieftanship’ are further explored based on information from Tsleil-Waututh’s current Hereditary Chief Ernest George Sla-holt and previous Elected Chief Leonard George.

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249. According to Chief Sla-holt, and in accordance with Suttles (1987:21, cited above), the word and concept of chief are not Coast Salish in origin, but are rather derived from *Hwunitum* (literally white people, “people who came out of nowhere”) culture (pers. comm. to Jesse Morin June 11, 2013). Chief Sla-holt described the Tsleil-Waututh *si?em* who lived in the past, now described as “chiefs,” as “a person of high stature”, “a respected person,” “decision makers,” “in charge” or “responsible for taking care of things and people,” “responsible for watching over things,” and “keeping people from breaking apart.” but emphatically, “not the boss.” People described as *si?em* were not, according to Chief Sla-holt, “high class”, but rather treated with a high level of respect because of their personal qualities. When other Coast Salish peoples would enter Tsleil-Waututh territory to harvest resources, they would first ask the permission of the local *si?em*. Permission would be given based on the kinship connections of the visiting individuals to local Tsleil-Waututh people.
250. Based on the available evidence, in the Tsleil-Waututh world prior to contact, there were two levels of *si?em*—local (for villages and environs) and regional/tribal (for the whole of Burrard Inlet and all of the Tsleil-Waututh Nation). A local village *si?em* would likely be the *si?em* of the most prominent family living at a location, and would be designated as in charge of local affairs there. But again, the *si?em* did not have authority over others, but was recognized and respected for his personal qualities and generosity. The position of the regional Tsleil-Waututh *si?em* was held by a descendant of a particular lineage. All Tsleil-Waututh’s oral histories indicate that Waut-salk I and II, the Tsleil-Waututh regional *si?em*, had their primary residence at Tum-tumay-whueton (Belcarra) (e.g., George 1990; Leonard George 1997; Menzies 1934). The extent of the authority of this regional *si?em* likely varied through time in relation to the personal capabilities of the *si?em*. This position was hereditary (for Tsleil-Waututh), although it was passed to the most able, and not necessarily to the eldest son. In the past, special qualities or talents were recognized early in children, and they were specially groomed or trained for particular roles, such as hunting, fishing, carving, warfare, or leadership. The *si?em* of the whole Tsleil-Waututh Nation and Burrard Inlet was selected from the most apt or promising of the current Tsleil-Waututh *si?em*. This regional *si?em* would be able to trace his ancestry back to a myth-age First Ancestor, and would manage the affairs of Burrard Inlet and the Tsleil-Waututh Nation, but did not own the Inlet that belonged to the whole of the Tsleil-Waututh Nation (see also Miller 2000:99–100 for a Skagit example of a regional *si?em* and Suttles (1955:10) for an example of a Katzie “head chief”).
251. At AD 1792, the only well-known named *si?em* in Burrard Inlet is Waut-salk I, the grandfather to all Tsleil-Waututh. While Waut-salk’s primary residence was at Tum-tumay-whueton, he had several other residences (Inlailawatash and Sleil-Waututh at least), and was the recognized Tsleil-Waututh chief of Burrard Inlet. Sisba-go-chatum (Sisb-go-Chatum), Waut-salk I’s brother or cousin, is described as a “lesser chief” of a Tsleil-Waututh village in Port Moody (Carter 1966:68). Siswhonaum, the son of Waut-salk I and brother of Waut-salk II, was the leader or chief of the village at Jol-gul-hook/Seymour Creek, until he was captured in a raid by northerners (George 1930). It is probable that every notable settlement or winter village had a *si?em*, and the largest

settlement would likely have the leading regional *si?em*. In my opinion, this is the most likely model of pre-smallpox Tsleil-Waututh political organization. Further archaeological research would shed light on this issue.

252. At AD 1846, Sla-holt (James) was the Tsleil-Waututh *si?em* of Burrard Inlet. Recall that James Sla-holt and his sister, Unsakaloate, son and daughter of Waut-salk II, are the direct ancestors of virtually the entire modern Tsleil-Waututh Nation. In sections below, I describe a range of historical evidence that unambiguously describes Sla-holt as a Tsleil-Waututh person and the Tsleil-Waututh *si?em* of Burrard Inlet. At sovereignty, Sla-holt's primary winter residence was probably still at Tum-tumay-whueton (Menzies 1934) (if it was not Tum-tumay-whueton at this time then it was Sleil-Waututh), while he also maintained houses at Inlailawatash (fall residence), Sleil-Waututh (early summer residence?), and Musqueam (late summer/early fall residence). By this time, another *si?em* named kiyapilano (Capilano), of mixed Squamish and Musqueam ancestry, was the recognized *si?em* of the villages at Capilano River and Jericho Beach in outer Burrard Inlet (Bouchard and Kennedy 1986; Kennedy 2000:278–310).
253. I have heard Tsleil-Waututh oral histories indicate kiyapilano was tied by marriage and alliance in some manner to Waut-salk II, perhaps married to Waut-salk II's sister. Following Coast Salish concepts of kinship and resource access, such a marriage makes considerable sense. By marrying Waut-salk II's sister, kiyapilano would have the requisite kinship connections to, with permission, begin over-wintering within Tsleil-Waututh territory at the Capilano River. Tsleil-Waututh gained a valuable military ally (connected to both Musqueam and Squamish communities) who was strategically positioned at the entrance to Burrard Inlet. Further genealogical research would shed greater light on these issues.

3.10 The Archaeological Record

254. As introduced above, the archaeological record of the Lower Mainland region displays notable clusters of major village sites. These clusters appear very stable for about 3,000 years, and they are spatially associated with individual Coast Salish groups' historical primary village sites and oral histories regarding their First Ancestors. These village clusters can be associated with particular Coast Salish First Nations with a reasonably high degree of confidence for at least the last millennium.
255. In a later section (see s. 4.2, *Archaeological Villages*, below), I briefly describe one such cluster of occupation in eastern Burrard Inlet. Specifically, I describe the occupation sequence and material evidence of a past village at eight locations, each represented by one or more archaeological sites in eastern Burrard Inlet (**Figure 11**):
- DhRr 6/Tum-tumay-wheuton/the Belcarra Park site;
 - DhRr 15/Tat-ose/Trading Beach site and DhRr 20/Sleil-Waututh/IR No.3;
 - DhRr 8/Whey-ah-wichen/the Cates Park site;

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- DhRr 18/Say-umiton/the Stathcona Park site;
- DhRr 17/Caraholly Point;
- DhRq 1/Say-mah-mit/Noon's Creek;
- DhRr 16/Reed Point Marina and DhRr 369, 370, 371, 372, 373/Barnett Highway sites; and
- DiRr 18/Inlailawatash/IR 4 and 4a.

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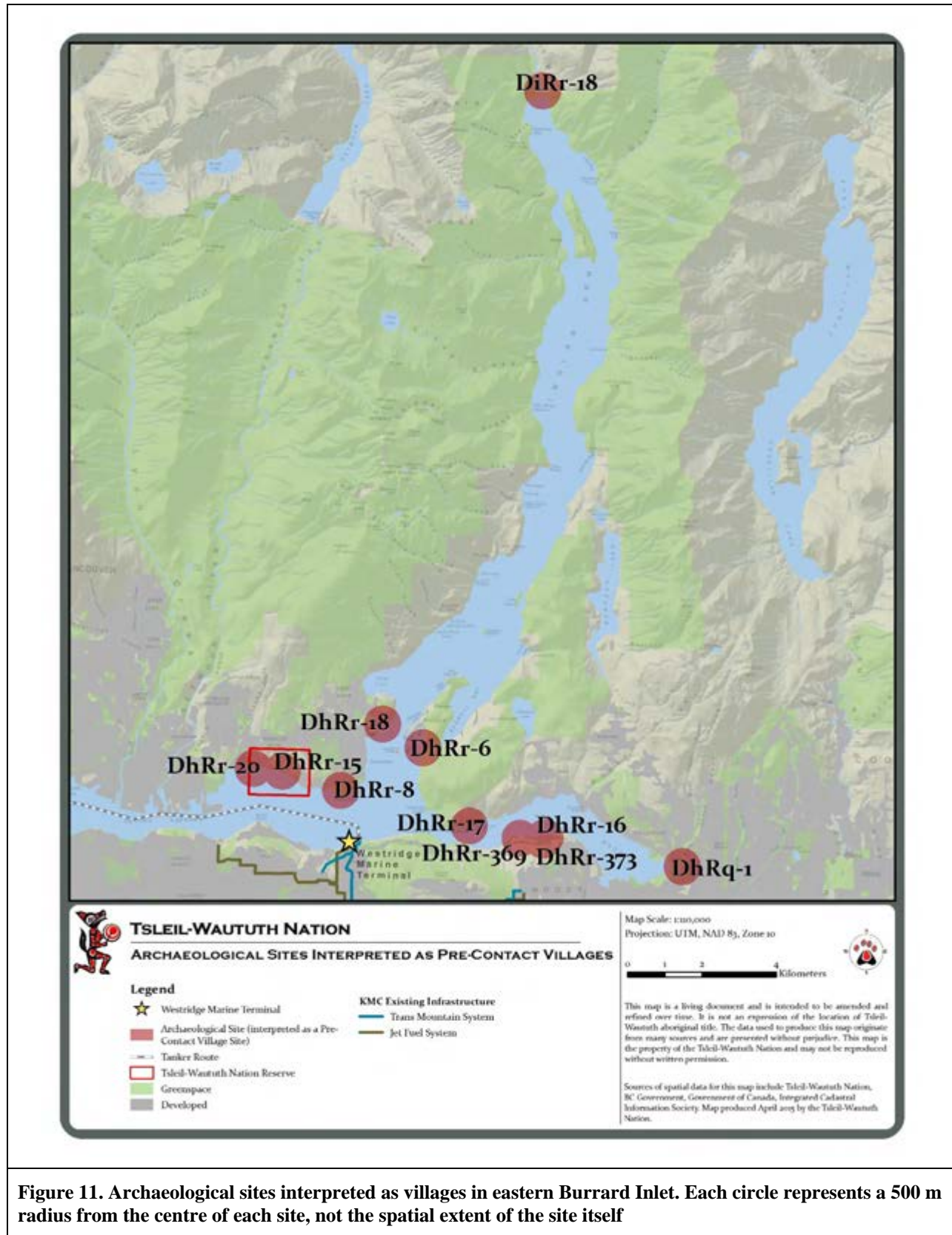


Figure 11. Archaeological sites interpreted as villages in eastern Burrard Inlet. Each circle represents a 500 m radius from the centre of each site, not the spatial extent of the site itself

256. These archaeological sites have all been investigated to varying degrees and in total contain evidence of:
- Occupation by Coast Salish people since at least 2100–2400 BC (Morin 2014);
 - Continuous regional occupation by Coast Salish people since at least 400 BC (Morin 2014);
 - An increasing number of roughly contemporaneous villages through time, apparently reaching a zenith in the centuries prior to contact (Morin 2014);
 - A large stable regional population;
 - Intensive and stable use of local marine, intertidal, and terrestrial resources for 3,000 years;
 - Extensive use of a very wide range of prey species for 3,000 years;
 - Trade and exchange with neighbouring people; and
 - Defensive features to protect settlements.
257. This evidence (multiple large villages, many of which were occupied contemporaneously in the centuries prior to contact) is indicative of a large stable population in the region. It is important to bear in mind that the ancestral Tsleil-Waututh people that inhabited these villages obtained all their food from the surrounding environment; they were hunter/gatherer/fishers. I greatly expand on the nature of pre-contact Tsleil-Waututh occupation and land and resource use in sections 4.0 and 5.0 of this report. *For the time being, note that while villages were clearly focal points of habitation and food processing, such semi-permanent habitation was predicated on regular intensive use of the seasonally available resources of and beyond the Study Area.*
258. The most recent occupation of these sites can be associated with the ancestors of the current Tsleil-Waututh Nation with a high degree of confidence. Further, I describe aspects of the archaeological record of eastern Burrard Inlet that distinguish it from other areas of the Lower Mainland (see s. 3.10.1, *Distinctive Archaeological Attributes*, below). All this evidence supports the conclusion that a distinctive Coast Salish group occupied eastern Burrard Inlet prior to, at contact, and at sovereignty.

3.10.1 Distinctive Archaeological Attributes

259. It is said, usually by non-archaeologists, that, 'one can't readily affiliate a set of archaeological remains with ethnic groups' (Amoss 1997a:51; Bouchard 1997b:28). Archaeologists that work in B.C., on the other hand, will more often make a similar statement along the lines of, 'I am not aware of any specific attributes or features that readily differentiates tribes or groups' (e.g., Stryd 1996). There are also examples of archaeologists who have looked for such patterns and have been able to associate

archaeological materials with different ethno-linguistic groups. For example, Professor R.G. Matson and Dr. Martin Magne have been able to distinguish Interior Salish (i.e., 'Plateau Pithouse Tradition') from Athabaskan (i.e., ancestral Chiltcotin) archaeological sites based on projectile point attributes and lithic (stone tool) assemblages (Matson and Magne 2007:103–130, see also Greaves 1982). Matson's research on this was used as key evidence in the case, *William v. British Columbia*. Dr. Terrance Clark, in the Coast Salish region, has similarly been able to differentiate the archaeological sites produced by Halkomelem and Straits Salish speakers from analysis of artifacts assemblages (i.e., the proportional abundance of particular tool types) (Clark 2013); and Dr. Dale Croes has been able to correlate ancient basketry styles on the Northwest Coast with Salish or Wakashan speaking populations (Croes 1989).

260. Based on my own research, I can readily differentiate groups of stone celts (or adzes) derived from Coast Salish, Interior Salish, Nuxalk or Athabaskan territories (Morin 2012, 2015a). Whether past peoples purposefully used particular types of rocks to make their adzes to demonstrate their identity or not, certain ethnic groups used distinctive types of stones to make particular types of adzes. Based on the pattern observed among more than 1,300 adzes, I can determine the broad ethnolinguistic group that an assemblage (group from one location) of adzes was derived from through their mineralogical composition and the techniques used to manufacture them (Morin 2012, 2015a). It is my opinion that it is possible to differentiate archaeological assemblages derived from the ancestors of specific ethnographic (or ethnic) groups depending on the scale of the group (area-size) and the magnitude of the regional variability in aspects of the archaeological record. This should be considered an open field of research. Coast Salish is definitely a large enough group to identify versus other major linguistic and social groups.
261. The methodological approach that I follow (e.g., Morin and Matson 2015; Matson and Morin 2010) in this line of research is outlined in Carr (1995a and 1995b). Briefly, Carr's (1995a and 1995b) analysis of style and ethnicity, describes how attributes as projectile point shape and material used would fit the classification of emblematic style, aspects that would be readily visible to observers of the completed objects. This class of material attributes (varying aspects of 'style'), would be useful in signaling, not only to members of a local group, but to outsiders. Other attributes of artifacts are far less visually obvious, but when subjected to detailed technological analysis, provide evidence of how an object was made. Examples of this could include the use of a specific temper in making pottery, the directional twisting of cordage in making sandals, or the use of indirect percussion (i.e., a punch and hammer) to make bifaces or projectile points (Morin and Matson 2015; Matson and Morin 2010). Such attributes do not fit the typical notions of style and could not be used as emblematic markers because such attributes are not readily apparent. However, these relatively hidden attributes mark practices one learned from one's relatives, that is, they mark attributes of enculturation (Carr 1995a, 1995b). In my opinion, careful investigation of differences in relatively recent archaeological materials (i.e., within the last 1000 years) may indeed reveal differences between social groups such as First Nations.

262. It is an open question (or a testable hypothesis) as to whether social groups as small as Coast Salish tribes (based on watershed units or some other definition) can be specifically associated with archaeological assemblages. Below, I put forward three working hypotheses whereby I offer the opinion that late prehistoric archaeological components (that is, a temporal unit of occupation of a site) in eastern Burrard Inlet (i.e., Tsleil-Waututh) can be differentiated from adjacent areas such as the North Arm of the Fraser (i.e., Musqueam), Pitt Lake (i.e., Katzie), the Lower Fraser (i.e., Kwantlen), and the Squamish Valley (i.e., Squamish). In my opinion, these differences provide further evidence for Tsleil-Waututh as a unique and distinct Coast Salish First Nation. *I emphasize that this research is in its infancy, but based on preliminary results, it does appear possible to affiliate Coast Salish ethnographic groups with archaeological sites and assemblages (i.e., groups of artifacts).*
263. The artifacts and food remains excavated from Gulf of Georgia Phase (1200 BP to contact) archaeological villages and other sites in eastern Burrard Inlet are not uniform. The major village sites in this area display particular preferences for types of raw materials and styles of projectile points for reasons that are not understood. But the difference between these sites within the Study Area is less pronounced than the differences between any and all of these sites and those of from a contemporaneous archaeological village on North Arm of the Fraser River, and the Lower Fraser in Surrey. Similarly, the rock art in Indian Arm is more similar to other rock art in Indian Arm than it is to rock art from adjacent areas.

3.10.1.1 Rock Paintings/Pictographs

264. Tsleil-Waututh core territory (e.g., Burrard Inlet and Indian Arm) has perhaps the richest body of rock paintings or pictographs in the Coast Salish world (Arnett 2013; Lundy 1974, **Figure 12**). These pictographs occur along the dramatic cliffs of Indian Arm at or near locations that figure prominently in Tsleil-Waututh oral histories (Arnett 2013). Chris Arnett, archaeologist and rock art specialist, indicates that (2013:10):

Rock painting is an ancient Salish practice of applying red ochre paint (tunulh) onto geological formations. The practice is mentioned in sxwoxwiyam (Transformer/Origin stories) from the Fraser Valley (Jeness 1955), the Harrison-Lillooet corridor (Teit 1912; Hill Tout 1978; Bouchard and Kennedy 1977) and the Lytton area (York et al 1993; Arnett n.d.) where it is associated directly and indirectly with the activities of Xa:ls, the Transformer, or his (their) Interior Salish equivalents.

265. Arnett suggests that the “rock paintings of Indian arm are a distinct local expression of a much larger pattern of rock painting that appeared throughout the Salishan territories” (Arnett 2013:9). Arnett (2013) suggests that some of these pictographs are relatively recent archaeological features, likely dating from just before contact or the first epidemics and after (2013:50, 92). Survival of more ancient pictographs here is unlikely due to very high precipitation; several images have faded appreciable in decades.

Elsewhere, Arnett and myself argue that these rock art locations in Indian Arm were probably used by people training to become *shxwla:m* "Indian Doctors," gaining power from the power of the place there (Arnett and Morin n.d.).

Figure 12 has been redacted from this version of the report because it contains confidential information.

266. The distinctiveness of the Indian Arm pictographs were commented on as early as the 1970s, when Lundy (1974:283–290) classified some of them as belonging to the “Interior Intrusive Rock Art Style” that can be readily contrasted with dominant coastal styles. I do not present a full comparative analysis here, but speaking generally, the pictographs in Indian Arm are much less representational and much more enigmatic than the pictographs in either Pitt Lake or Squamish Valley. The individuals who painted the pictographs in Indian Arm displayed a preference for curvilinear lines and forms over straight lines and forms. Bilateral symmetry occurs, but is relatively rare in Indian Arm pictographs (**Figure 13**). Rock art in Indian Arm often consists of: 1) one or more individuals and animals in a panel drawn in ‘stick man style’ (**Figure 14**), 2) single individuals, often with only one leg (**Figure 14**), or 3) extremely enigmatic figures (**Figure 15**, **Figure 16**).
267. It should be noted that the vast majority of the pictographs in Indian Arm are relatively small and not prominently located. They are not ‘billboards’ broadcasting a clear message to all those canoeing by. They are small, ambiguous, and likely relatively private affairs. Teit (1918) associates the practice of creating pictographs with the Salish practice of spirit questing, to specifically acquire the power from the place and the powerful beings that may inhabit the place. Teit’s (1918) description seems appropriate for all of the pictographs in Indian Arm, especially given the multitude of oral histories describing the serpent in the area (**Figure 17**).
268. Some the pictographs in Pitt Lake (DiRp 6) (**Figure 18**) are far more representational than those in Indian Arm, are regularly bilaterally symmetrical, are composed of largely straight figures composed of primarily of straight lines, and have very clear faces. The pictographs from this site (DiRp 6) in Katzie territory are very different to one who is familiar with the pictographs of Indian Arm. Pictographs at EeRu 9 in the Squamish Valley are different from those in Indian Arm and the aforementioned panel at Pitt Lake. The Squamish Valley panel is highly representational of birds that are all drawn straight in form and composed of straight lines (**Figure 19**). All show bilateral symmetry.
269. In summary, in my opinion, there are clear differences between the pictographs of Indian Arm, Pitt Lake and the Squamish Valley. There are no remaining pictographs in the regions immediately south of Burrard Inlet, as there are no suitable stone cliffs for painting them. It is my opinion that the style of pictographs painted by the people who inhabited Burrard Inlet/Indian Arm in the centuries prior to and at contact was distinctive from neighboring styles. This difference in style could be attributable to processes of enculturation whereby people learn by experience with elder relatives. As these three geographic areas can be readily associated with modern decent communities (e.g., Tsleil-Waututh, Katzie and Squamish), it is my opinion that these are local distinctive ‘tribal’ styles. Tsleil-Waututh’s distinctive style of pictographs provides further evidence to Tsleil-Waututh as a distinctive social group at contact.



Figure 13. Digitally enhanced image of pictographs at DiRr 12 in Indian Arm. Note the curvilinear forms and 'stickman' forms. Photo by Chris Arnett 2013

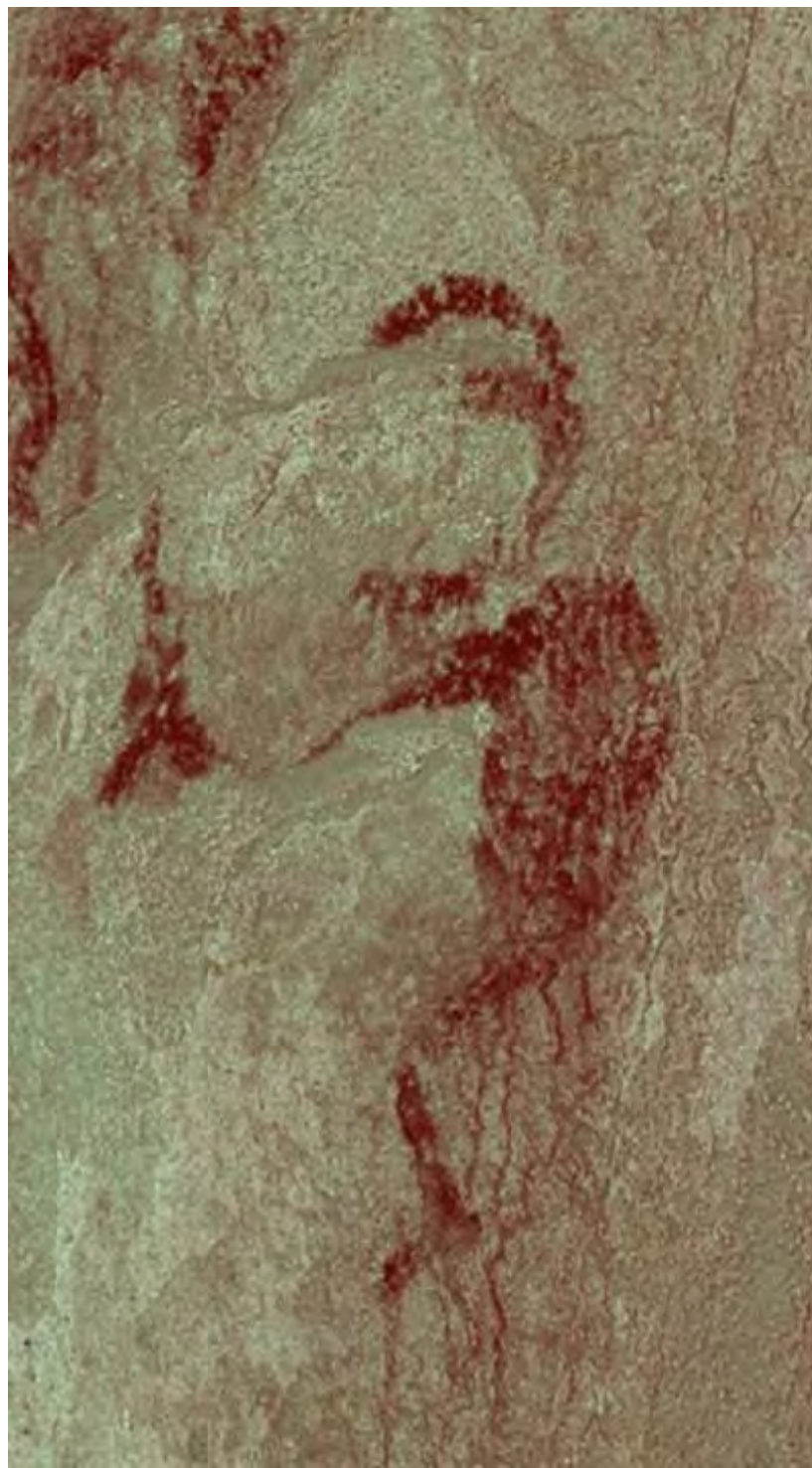


Figure 14. Digitally enhanced image of pictograph in Indian Arm (DiRr A, unrecorded site). Note use of curved lines and curved form of individual and lack of bilateral symmetry and facial details. Photo by Chris Arnett 2013



Figure 15. Digitally enhanced photo of a pictograph panel in Indian Arm (DiRr 2). Note use of curved lines, curved figures, profile view, and lack of bilateral symmetry. Photo by Chris Arnett



Figure 16. Digitally enhanced pictograph in Indian Arm (DiRr 2). Note rare use of bilateral symmetry and extremely enigmatic design. Photo by Chris Arnett 2013

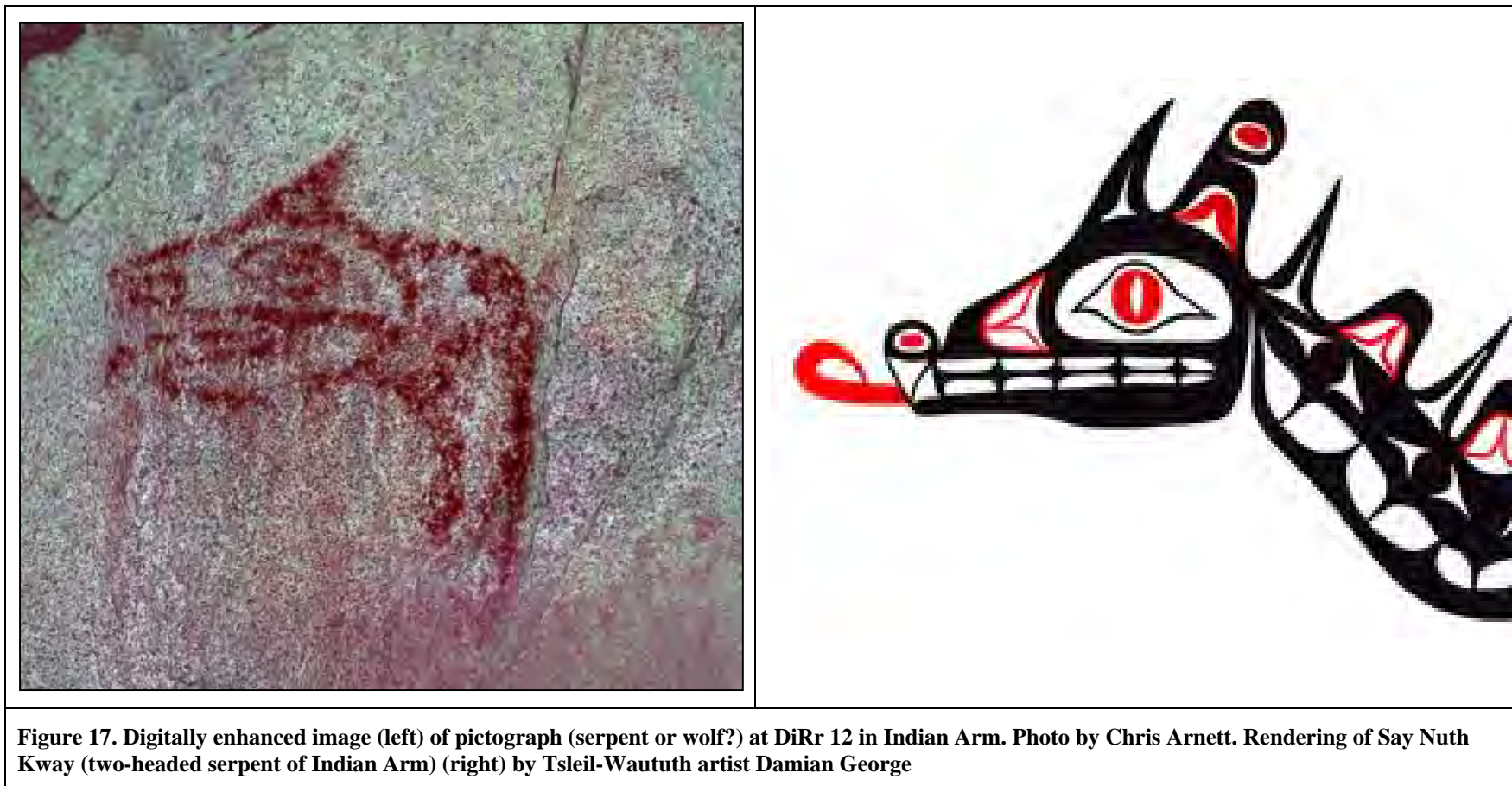




Figure 18. Example of pictographs from Pitt Lake (DiRp 6) (digitally enhanced). Note preferences for straight lines and forms, the bilateral symmetry and facial details of the individuals



Figure 19. Pictographs at EaRu 9 in the Squamish Valley. Note the use of straight lines, straight forms and bilateral symmetry

3.10.1.2 Lithic Technology/Stone Tools

270. The range of artifacts recovered from archaeological sites in the Lower Mainland region is generally well-documented. The range, or more specifically the proportion of certain types of artifacts made of flaked or ground stone, bone and antler that co-occur in a certain time period are used to define archaeological 'phases' or 'cultures' that have temporal and spatial extent (e.g., the Marpole Phase 2500–1200 BP, the Gulf of Georgia Phase 1200BP to contact) (Borden 1970; Burley 1980; Clark 2013; Matson and Coupland 1995; Mitchell 1990). General regional trends in the patterns of technological change between such phases or cultures are also well-documented. In the sections below, I will highlight some differences that I can detect between the generalized regional trends over the last 1,000 years and the specific archaeological remains from sites in Burrard Inlet.
271. First, it is important to point out that the archaeological record of Burrard Inlet is Coast Salish in general character; this is beyond dispute. All major artifact classes that occur in other Lower Mainland assemblages also occur in Burrard Inlet (see Charlton 1980; Lepofsky et al. 2007; Morin 2012). That being said, archaeological sites in Burrard Inlet do not fit very 'comfortably' within the general culture historical framework of the last 2000 years in Lower Mainland. The primary reason for this is that the 'type site' that was used to define the Gulf of Georgia Phase, Stselax/DhRt 2 actually displays the lowest percentage of flaked stone of any major reported assemblage in the Lower Mainland (Thom 1992). Elsewhere in the Salish Sea during this period "is marked by the almost complete absence of chipped stone" (Matson and Coupland 1995:268). *While other Gulf of Georgia Phase sites in the Salish Sea display a marked decrease in flaked stone and corresponding increase in ground stone, bone and antler tools within the last 1000 years* (Ames et al. 2010; Clark 2013; Matson and Coupland 1995:268; Thom 1992), *Burrard Inlet sites do not*. Neither does the Tsawwassen Beach (DgRs 2) site nor the Crescent Beach (DgR 1) site (Thom 1992) for that matter (**Table 1**). *Flaked or chipped stone tools dominate assemblages compared to ground stone in Burrard Inlet during all periods* (see Charlton 1974; 1980; Lepofsky et al. 2007; Stantec 2010; Struthers 1973).
272. The reason for this marked difference is that the mountainous valleys of the North Shore Mountains are relatively rich in tool stone quality rocks (mainly dacites and andesites), while the Fraser Delta/Lower Mainland region is not (see Reimer 2011). As described by Ozburn (2015:1) "(A)ncient lithic technological traditions have survived in ways similar to native languages," and archaeologists are just beginning to identify and interpret these patterns (see Ozburn and Adams 2015; Morin 2012, 2015a; Reimer 2011).
273. I summarize several examples of Gulf of Georgia Phase (1200 BP to contact) artifact assemblages from Burrard Inlet and elsewhere in the Lower Mainland in **Table 1**. Inspection of **Table 1** indicates that while Say-umiton/DhRr 18 displays the highest reported percentage of flaked stone from any comparable aged assemblage, Belcarra Park II/DhRr 6 and Whey-ah-wichen/DhRr8 actually display less flaked or chipped stone than Crescent Beach or Tsawwassen VIII. No one, to my knowledge, has ever conflated Tsleil-Waututh with Tsawwassen or Snoqomish/Semiahmoo peoples, so differentiating

Burrard Inlet assemblages from those near Point Roberts and Boundary Bay is not really necessary here.

274. What is notable about this table is the very limited amount of flaked or chipped stone at Stselax/DhRt 2 (Thom 1992). *The excavations of DhRt 2 occurred inside a Musqueam plank house called 'Stselax' on Musqueam IR No.2 (Borden 1970). The remains recovered by Borden (1970) from his excavations at Stselax can be readily affiliated with the ancestors of the Musqueam people. And because Tsleil-Waututh has so often been conflated with Musqueam, it is very notable that the pre-contact technologies used in Burrard Inlet and the North Arm of the Fraser River differ so dramatically. This technological difference can be considered as evidence of the unique identities of Tsleil-Waututh and Musqueam groups prior to contact. I elaborate on these differences below.*

Table 1. Major technological categories from excavated archaeological sites dating to the Gulf of Georgia Phase (1200 BP - contact)

Affiliation	Borden #	Village	Flaked Stone %	Ground Stone %	Pecked and Ground Stone %	Ground Bone %	Ground Antler %	References
Tsleil-Waututh	DhRr 6	Belcarra II	19.2	11.6	10.5	46.3	12.4	Charlton 1980
Tsleil-Waututh	DhRr 18	Say-umiton	49.6	18.8	1.5	29.3	0.7	Lepofsky et al. 2007
Tsleil-Waututh	DhRr 8	Whey-ah-wichen	15.7	27.5	8.2	28.6	20	Charlton 1974
Musqueam	DhRt 2	Stselax	11.1	33.2	12.7	26.7	16.3	Thom 1992
Semiahmoo	DgRn 1	Crescent Beach	31	9.5	8.6	25	26	Thom 1992
Tsawwassen	DgRs 2	Tsawwassen VIII	29.6	27.4	9	13.5	20.6	Thom 1992

275. From **Table 1**, it is clear that while some Lower Mainland Gulf of Georgia Phase sites do show a very low reliance on flaked/chipped stone (e.g., Stselax/DhRt 2), many others, and all those in Burrard Inlet, except perhaps Whey-ah-wichen/DhRr 8, do not. Beyond this underlying technological difference between Burrard Inlet archaeological assemblages and that from Stselax, several other discrete differences are apparent:
- a) Notable preference for flaked rather than ground stone points (i.e., ground slate).
 - b) Notable preference for green andesite for making flaked stone tools (e.g., projectile points, knives, scrapers etc.), especially at DhRr 18/Say-umiton.
 - c) Notable preference for triangular side-notched projectile points (probably arrow points), especially at DhRr 6/Tum-tumay-whueton.
276. First, flaked stone points are numerically dominant over ground slate points in all Gulf of Georgia Phase sites in Burrard Inlet (**Table 2**). Flaked stone projectile points comprise

between 54% and 87% of all projectile points in the three Burrard Inlet assemblages tabulated below. Even at Whey-ah-wichen/DhRr8, which displays the greatest use of ground stone technology of sites in Burrard Inlet, ground stone points only make up about 46% of the assemblage (Charlton 1974). By way of comparison, ground stone points are far more numerous than flaked stone points at Stselax/DhRt 2, comprising 92% of the projectile point assemblage there (**Table 2**, Thom 1992). That is to say, the pattern of projectile point use at Stselax and also Kikayt is completely inverse to that at Whey-ah-wichen, Tum-tumay-whueton and Say-umiton.

Table 2. Comparison of projectile points and raw material between archaeological village sites. Note that DgRn 1 and DgRs 2 are excluded here because of small sample sizes

Affiliation	Borden #	Village	Chipped Stone Points %	Ground Stone Points %	Triangular Chipped Points %	Other Chipped Stone Points %	Green Andesite % of Flaked Stone Assemblage	References
Tsleil-Waututh	DhRr 6	Belcarra II	66.5	33.5	79.2	20.8	0 - 3.8	Charlton 1980; Lepofsky et al. 2007; Reimer 2011; Thom 1992*
Tsleil-Waututh	DhRr 18	Say-umiton	87.5	12.5	28.6	71.4	47.2	Lepofsky et al. 2007; Reimer 2011
Tsleil-Waututh	DhRr 8	Whey-ah-whichen	54.1	45.9	0	100	unknown	Charlton 1974
Musqueam	DhRt 2	Stselax	8	92	0	100	unknown	Thom 1992
Kwantlen/Kikayt	DhRr 74	Kikayt	25	75	12.5	87.5	unknown	Golder 2011

*Note Thom 1992 does not code "triangular side notched points", only "triangular points"

277. Further, at some of the Burrard Inlet sites, and especially Tum-tumay-whueton/DhRr 6, it is a very specific style of projectile point that dominates assemblages – triangular side-notched points (**Figure 20**). While single examples of such triangular side-notched points do occur in other Gulf of Georgia Phase Lower Mainland sites, DhRr 6 has in excess of 80 of them, comprising 79% of the projectile point assemblage there (Charlton 1980) (there are many more such side notched triangular points in surface collected assemblages or private collections from DhRr 6 as well). Indeed there are, to my knowledge, more such points from excavations at Tum-tumay-whueton than from controlled excavations from the rest of the Salish Sea combined (Carlson 2008). Such triangular side-notched points are very common in the adjacent Canadian Plateau during this period (1200 BP to contact) where they are called “Kamloops Points” (Henry and Hayden 2000; Matson and Magne 2007; Richards and Rousseau 1987; Sanger 1969; Stryd 1973; Wilson and Carlson 1980:50-51). The abundance of such points is a distinctive attribute of Tum-tumay-whueton DhRr 6. This pattern was first identified by Diana Alexander (Tsleil-Waututh 2001:211).

278. It is my opinion that this pattern reflects long-standing social connections between the families that lived at Tum-tumay-whueton and those that inhabited the Mount Currie and Lillooet areas. There are numerous Tsleil-Waututh oral histories that speak of connections to Lillooet (e.g., Mortimer 1981:161–163; Gabriel George 2014; Sparks and Border 1989:1). Lillooet people married into the Tsleil-Waututh community (e.g., Old Honus's wife, (George 1990:1)), and it has been suggested that the name 'Tsleil-Waututh' may actually mean 'towards or facing Lillooet' (Point 1996a:22). It is my opinion that the high-ranking lineage (i.e., 'chiefly') that was reported to have inhabited Tum-tumay-whueton maintained marriage and trade connections with high ranking families in Lillooet and either imported points from there, or copied Lillooet styles with local Burrard Inlet raw materials. As noted above, the 'Hutchingson Collection' likely from Say-mah-mit (DhRq 1) displays a very low proportion of ground slate points, a high proportion of triangular side-notched points, and points made of green andesite. These attributes suggest similarities to both Tum-Tumay-whueton (DhRr 6) and Say-umiton (DhRr 18) and distinguish it from Gulf of Georgia-aged sites (1200 BP to contact) on the lower Fraser River.



Figure 20. Triangular side-notched projectile points from Tum-tumay-whueton/DhRr 6 (Carter Collection, Tsleil-Waututh Treaty, Lands and Resources)

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279. This pattern of preference for flaked stone projectile points in Burrard Inlet and ground stone projectile points on the North Arm of the Fraser is really more about raw material selection than technological preference. That is to say, people who lived in Burrard Inlet (i.e., ancestral Tsleil-Waututh) displayed a preference for manufacturing projectile points from dacite/basalt, andesite and obsidian that can be flaked into shape, while people who lived on the North Arm of the Fraser (i.e., ancestral Musqueam) displayed a preference for manufacturing projectile points made of slate that is typically ground rather than flaked into shape. It is my opinion that this pattern reflects highly localized patterns of tool stone procurement that was embedded into people's seasonal rounds. It is my opinion that the pre-contact inhabitants of Burrard Inlet procured local tool stones (dacite/basalt, andesite, and obsidian) from the beaches of the inlet and the mountains adjacent to it, while the pre-contact inhabitants of the North Arm of the Fraser procured slate from local sources in the Lower Mainland or farther up the Fraser Valley near Chilliwack (Graesch 2007; Lepofsky et al. 2007).
280. As a specific example of local preference of raw material, I present the case of green andesite in Burrard Inlet. A distinctive variety of tool stone quality green andesite (**Figure 21**) was used for making bifaces, projectile points, and other stone tools in Burrard Inlet and Howe Sound, but is very rare beyond those areas (Lepofsky 2007; Reimer 2011). This green andesite is present in most of the aforementioned village sites, but at Say-umiton/DhRr 18 it makes up 41% of the stone tool assemblage (Lepofsky et al 2007:209). Green andesite also comprises a notable proportion (~10–20%) of the Hutchingson Collection likely from DhRq-1 (Port Moody Museum). Reimer (2011:85–88) reports a bedrock source of this green andesite from Anvil Island in Howe Sound, and I have located unworked (i.e., geological/natural) green andesite from glacial outwash deposits in north Burnaby and alluvial deposits of the Indian River. Reimer's (2011) research claims to have sourced these green andesite artifacts to Anvil Island, but no other sources were compared in that study, thus Reimer's (2011) interpretation of a 'match' between artifact and source cannot be supported unless other sources are considered in the analyses. In my opinion, the preference for this green andesite is a distinctive trait of the pre-contact inhabitants of Burrard Inlet, the ancestors of the Tsleil-Waututh.
281. Along similar lines, researchers in Puget Sound have identified dacite cobbles geologically derived from Watts Point in Howe Sound, on San Juan Island and the Olympic Peninsula (Kwarsick 2010; Taylor 2012). The most parsimonious explanation is that these dacite cobbles were transported from Watts Point, and Burrard Inlet (as originally indicated by Morin in Lepofsky et al. 2007) by glaciers rather than people (Rorabaugh and McNabb 2014). This means that Reimer's (2011) classification of dacite artifacts from Burrard Inlet sites to the Watts Point dacite source, rather than local dacite beach cobbles, is highly suspect. By far the more plausible (and my original) explanation is that ancestral Tsleil-Waututh people used local dacite beach cobbles for making most of their stone tools (Lepofsky et al. 2007). These local dacite cobbles were transported from Watts Point to Burrard Inlet by glaciers more than 10,000 years ago.



Figure 21. Green andesite bifaces and projectile points from Say-umiton/DhRr 18 (Carter Collection, Tsleil-Waututh, Treaty, Lands and Resources)

3.10.2 Summary of Distinctive Archaeological Traits

282. In the preceding sections, I outlined four major features of the archaeological record of Burrard Inlet that sets it apart from adjacent localities: pictograph style, reliance on flaked stone technology, preference for triangular side-notched projectile points, and preference for green andesite. In my opinion, each of these distinctive attributes should be considered working hypotheses that could be borne out with additional research. Given Tsleil-Waututh's oral histories regarding their pre-contact occupation of eastern Burrard Inlet, and that Tsleil-Waututh's genealogy extends into the pre-contact period, and that there is no convincing evidence for a late pre-contact population replacement in the area, one can associate the late pre-contact archaeological record with the ancestors of the Tsleil-Waututh. This is the essence of the direct historic approach in archaeology. *Because the archaeological record of these people is distinctive from neighboring peoples, this can be taken as evidence of Tsleil-Waututh as a distinct society prior to contact.*

3.11 Historical Record

283. In this section, I shift the discussion from archaeological to historical evidence in relation to identifying whether or not Tsleil-Waututh was a distinct aboriginal group and their relationship with adjacent groups. In terms of the relevance of this evidence, there are parallel British and Spanish accounts of 'First Contact' in Burrard Inlet in the summer of AD 1792. While it is extremely likely that these documents do describe Tsleil-Waututh ancestors, the documents do not specify the tribal or ethnic affiliation of the peoples they encountered. Further, in terms of historical evidence around AD 1846, there is a dearth of historic evidence relevant of Burrard Inlet. The historical record picks up sharply around and after AD 1858. By about AD 1863, documents derived from missionaries (OMI) and colonial authorities do describe the tribal affiliation of the inhabitants of eastern Burrard Inlet as 'Tsleil-Waututh' (e.g., "Lillooet", "Slillooet" etc.) and occasionally, 'Squamish' ("Skwamish").

284. It is worth noting here, that it is possible that 'First Contact' with Tsleil-Waututh may have occurred much earlier (AD 1579) with the voyage of Sir Francis Drake (Bawlf 2003). Specifically, based on archival research of 16th century maps and travel logs, Bawlf (2003:223–226, 300–304) contends that Drake traveled much farther north in AD 1579 than the official descriptions of his voyage indicate. According to Bawlf (2003:225, 303), Drake mapped Burrard Inlet (on Ortelius's third atlas) and called it "*Baia de las pinas mozzo hermoso*" ('Bay of the young and beautiful pines'), probably an apt description of the area. Notably, Point Grey is labelled "*P.[Punta] de Sardines*" (Sardine Point). Point Grey was well-known as an excellent place to harvest sardine-like smelt and herring (Coupland 1991; Mathews 1955). Both the North and South Arms of the Fraser River are also apparently mapped, and hence explored (Bawlf 2003:225, 303). However, the academic community has by no means accepted Bawlf's research (e.g., Archer 2005), and Canadian case law indicates that the official timing of 'First Contact' for Tsleil-Waututh should be AD 1792. However, it is worth mentioning in passing, that the date of

AD 1792 may not be an accurate date for 'First Contact'. In any case, the influence of European disease here preceded 'First Contact' by at least a decade (~AD 1782) (Boyd 1990, 1999; Harris 1994), and had a far greater impact on indigenous people than did the passing voyages of Narvaez, Vancouver, and Galiano, and possibly Drake.

285. The historical record indicates that the Crown and missionaries described the community living at Sleil-Waututh/IR No.3 as an independent group called Lillooet or Slillooet, and sometimes described them as, or grouped them with "Squamish" (i.e., described as a 'Skwamish' band). Tsleil-Waututh's increasing use of the Squamish language and high rate of intermarriage with Squamish women contributed to this confusion. As described in detail below, this was not "Squamishization" of the Tsleil-Waututh people (Bouchard and Kennedy 1986). Reserves were created in Burrard Inlet in AD 1869 and AD 1876. In AD 1876, the Joint Indian Reserve Commission described IR No.3 as "Skwamish" and IR No.4 as jointly held by "Skwamish and Muskweam" (Sproat 1877). In AD 1923, the Tsleil-Waututh inhabitants of IR No.3 voted against amalgamating with another band classified as "Squamish," and instead asserted their independence (Perry 1923). Since then, the "Burrard Band" and the "Tsleil-Waututh Nation" have administered Burrard Inlet IR No.3, IR No.4, and IR No.4a. In my opinion, around AD 1863, the historical record describes a distinct group—Tsleil-Waututh—that was rapidly being numerically overwhelmed by immigrating Squamish neighbors. In later descriptions of this community, it was increasingly described as Squamish probably due to an increased use of the Squamish language by the inhabitants there. A synopsis of the history of Burrard Inlet is presented below, with key accounts reviewed in detail.
- a) ~AD 1782: A smallpox epidemic sweeps the Coast Salish world with a 50-90% death rate. Entire villages and groups are annihilated, and survivors congregate at fewer villages (Boyd 1990, 1999; Carlson 2010; Harris 1994). *The significance of this depopulation event cannot be overstated.*
 - b) AD 1791: The Eliza Expedition (Spanish) explores the Salish Sea, but apparently does not make landfall in the Lower Mainland area (July 1791). A map is produced (the Eliza-Narvaez chart, **Figure 22**) describing a rough outline of the coastline of the Lower Mainland indicating four aboriginal settlements (Bartroli 1997).
 - c) AD 1792: The George Vancouver expedition (British) explores the Salish Sea including Burrard Inlet (June 1792). Indigenous people are encountered at Point Grey and near First Narrows. Settlements are inferred, but apparently not observed at First Narrows (Bartroli 1997:70-75).
 - d) AD 1792: Peter Puget (of the Vancouver expedition) describes the north shore of Burrard Inlet as apparently being "well inhabited" (Bartroli 1997:75).
 - e) AD 1792: The Galiano and Valdez expedition (Spanish) explores the Salish Sea including Burrard Inlet and Indian Arm (June 1792). Indigenous people are encountered at Point Grey, near First Narrows, and at Indian River. Settlements

are inferred, but not observed at First Narrows. A small settlement is observed at Indian River. The Spanish indicate that the indigenous name for Burrard Inlet is "Sasamat" (Wagner 1933).

- f) ~AD 1790–1850: Raids of northern 'Lekwiltok' (Kwakwaka'wakw, from northern Vancouver Island) peoples into Coast Salish territory inflicts tremendous population loss and defensive oriented reconfiguration of settlements (i.e., consolidation and erection of palisades) (Anglebeck and Hall 2011).
- g) AD 1801: Boyd (1990, 1999) posits an additional smallpox epidemic to sweep the Northwest Coast; Harris (1994) argues that this event did not occur.
- h) AD 1808: Simon Fraser descends the Fraser River and reaches Musqueam (Lamb 1960).
- i) AD 1824–1825: Hudson Bay Company parties explore the Lower Mainland for a potential site for a fort.
- j) ~AD 1827: Chief Kiapilano (Capilano, qewəpəlenəx^w) establishes a village at Capilano River (Sproat 1876, Letter of November 27th, to the Minister of Interior in Ottawa, RG10, v.3611, f.3756–3757).
- k) AD 1827: Fort Langley is established (Maclachlan 1998:12, 28). Cultivation of the potato quickly spreads to Coast Salish people (Suttles 1987). Firearms and other trade goods are integrated into Coast Salish material culture on an ever-increasing scale.
- l) ~AD 1835-50: The Battle of Maple Bay—a Coast Salish alliance wins a decisive victory against the Lekwiltok, ending their reign of predatory raiding (Anglebeck and McLay 2011).
- m) ~AD 1840: Tsleil-Waututh's chief Waut-salk II dies, leaving a brief power vacuum in Burrard Inlet. James Sla-holt (son of Waut-salk II) becomes the next Tsleil-Waututh hereditary chief.
- n) AD 1853: Another smallpox epidemic sweeps the southern Northwest Coast. Boyd (1990:141–143) argues that much of the Coast Salish area was not impacted by this due to an aggressive inoculation campaign. It is unknown if any Tsleil-Waututh people were inoculated against smallpox at this date, and whether or not this, or a different epidemic, is the second great plague described in Tsleil-Waututh oral histories.
- o) AD 1857–1858: Gold is discovered on the Thompson and Fraser Rivers and thousands of Californians, Canadians, Europeans, and Chinese miners flock to the gold fields (Akkrig and Akkrig 1977). The settlement of Queensborough (later New Westminster) is established.

3.0 The Tsleil-Waututh Historically and Today

- p) AD 1858: Squamish people flock to the new colonial settlement (Queensborough), and begin to over winter in western Burrard Inlet, rather than the Squamish Valley and Howe Sound for the first time (Sproat 1876).
 - q) AD 1862: Father Fouquet visits the Tsleil-Waututh community living at the future site of IR No.3 and baptizes several individuals there. He identifies the village and people as 'Slelouet' (Bouchard and Kennedy 1986:29; Oblate Registers 1860–1869).
 - r) AD 1862–1863: Another smallpox epidemic spreads from Ft. Victoria (March 18, 1862). 'Northern Indians' (Haida and Tsimshian) were particularly hard hit. Boyd (1990:145) argues that much of the Coast Salish area was not impacted by this due to an aggressive inoculation campaign. It appears that Tsleil-Waututh people were inoculated against smallpox in 1862 at a village called "Lilloetou" by Father Fouquet (The British Columbian 1862).
 - s) AD 1863: Moodyville sawmill established in North Vancouver. Many Squamish people gain employment in this mill and settle on adjacent lands.
 - t) AD 1868: Establishment of 'Mission Settlement' near an aboriginal settlement at Mosquito Creek for aboriginal people who had embraced Catholicism (Lascelles 1984:12).
 - u) AD 1867: Stamps Mill established on south shore of Burrard Inlet at Hastings. The townsite would develop into the modern city of Vancouver.
 - v) AD 1869: Reserves allocated by Joseph Trutch (surveyed by Launders 1869 FBBC162) at Mission (IR No.1), False Creek (IR No.2), and North Shore Burrard Inlet (IR No.3) "*to the Indians respectively residing therein*"—not for specific 'tribes' (Trutch Gazette Notice of November 27, 1869, B.C. Gaz, v. VIII, November 27, 1869, at p1.).
 - w) AD 1876: the Joint Indian Reserve Commission (JRC) confirms and establishes a number of reserves on Burrard Inlet *and assigns them to specific tribes* (Sproat 1877). Tsleil-Waututh officially becomes administratively Squamish in the eyes of the Canadian Government (see above for a detailed discussion of this issue).
286. It is highly significant that the Coast Salish world had undergone a very heavy mortality before contact. Mortality rates of 90% have been described by some historians for an AD 1782 smallpox epidemic (Harris 1994) (note Boyd (1999:21–30) argues for a slightly earlier epidemic, AD 1775). If 90% of the population suddenly died a decade before 'First Contact' (AD 1792), then the observers at 'First Contact' were not witnessing an indigenous aboriginal culture that had remained unchanged for centuries. They were witnessing a survivor population rebuilding their societies and social groups. It is my opinion that many of the practices observed or inferred by early contact accounts were fairly recent phenomena, spurred by this devastating epidemic. I make specific note of such accounts below.

3.11.1 Contact

287. First contact between Europeans and the indigenous inhabitants of Burrard Inlet may have occurred in the summer AD 1791. At that time, a Spanish expedition under Eliza (including Narvaez and Verida) entered the Georgia Strait and roughly mapped an outline of the coast and indicated the location of several villages (Bartroli 1997:37–40; Wagner 1933:186–187). Juan Pantoja (a member of the Narvaez/Verida expedition) provided a detailed account of indigenous fishing at Point Roberts (called “Isla de Zepada” by the Spanish), but no further details of the Lower Mainland region (Bartroli 1997:44–47; Wagner 1933:186–187). It should be noted that the official logs of this voyage have never been located (Bartroli 1997), only the brief accounts by Pantoja and a map (**Figure 22**) roughly describing the coastline of the Lower Mainland and the location of several indigenous settlements.



288. As this map is very rough (it only vaguely corresponds to the landforms of the region) and lacks associated written description, associating the villages indicated on it with known indigenous settlements (from historical, ethnographic or archaeological sources) is difficult (see Bartroli 1997; Ham 1996). If “Isla de Zepada” corresponds to Point Roberts, and “Isla de Langara” to Point Grey, then the village indicated there is probably Eyalmu, Musqueam or Male. If “Punta de la Bodega” corresponds to West/North Vancouver, then the village indicated there probably corresponds to that at Capilano River (Xwmélt’sstn or Homulcheson). The village at the entrance to “Bocas del Carmelo” (Howe Sound) is more difficult, as there is no (to my knowledge) corroborating ethnographic or historic information indicating a village near Point Atkinson. There are, however, substantial shell middens at Horseshoe Bay (DiRt 1) and the former location of the Great Northern Cannery in West Vancouver (Stukale/DiRt 5). It is possible that either of these completely un-studied archaeological sites may correspond to this village. In any case, the information from the Narvaez and Verida expedition of AD 1791 is too sparse to make any determination of the identity of the aboriginal people and settlements they describe.
289. The expeditions of the following year—Vancouver for the British, and Galiano and Valdez for the Spanish AD 1792—provide far more detail regarding Burrard Inlet and the indigenous people they encountered there, but again, are not specific enough to determine who they encountered (i.e., Tsleil-Waututh, Musqueam, Squamish, or other peoples). All later descriptions of these encounters inferred who the Spanish and British encountered based on modern reserve locations—especially the Squamish reserve at Capilano River—not on the information provided in the primary accounts (see Lamb 1984:583). It must be emphasized that modern Squamish reserve locations in Burrard Inlet have no demonstrated historical association with AD 1792 Squamish occupancy there (e.g., Sproat 1876), or at least I know of no substantial evidence that supports it. I review the British and Spanish accounts of ‘First Contact’ below, and glean some information regarding the identity of the peoples they encountered there.
290. Captain George Vancouver is credited as the first European explorer to enter Burrard Inlet which he did on June 13, 1792 in longboats (**Figure 23**). As Vancouver’s expedition entered the inlet (which he named Burrard’s Canal”) at the First Narrows, they encountered indigenous people in canoes approaching them from the direction of Capilano River. These indigenous people escorted the English boats the length of the inlet. While this initial encounter is to the west of the Study Area, it is an event of such significance that it is worth reviewing here in detail. George Vancouver’s First Contact with the inhabitants of Burrard Inlet, likely from the village of Who-mult-chun (the Tsleil-Waututh name for this village) or Capilano, or Xway-Xway (Lumberman’s Arch in Stanley Park) was described by Vancouver thusly:

Here we were met by about fifty Indians in canoes, who conducted themselves with great decorum and civility, presenting us with several fish cooked and undressed of a sort resembling smelt. These good people, finding we were inclined to make some return for their

hospitality showed much understanding in preferring iron to copper (Bartoli 1997:70).



Figure 23. A portion of Vancouver's 1792 map of the Salish Sea (Bartoli 1997). Note Indian Arm rendered in red ink, indicating this information was gained from the Spanish

291. Peter Puget, in charge of the other longboat, provides a slightly different account of the meeting and indicates that the people came from “a village” on the south, rather than the north shore of the inlet near Xway Xway (Lumberman's Arch, Stanley Park):

From the Noon Breakfast Point the Continent [Stanley Park] takes a rounding Turn to the Eastward forming a very narrow inlet with the opposite shore. On its South Side is a Village from which we were visited by about 30 Indians, the Conduct of these People was friendly and inoffensive and from them we procured an Excellent Supply of Smelts in Exchange for Trinkets, etc...not a Weapon of any Sort were in the Canoes til asked for which they readily complied with, fetching these Articles from the Village, they trusted everything in the Boats, with which they could hardly keep way though nothing had been given in exchange for them (Bartroli 1997:70).

292. Vancouver's account continues:

For the sake of the company of our new friends we stood under easy sail, which encouraged them to attend us some little distance up the arm. The major part of the canoes twice paddled forward, assembled before us, and each time a conference was held. The subject matter, which remained a profound secret to us, did not appear to be of an unfriendly nature, as they soon returned, and, if possible, expressed additional cordiality and respect. Our numerous attendants, who gradually dispersed as we advanced from the station where we had first met them, and three or four canoes only accompanied us up a navigation which in some places did not exceed one hundred and fifty yards in width.

We landed for the night about half a league from the head of the inlet and about three leagues from the entrance. Our Indian visitors remained with us until, by signs, we gave them to understand we were going to rest, and, after receiving some acceptable article, they retired, and, by means of the same language, promised an abundant supply of fish the next day, our seines having been tried in their presence with very little success. A great desire was manifested by these people to imitate our actions, especially the firing of a musket, which one of them performed, though with much fear and trembling. They minutely attended to all our transactions, and examined the color of our skins with great curiosity; they possessed no European commodities or trinkets, excepting some rude ornaments apparently made from sheet copper; this circumstance and the general tenor of their behavior gave us reason to conclude that we were the first white people from a civilized country that they had seen.

Perfectly satisfied with our researches in this branch of the sound at four in the morning of Thursday, 14th, we retraced our passage in; leaving on the northern shore, a small opening with two little islets before it of little importance.

As we passed the situation from whence the Indians had visited us the previous day with a small border of low marshy land on the northern shores intersected by seven creeks of fresh water we were in expectation of their company, but were disappointed owing to traveling so soon in the morning. Most of their canoes were hauled up in creeks and two or three only of the natives could be seen straggling about on the beach. None of their habitations could be discovered whence we concluded that their villages were within the forest. Two canoes came off as we passed the island but our boats being under sail I was not inclined to halt, and they almost immediately returned.

By seven in the morning we had reached the north west point of the channel. This also, after another particular friend, I named Point Atkinson (Mathews 1955:204–205).

293. With regards to indigenous occupation east of First Narrows, Puget indicated that “[t]he North Shore...appears well inhabited and much broken by Small Rivulets” (Bartroli 1997:75). Lamb’s (1990:13) excerpt from Puget’s journal provides a slightly different account: “[t]he North Shore is in General inhabited & apparently much broken by Small Rivulets.” Puget saw several villages and people (or some other signs of habitation to indicate to him it was inhabited) along the north shore of Burrard Inlet, but no details are provided. Puget’s accounts refers to the Tsleil-Waututh villages at Sleil-Waututh/Tat-ose, Whey-ah-wichen, Say-umiton, and Tum-tumay-whueton – all known ancestral Tsleil-Waututh village sites with corresponding archaeological sites with evidence of very late prehistoric (i.e., ~AD 1600 and later) and early historic occupations.

294. Puget adds the following:

These People were wonderfully surprized both at the Report and Effect of a Musquet, they had waited in Anxious Expectation of one being fired and I have reason to think, it far exceeded, what their Imagination had painted; they seemed to behold it with a Mixture of fear and admiration, and I think it not a little contributed to hasten their Departure, for they shortly after left us...we however contrived by Signs to convince each other of reciprocal Friendship (Bartroli 1997:72-73).

295. The accounts from the British expedition in Burrard Inlet provide little or no indication of the ethnic or tribal affiliation of the people they encountered. On June 12–13, 1792 they vaguely describe one village, probably at Xway-xway (Stanley Park), and infer another one, probably at Xwmélts’stn or Homulcheson (Capilano River). While other villages are not specifically noted, the north shore of Burrard Inlet is described as “in General inhabited” (Lamb 1990:13, see also Bartroli 1997:75). That being said, it seems clear that in the case of Xwmélts’stn or Homulcheson (Capilano River), the British inferred that this village was hidden in the forest: “None of their habitations could be discovered whence we concluded that their villages were within the forest” (Bartroli 1997:74). This practice of hiding villages in the forest is not a traditional Coast Salish practice. Coast Salish villages were arranged facing the shoreline for millennia (Charlton 1980; Grier

2003; Matson and Coupland 1995). In my opinion, this practice of hiding one's villages was a response to depopulation from smallpox and increasing raids from Lekwiltok. In my opinion, this was a very recent occurrence. The AD 1791 Eliza-Narvaez map clearly indicates villages in the area that were seen from a distance. Puget's account of a "well inhabited" (Bartroli 1997:75) north shore indicates some manner of occupation in the five or so Tsleil-Waututh village sites along that shore.

296. Only about 10 days after Vancouver's exploration of Burrard Inlet, a Spanish Expedition under Galiano and Valdez also entered the inlet, and explored the length of Indian Arm. The two expeditions encountered each other on June 13, 1792 at Point Grey (**Figure 24**, Bartroli 1997:82; Wagner 1933:259). The Spanish accounts provide some additional details on the indigenous people they encountered, and unlike the British, the Spanish also explored Indian Arm. Below, I present three separate translations because all differ slightly in detail. Beginning in outer Burrard Inlet on June 20th, 1792:

At 9 we saw four canoes coming from south of Punta de Langara. Three were of the same size as the previous ones, the other was larger and in it were two young men paddling, an old man of conspicuous seriousness who appeared to be the chief, and three other individuals. We made them presents of beads, but they showed that they cared little for them. However we took a canoe in exchange for some small sheets of copper, with the idea of using it for communication between the schooners when their boats had gone on some survey. The old man came on board directly he was asked and showed frankness and confidence. In the afternoon twelve canoes came close with some natives who communicated with us with friendly faces and signs of confidence. *Their language seemed to greatly resemble that of the ones we saw in the Isla de Descanso*, but their kindly character, liveliness and joyousness were to be preferred. They repeated very easily what was said to them. One of them came on board, was combed and decorated with a ribbon, which pleased him greatly and he gave many embraces to the man who had adorned him. The sailors sang the Malbroug to them and the Indians accompanied them, continuing the song by themselves when our men stopped. They sold us some bows, arrows, clubs, and three paddles for the canoe, as those who had let us have it went off without troubling to leave it provided with that accessory. None of them was to be seen in the afternoon, *which satisfied us that they were not from the village which we saw close to Punta de Langara*. They had made many signs to us that we should go towards the interior of the channel, giving us to understand that we would find food and abundance of water (Wagner 1933:260–261, emphasis added).

297. There two indications of the identity of the people encountered by Galiano and Valdez here. The first is provided in the statement regarding their language resembling that observed at "the Isla de Descanso" (Gabriola Island). The inhabitants of Gabriola Island spoke a dialect of Halkomelem (Islands Halkomelem). This implies that the people Galiano and Valdez encountered in outer Burrard Inlet were probably Halkomelem

speakers. Recall that Tsleil-Waututh and Musqueam were Halkomelem speakers while the Squamish were not. The ability of the Spanish to discern between Halkomelem and Squamish has been questioned (Amoss 1997b:87; Bouchard 1997a:26–29, April 15), and in my mind, is an open debate. That being said, this is the first indication of the identity of the inhabitants of Burrard Inlet at the time of contact.

298. Second, while these four canoes came from the direction of Point Grey and the certain Musqueam villages on the North Arm of the Fraser, the Spanish conclude they were not from there. Further, this group beckons the ships into Burrard Inlet, their probable home. Thus, it seems a group of people from Burrard Inlet that spoke a dialect of Halkomelem encountered the Spanish in English Bay on June 20th, 1792.

299. And, upon entering First Narrows:

The Indians continued their good relations with us, so much so that the canoe we purchased from them having got out of order, one of them came on board and offered to superintend its repair, which was carried out with all ease (Wagner 1933:264).

300. And, on June 23rd 1792, upon entering Indian Arm:

The north arm of the channel which we called “Floridablanca,” and the natives name “Sasamat”, ends in a river of very little consequence which runs down the slopes and by a ravine of a great mountain and is apparently formed by the waters which, coming from the melted snow, rush down from the mountain. Our officers who surveyed the channel tried to go up the river, although it is very narrow. Navigating in half a fathom of water, they exposed the boats to be dashed to pieces against the trees on the banks. These present a lovely woods in which were some huts, and near them some Indians, who were surprised to see barks so new to them, and very strange people appear in that concealed spot, the entrance to which would certainly remain hidden to everyone who was not led by the vehement desire of making discoveries, and by untiring curiosity. But neither the long distance from inhabited country, nor living, as these people did, deprived of all traffic and communication, and contenting themselves with what that poor land supplied, nor the obscurity and seclusion of the place in which they dwelt, sufficed to preserve them in their solitary tranquility. The women fled at once and hid themselves among the bushes. Some of the men got into a canoe accompanying a youth to whom they all rendered prompt obedience. They approached our boats and watched those who were in them; but shortly returned to land, and went into the wood (Wagner 1933:265–266).

301. Bartroli (1997:102–103) provides a slightly differing account based on his own translation of primary documents:

In the Canal that we call Florida Blanca and the natives call Sasamat, there are few inhabitants. At the entrance I have seen two villages,[dos Rancherías] and several of their Indians brought their canoes alongside our boats, they presented us with fish and expressed satisfaction in meeting us. Their garments, weapons, etc., were very similar in every way to those of the Indians we had met earlier, but I did not find them as robust and skillful as those we had seen coming from the vicinity of Isla de Cepeda [Point Roberts]. We saw no other Indians during our navigation along the eastern arm, but when we finished our navigation of the North Arm [Indian Arm], we saw, on the banks of the river in which that arm ends, a small village from which the women immediately fled as soon as they saw us. Some of the men embarked in their canoes and came closer to us, especially a young man who seemed to be the *tayee* who was giving orders and was obeyed by the Indians in a way that we had not noticed in other parts. *They were more clothed, with capes, than the natives of the entrance to the Inlet, but both groups had the same kind of blankets.* After spending about one hour with us, these Indians of the North arm went further into the river, jumped to land and, carrying their weapons, went into the woods (Mss 144, folio 497, Museo Naval, Madrid, underlining mine).

302. In the discussion of place names above, I offered the view that Sasamat (provided by Tetacus, and Esquimalt chief, Wagner 1933:240) was likely a Spanish rendering of Saymah-mit, the Tsleil-Waututh name for Port Moody. The significance of this cannot be overstated. No other indigenous names were recorded for the area, and Squamish individuals explicitly denied knowledge of the name Sasamat (Mathews 1955:30). Historians have pondered the origin of name Sasamat (e.g., Bartroli 1997; Layland 2013; Mathews 1955), but none had access to the corpus of Tsleil-Waututh place names. I find it remarkable that no one appears to have ever specifically asked a Tsleil-Waututh person about the name Sasamat.
303. I note here that the Spanish description of indigenous dress at Indian River and First Narrows is perhaps of some use in identifying the inhabitants. It specifies that the people at First Narrows and at Indian River wore the same type of blankets. While this may seem a trivial detail, it is my opinion that that Coast Salish woven blankets would have been highly visible and an excellent medium for active expression of emblematic style (Carr 1995b:184–190, 214–215), and very likely could have been active expressions of indigenous identity. In my opinion this evidence suggests that those people living at First Narrows belonged to the same group or tribe as those living at Indian River.
304. Cecile Jane's translation of the events of June 1792 differ slightly from those provided above (Wagner 1933 and Bartroli 1997):

In the afternoon there came near us two canoes with several natives, who regarded us with smiling faces and signs of confidence. Their language appeared to be very similar to that of those whom we had seen in the creek of Descanso, but their open character, their liveliness and

cheerfulness was preferable. They repeated what was said to them with great ease. One came on board; he wished to have, and was given, a ribbon, with which he was much pleased, repeatedly thanking us for that with which he was adorned. The sailors sang the "Marlborough" and the Indians accompanied them, continuing the tune by themselves when our people had stopped. They sold us some bows, arrows, machettes and three small casks for the canoe, since those who had let us have the canoe had gone away without consenting to leave us to leave us these things. No one of the natives remained in sight in the evening, from which we felt sure that they did not come from the settlement which we saw near Point Langara. They made many signs to us that we should proceed further into the channel, giving us to understand that we should find food and abundance of water. It was not possible for us immediately to carry out our intention owing to the calm, and in the state of inaction in which we found ourselves it seemed to be well to send the launch and the boat to examine for ourselves the channel of Floridablanca...The Indians followed in good accord with our men, and so much so that when the canoe which we had bought from them came apart, one of them came on board and wished to direct its refitting, which he did to perfection (Jane 1930:55-56).

The northern arm of the channel which we called Floridablanca and which the natives call Sasamat, ends a river little worthy of notice, which flows down the slopes and through the gorge of a great mountain. Its source appears to be the melting snows, the water from which falls into it. Our officers who explored this channel wished to go up the river, despite the fact that it was very narrow, and navigating in half a fathom of water they were in danger of finding their boats caught in the trees which were on the banks. These trees formed an attractive wood in which there were some clearings, and near them a number of Indians who were amazed to see vessels so novel in appearance to them, and men even more strange, who appeared in that remote place, the entrance to which was assuredly hidden from all who were not filled with a vehement desire to make discoveries who were not filled with a vehement desire to make discoveries and lead on by an unwearied curiosity. But neither the great distance from an inhabited land, nor the complete absence of all trade and means of communication among these people, who lived contented with the products of the place in which they lived sufficed to preserve from them their lonely peace. The women fled at once and hid themselves among the rocks, while some of the men embarked in a canoe, accompanied by one boy to whom all showed great deference. They approached our boats, observed those who were in them, but in a little while returned to land, and went away into the wood (Jane 1930:57-58).



Figure 24. Galiano and Valdez AD 1792 expedition map, published in 1802 (Bartroli 1997). Note "Canal de Sasumat" indicated for the eastern Burrard Inlet and Indian Arm area

305. After these accounts of First Contact, there are very few historical documents providing any detail on the inhabitants of Burrard Inlet for almost 70 years. There is a single passage in the Fort Langley Journals referring to the “Whooms” returning to “Burrard’s Canal”:

September 1828 - Thursday 25th. 200 canoes of Whooms Stopped along Side of the wharf. They are on their way to Burrard’s Canal for the winter. (MacLachlan 1998:75).

306. The recording of the name ‘Whooms’ by HBC clerk McMillan has been examined at some length in the matter of *Mathias v. HMTQ*, and therein considerable doubt was cast on McMillan’s linguistic ability (see Bouchard 1997b:4–5). It was Suttles (in MacLachlan 1998:234–237) that correlated the name ‘Whooms’ with the Squamish, not McMillan himself. As, to my knowledge, there is no corroborating evidence of Squamish over-wintering in Burrard Inlet as early as AD 1828, there are really two reasonable interpretations of this statement. First, McMillan may have correctly identified the identity of this flotilla as ‘Whooms’ (taken to mean Squamish), but confused Howe Sound for Burrard Inlet. Second, McMillan may have misidentified some of the flotilla as ‘Whooms’, when many of them were Tsleil-Waututh, on their way to their traditional winter villages in Burrard Inlet. In either case, this passage, and the two others describing ‘Whooms’ in Burrard Inlet are not persuasive evidence on the identity of the indigenous inhabitants of Burrard Inlet in AD 1828.
307. A map of the Lower Mainland area published in AD 1849 (surveyed in AD 1847 Henry Kellet in the HMS Herald, but the Herald’s logs indicate they did not enter Burrard Inlet) indicates that Burrard Inlet was “inhabited”, but no specific village sites are located there (**Figure 25**; Hayes 2005:18). This document cannot be taken as negative evidence (i.e., lack of villages in Burrard Inlet), as several Coast Salish villages with centuries of continuous occupation and near-certain occupation at this time are also not indicated (e.g., Musqueam/Stselax, Tsawwassen).



Figure 25. AD 1849 map of the Lower Mainland (surveyed in AD 1847 by Henry Kellett in HMS Herald); note Burrard Inlet indicated as 'inhabited' (Hayes 2005:18)

3.11.1.1 Oblates of Mary Immaculate

308. The French-speaking missionaries from the Oblates of Mary Immaculate (OMI) began their missionary work in the Lower Mainland area of what would become British Columbia at approximately the same time as the AD 1858 Gold Rush. The Oblates were actively baptizing and vaccinating Coast Salish people against smallpox in the early 1860's. Some of these documents predate any descriptions by the colonial authorities of the indigenous occupants of Burrard Inlet.
309. On January 6, 1862, the Oblates baptized 16 people at Burrardview and identified them as "Slelouet" (January 6, 1862 OMI Baptismal Records). Additionally, Father Fouquet (OMI) vaccinated a number of individuals at a village called "Lilloetoul" (1 rancherie) (in the New Westminster District) around April 1862 (June 7th, 1862, The British Columbian). The following year, OMI missionaries baptized two more adults at Burrardview and indicated they were "Slelouet" (November 20, 1863 OMI Baptismal Records). In November 1867, James Sla-holt was baptized by Father Fouquet. Sla-holt's parents were given as "Watsartk" (Waut-salk II) and N-sie-tsar. "Watsartk" is indicated as being "sauvage Skormish". Kennedy (2000:143) suggests that Tsleil-Waututh people were self-identifying as Squamish at this time (see *Bouchard and Kennedy's Squamishization Hypothesis* below). I do not think this was the case. Sla-holt was not identified as Squamish or Tsleil-Waututh in this baptism record; Waut-salk (II), who had been dead for nearly 30 years was identified as Squamish. According to the Tsleil-Waututh Genealogy, Waut-salk (II)'s father was Waut-salk (I), a Tsleil-Waututh person (the chief) who lived in eastern Burrard Inlet, and his mother was Whi-why-loat, a woman from Musqueam. I think that Fouquet indicated that Waut-salk (II) was Squamish either by mistake or because he was told so by his Squamish interpreter. Many Squamish people worked closely with the Catholic Church and their missionaries from The Mission/IR No.1.

3.11.1.2 Colonial Authorities

310. After about AD 1863, the historical record relevant to the indigenous inhabitants of Burrard Inlet picks up sharply, as colonial authorities began to integrate Burrard Inlet into the British Empire. I review some of the earliest and most salient documents in this below. In AD 1863, the English-speaking colonial official and judge H.P.P. Crease identified the village at Burrardview (to become Burrard IR No.3) as "Large Indian Ranch (Squamish) owned by Lillooet", indicated the village at Roche Point as "Slilooet Indians, Tum-tumay-whueton (?)," and the North Vancouver area as "Lillooet Indians ground" (**Figure 26**). This document then identifies two "Lillooet" villages in eastern Burrard Inlet (Sleil-Waututh/IR No.3 and Whey-ah-wichen/Roche Point), and mistakenly uses the name for a recently occupied village—Tum-tumay-whueton—at Roche Point. The mountains of North Vancouver are explicitly indicated as Tsleil-Waututh ("Lillooet") territory. The fact that the community at Burrardview is the only one indicated as "large" in all of Burrard Inlet is notable. I interpret this to indicate that relatively few Squamish people had begun to over-winter in Burrard Inlet at this time,

because in less than a decade, several predominantly Squamish reserves would be much larger than the predominantly Tsleil-Waututh village at Burrardview. I interpret that "Squamish" was written in brackets beside it to indicate some Squamish people lived there.

311. It is notable here that there are no indigenous settlements at either Belcarra, indicating Tsleil-Waututh's relocation to Sleil-Waututh prior to that time, or Seymour Creek, indicating that this village had not yet been re-occupied (Tsleil-Waututh oral histories indicate it was a village site with a named leader). Overall, in my opinion, the Crease Map is very strong evidence of a distinctive aboriginal group inhabiting eastern Burrard Inlet in AD 1863. Crease indicates this group was called "Lillooet" or "Slillooet"; and I interpret this to be a poor transcription of Tsleil-Waututh.



Figure 26. 1863 Crease map of eastern Burrard Inlet (cropped here) (Crease, BCARS CM_A1071, sheet 2)

Table 3. Annotations to the 1863 Crease Map (Figure 32)

#	Notation	Location
1	"Lillooet Indians Ground"	North Vancouver
2	"Fred Houston"	Seymour Creek
3	"Large Creek, Whiskey Seller"	Seymour Creek
4	"Large Indian Ranch (Squamish), belongs to Slillooet"	Sleil-Waututh/IR No.3
5	" Tom-tumay-eoton"	Whey-ah-wichen/Roche Point
6	"Slillooet Indians"	Whey-ah-wichen/Roche Point

312. In 1869, local colonial Constable Brew seemed to draw clear distinctions between the Tsleil-Waututh, Squamish, and the Musqueam:

I would respectfully state that the Squamish Indians are squatting on the Military Reserve on the Reserves of the Lilote(?) and Musqueam Indians: they are also in other places around the Inlet. They do not belong to this section of the country, but to Howes Sound, out of which until a very recent date they seldom ventured, fearing retaliation for murder and robbery committed on White miners in 1858, and other Indians for a long time (Letter from Constable Brew to A.T. Bushby, Assistant Commissioner of Lands and Works, dated July 30, 1869, Burrards Inlet).

313. It is near-certain that the “Lilote(?)” are the Tsleil-Waututh. It also seems apparent that Brew had observed or had been told of Squamish peoples’ recent migration into Burrard Inlet and distinguished between them and the Tsleil-Waututh and Squamish.
314. The original survey notes of Sleil-Waututh/IR No.3 provide ambiguous evidence regarding Tsleil-Waututh’s identity as a group in 1869 (Lauders 1869a, 1869b) (**Figure 27, Figure 28**). Lauders (1869a) indicated that the chief of this village was “Slaick-whett” (**Figure 27**) (James Sla-holt, brother of Catherine Unsakaloate and son of Waut-salk II). In the *Tsleil-Waututh Genealogy* Section (above) I identified that the vast majority of the Tsleil-Waututh community is comprised of the descendants of James Sla-holt (b ~1820–1901) and his wives, and Unsakaloate and her husband. It is highly significant that the first named “chief” of this community is a recognized Tsleil-Waututh ancestor (note the status and standing of leading *si?em* this time was rapidly evolving into the spokesman and political role ‘chief’ of historic and modern Canada). Three successive Sla-holts have been the hereditary chiefs of Tsleil-Waututh after James Sla-holt (George, John, and Ernest). Much of the current Tsleil-Waututh community can be trace its descent to the named chief on the earliest reserve creation document (Lauders 1869a).
315. In his notes Lauders indicated:

This Village is called Lillooet and was established by Indians from the portage of that name perhaps 30 or 40 years ago there are yet 2 or 3 Old people of that tribe still living here – all the remainder of the Indians here and all over Burrard Inlet are of the Squamish tribe, very much divided. (Lauders 1869b, Sept-Oct 1869. Notebook 2/69, P.H. 1, Group 1).

316. In sections below, I provide many lines of evidence that contradicts these statements (especially the Tsleil-Waututh population at the time), and in my opinion it cannot be taken at face value. Sla-holt was not present during the survey or any 'discussions' through translators that may have occurred with Lauders (Lauders 1869a).
317. This statement does refer to Tsleil-Waututh's relocation from Tum-tumay-whueton and places this event circa AD 1820–30. *However, as was mentioned above and will be reviewed in detail below, there are several lines of evidence that place an existing Tsleil-Waututh village here at Sleil-Waututh prior to the relocation of the people from Tum-tumay-whueton (Morin 2014; Tsleil-Waututh 2000). Indeed, the history of aboriginal occupation spans more than 3,500 years at this place; there is no abrupt appearance of a people here.* Therefore, the balance of evidence suggests that Lauders (1869a) was mistaken in his assessment of the recent history of Sleil-Waututh.

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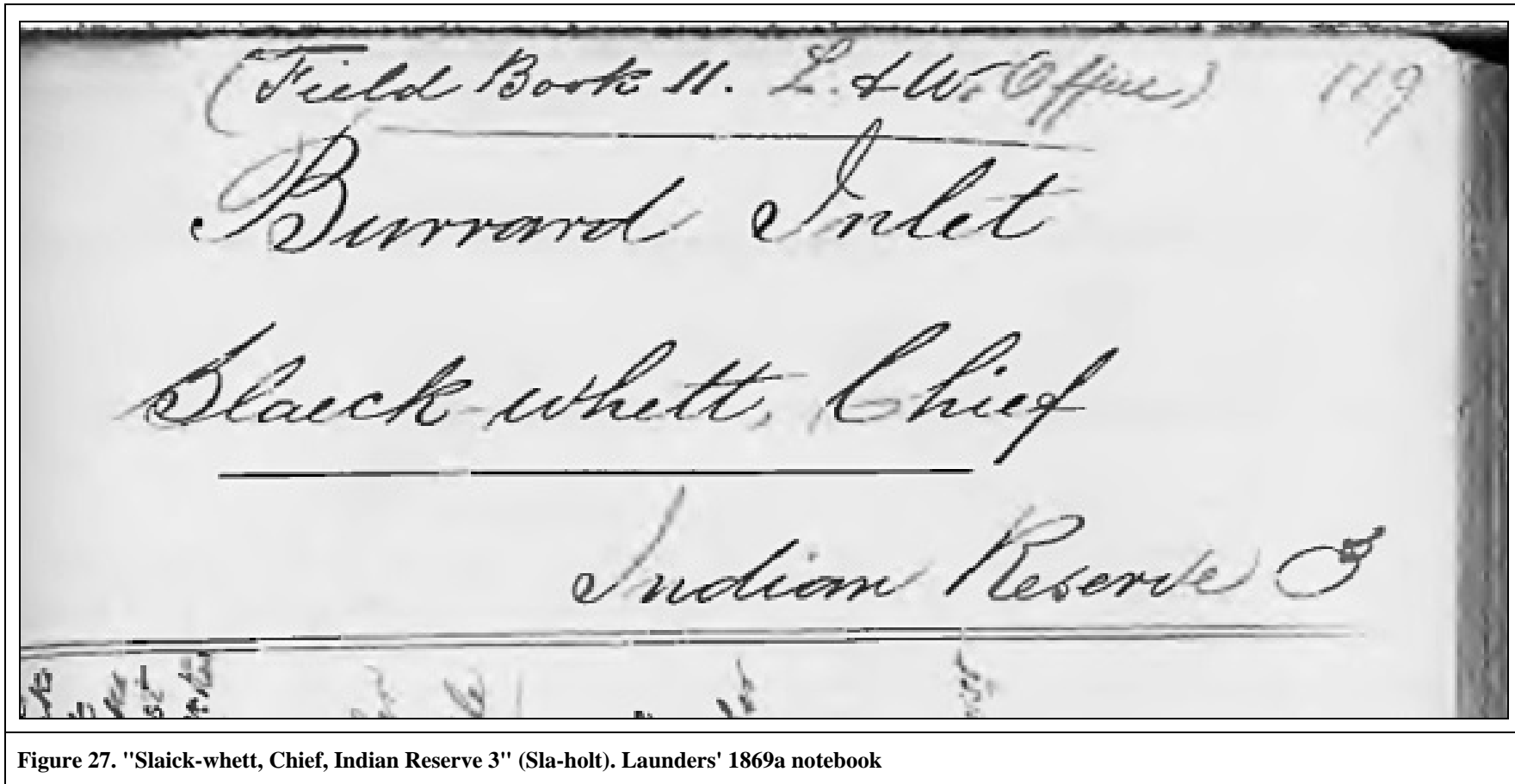


Figure 27. "Slaick-whett, Chief, Indian Reserve 3" (Sla-holt). Launder's 1869a notebook

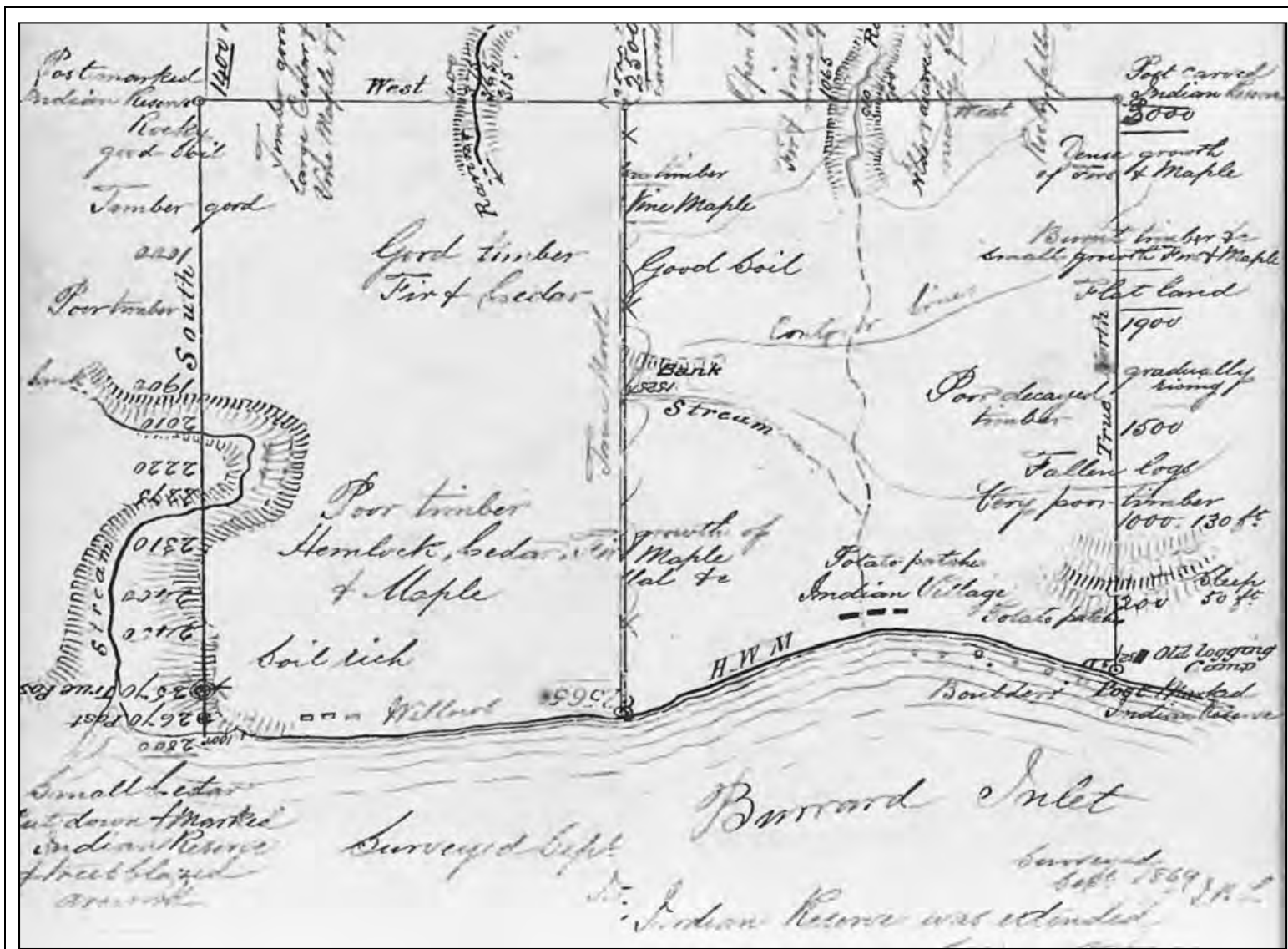


Figure 28. Launders' 1869a survey map of Burrard IR No.3. Note that this is composite map from two sketches in Launders' notebook (FBB162)

3.11.1.3 Coast Salish Petitions

318. The historical evidence reviewed above does shed light on Tsleil-Waututh as a distinct group in the past and at AD 1846, but all this information describes how outsiders with relatively little knowledge of local communities, their history or their language viewed Tsleil-Waututh. Bouchard (1996a) has argued that Tsleil-Waututh maintained a “dual identity” through the 19th century. It is my opinion that Tsleil-Waututh occasionally were described as Squamish, but when Tsleil-Waututh asserted their own identity, it was as an independent group and did not self-identify as Squamish. Contemporaneous petitions by Coast Salish people balance the historical record to some degree because in the petitions, indigenous people were given discretion in self-identifying. In my opinion, the following petitions are powerful evidence for Tsleil-Waututh as a distinctive aboriginal group in the 1860's and that this distinctiveness can be projected into the recent past (i.e., at and before contact) with some certainty.
319. There are at least four instances in the early historic period wherein the Tsleil-Waututh chief James Sla-holt described what community he belonged to. One of the first petitions delivered to colonial authorities from Coast Salish peoples (AD 1864) lists only one chief from Burrard Inlet: “Slewlton” (Sla-holt) of the village of “Slelouet” (Petition of Indian Chiefs to Governor Seymour, May 24, 1864, Great Britain Colonial Correspondence, CO 60/19, Seymour to Cardwell, British Columbia Archives, Victoria).
320. Indeed, in her sworn evidence regarding the AD 1864 Seymour petition, Dr. Barbara Lane (a recognized expert in anthropology, history and First Nations rights) recounted:
- Q (Ashcroft): From your knowledge, would you agree with me that of all of the names of the people in villages only Slelouet is in Burrard Inlet?”
- A (Lane): “Of the villages listed here?”
- Q (Ashcroft): “Yes”
- A (Lane): “Well, I don't know because I can't recognize many of the village names from the way they are written here”
- Q (Ashcroft): “Of the ones that you recognize, do you recognize any others in Burrard Inlet?”
- A (Lane): “Well, there are many here that I can't identify so the answer has to be understood in that context. But the only one that appears to me to be familiar as one in Burrard Inlet is the next to last on page 6, I believe, of the exhibit.”
- Q (Ashcroft): “That's the one we have described as Slelouet?”
- A (Lane): “Yes” (Lane 1997:37–39, Proceedings at Trial, February 5, 1997, *Mathias v. HMTQ*)

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321. This is a highly significant historical fact. In 1864 there were no chiefs in Burrard Inlet as signatories besides Sla-holt (James), the Tsleil-Waututh Hereditary Chief.
322. Three years later in AD 1867, another petition from Coast Salish peoples to colonial authorities listed only one chief of Burrard Inlet "Slelortle of Slelowet Burrard Inlet Villages" (Petition to Governor Seymour Feb 19, 1867, Dispatch No. 33, February 19th, 1867. Great Britain Colonial Correspondence, CO 60/27, Seymour to Cardwell). Here, "Slelortle" is likely a rendition of the name Sla-holt, Tsleil-Waututh's chief at that time (born circa 1820, died 1901), and multiple "Slelowet" (Tsleil-Waututh) villages in Burrard Inlet are indicated. In AD 1870, "Sleholdoo, chief of Slilooet" (i.e., Sla-holt, chief of Tsleil-Waututh) was a signatory on a petition to colonial authorities (Petition of Fraser Valley Chiefs to Governor Musgrave Regarding the Sale of Cranberry Patches in the Lower Fraser Valley, January 7, 1870, British Columbia Colonial Correspondence, Holbrook to Musgrave, F778/38, reel B-1334, British Columbia Archives, Victoria). And finally, in AD 1873, "James" chief of "Burrard Inlet" was signatory on a petition to the colonial authorities (Petition to Powell from Lillooet, Lower Fraser and Bute Inlet Indians, 1873, RG10, vol 3602, file 1794, reel C-10104, National Archives of Canada, Ottawa). This was James Sla-holt, Tsleil-Waututh's hereditary chief of that time.
323. These petitions provide very strong evidence that during the period from AD 1864–1873 there was a unique group of people living in Burrard Inlet called "Slelowet", "Slilooet" or "Slelouet", all renditions of Tsleil-Waututh, and that these people had a leader named "Slelortle", "Sleholdoo", "Slewtou" or "James" who was James Sla-holt. Note that James Sla-holt did not advance any manner of "dual identity" (i.e., Tsleil-Waututh/Squamish) in any of these cases; he only emphasized a Tsleil-Waututh identity.

3.11.1.4 Summary of the Historic Record

324. Unfortunately, there is, to my knowledge, almost no historic information relevant to Tsleil-Waututh's identity dating to about AD 1846. As reviewed above, the historical record is much richer about 15–20 years later. And given that there are no indications of a relatively recent migration of Tsleil-Waututh people into Burrard Inlet, I am fully confident that the historical evidence dating from AD 1862 and later describing a distinct Tsleil-Waututh people in Burrard Inlet can be projected back to AD 1846 and much earlier with a high level of confidence.

3.11.1.5 Ethnographic Record

325. Until relatively recently, Tsleil-Waututh was virtually invisible in the ethnographic record. Reading Barnett (1955), for example, one would get the impression that no Coast Salish people over-wintered in eastern Burrard Inlet. Hill-Tout (1978a) does not mention any inhabitants of eastern Burrard Inlet. Similarly, Suttles early work (1951, 1968, 1987) does not mention a distinctive group in Burrard Inlet. However, Suttles later work (1990:455), did identify a Halkomelem-speaking group in Indian Arm called Saleelwat (Tsleil-Waututh). The reason that Tsleil-Waututh is so poorly represented in the ethnographic record is primarily because no professional ethnographer has ever worked

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with them. The following sections describe the scant existing ethnographic information pertinent to Tsleil-Waututh. Because none of these ethnographers interviewed or worked extensively with Tsleil-Waututh people, they cannot be taken as a definitive description of Tsleil-Waututh society.

326. It is my opinion that much of the ethnographic record regarding the indigenous inhabitants is very confused and contradictory, and only relatively recently has a stable academic consensus emerged that recognizes a distinct group in eastern Burrard Inlet. I summarize most ethnographic references to the indigenous inhabitants of Burrard Inlet below:

- 1887 Boas: “Lelelot were the only Squamish family in Burrard Inlet” (Boas 1887:132). In this case, Boas is describing Tsleil-Waututh as a Squamish-speaking, but distinguishing them from all the rest of the Squamish who traditionally occupied Howe Sound and the Squamish Valley.
- 1900 Hill-Tout: “According to one of my informants the Indian villages that used to exist on English Bay, Burrard Inlet, and False Creek were not originally true Sk-qō’mic. They were said to be allied by speech and blood to the Lower Fraser tribes” (Hill-Tout 1900:447). *This account indicates that before the Squamish migrated to Burrard Inlet, it was occupied by a Halkomelem-speaking group. It does not specify the name of the group.*
- 1938 Barnett: “The Muskwium lived on the receding shore of Point Grey at the mouth of the north arm of Frazer River. Nearby, at Capilano Creek close to North Vancouver, there are at present some Squamish, but it is doubtful whether this group originally had any real claims anywhere on Burrard Inlet. Their home was at the head of Howe Sound and for some miles up the two rivers emptying therein” (Barnet 1938:140). Barnett indicates here that Burrard Inlet is Musqueam territory. It is unclear if Barnett ‘lumps’ Tsleil-Waututh with Musqueam or Squamish here, but he does not identify a distinct group in eastern Burrard Inlet.
- 1949–50 Duff: Anthropologist Wilson Duff’s (1949–1950) interview with Simon Pierre (Katzie) describes Tsleil-Waututh Hereditary Chief James Sla-holt as ‘Musqueam’ and that “Musqueam owned Indian Arm” (cited in Kennedy 1996a:44). In the mind of Simon Pierre, James Sla-holt and Tsleil-Waututh were Musqueam. It is not clear if he considered Tsleil-Waututh as Musqueam on account of their language (*Hunq’imnum*) or shared culture or political integration. And further, Simon Pierre (Duff 1949–1950) described Chief Jimmy Harry (Chief of Seymour River as of 1897) as a Musqueam person and Jol-gul-hook/Seymour as a Musqueam village. Jimmy Harry was Squamish and most people living at that village were Tsleil-Waututh or Squamish. According to several lines of evidence, it was a traditional Tsleil-Waututh village prior to contact.

- 1951 Suttles: In Suttles (1951:5) map of Coast Salish territories, Burrard Inlet is indicated as Squamish territory. It is probable that Suttles is lumping Tsleil-Waututh with Squamish in this case.
- 1952 Duff: Listing the two non-Sto:lo Halkomelem speaking tribes, Duff (1952a:37) describes the “təmtəmi’uxtən” of eastern Burrard Inlet:

“19. təmtəmi’uxtən. This is the name given by a Musqueam informant for the group that formerly inhabited Burrard Inlet. It was said to speak Halkomelem and be closely associated with the Musqueams. Squamish occupation of Burrard Inlet he considered to be post-white. The whole question of pre-white occupation of Burrard Inlet needs further investigation. Barnett gives evidence that both Squamish and Musqueam claimed summer camping areas in the inlet, but mentions no permanent occupants (ms. Pp. 31, 34). It is possible, of course, that there were no permanent occupants, but from the reports such as the one I obtained, I am inclined to the opinion that a Halkomelem speaking group closely allied to Musqueam formerly lived in Burrard Inlet. (Cf. also Hill-Tout 1900:473)” (Duff 1952a:37).

327. To me, it is clear here that Duff’s Musqueam informant was describing the 19th century history of the inhabitants of the primary village there—Tum-tumay-whueton. It is reasonable that the inhabitants of Tum-tumay-whueton may have been referred to by others (i.e., Duff’s Musqueam informant) as “the Tum-tumay-whueton.” And as discussed above, all the Tsleil-Waututh people living at Tum-tumay-whueton relocated to Sleil-Waututh around AD 1855-1861, following a terrible epidemic.
328. It is not clear what Duff’s informant thought became of the təmtəmi’uxtən, but as they were described as having “formerly inhabited Burrard Inlet” (Duff 1952a:37), it implies they were no longer there—perhaps merging with other groups or all dying out. This passage or idea does not appear in Duff’s (1952b) published and much more widely cited work:
- Duff (1952a): Duff’s Master’s thesis (1952a:20) indicates a separate group named “Burrard” located in the North Vancouver area.
 - Duff (1952b): Duff’s published version of his Master’s thesis (1952b:20) does not distinguish a distinct or separate group in eastern Burrard Inlet. The dotted line appears to indicate that Musqueam occupied Burrard Inlet. To my knowledge, Duff did not interview any Tsleil-Waututh people to express their opinion on the traditional aboriginal occupancy of Burrard inlet.
 - Suttles (1955): Suttles (1955:12) indicates that at the time of First Contact, Burrard Inlet was occupied by Musqueam. It is unclear if Suttles is lumping Tsleil-Waututh with Musqueam in this case.

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- Mathews (1955): Vancouver City Archivist Major Mathews “Conversations with Khahtsalano” provides many, often contradictory accounts regarding the inhabitants of eastern Burrard Inlet from a range of informants. Mathews (1955) does not synthesize the ethnographic information he collected, but presents it more or less verbatim. In most cases, Mathews (1955) informants were Squamish people, and in most cases they usually treat Tsleil-Waututh as a Squamish group.
- Barnett (1955): Anthropologist Homer Barnett (1955:25) depicts Burrard Inlet as being seasonally used by both Musqueam and Squamish. Barnett does not identify a distinct group (or indeed any group) that over-wintered in eastern Burrard Inlet.

It is relevant that Barnett's informants apparently included only one Squamish and one Musqueam person. No Tsleil-Waututh people were interviewed to express their opinion on the traditional occupancy of Burrard Inlet (Barnett 1935–36). It is my opinion that this lack of corroboration from multiple informants renders Barnett's conclusions regarding the indigenous inhabitants of eastern Burrard Inlet very weak. Barnett (1955:31) describes Squamish use of a number of sites primarily in ‘outer’ Burrard Inlet (i.e., west of the First Narrows) during the summer. Evidently, Barnett's Squamish informant actually indicated that they used to spend summers in “Moodiville” (i.e., just west of Second Narrows) (see Bouchard 1996a:105; Barnett 1935–36), which Barnett (1955:31) interpreted as ‘Port Moody’. *And this simple mistake from a single relevant informant was then memorialized in Barnett's (1955:25) famous map of Coast Salish “Group Exploitation Areas.”* To my knowledge, Barnett did not interview any Tsleil-Waututh people regarding the traditional use and occupancy of Burrard Inlet.

- Jenness (1955): Regarding “tributary villages” or “*st'ε'xəm*” (*stacem*) Anthropologist Diamond Jenness (1955:86) described:

the second was Ioco, near Port Moody, which was tributary to the Squamish Indians of North Vancouver...Each of these three villages enjoyed its own communal life without interference, but the overlord villages could requisition from them supplies of firewood, salmon, deer-meat, or whatever else they required. In the long run, of course, such requisitions could only be enforced by war, but apparently the tributary villages accepted their position and obeyed their overlords without question.

This information was derived from Old Pierre, an exceedingly knowledgeable Katzie informant. Suttles (1987:5–6) provides further information on *stacem* villages. Carlson's (2010:135–141) interpretation of the origin of *st'ε'xəm* villages is that, in many cases, the inhabitants of these villages had ‘lost their history’ through some calamity such as plague, and often were repopulated by the descendants of masters having sex with their slaves. There is partial corroboration of the existence of a *stacem* in Port Moody in Tsleil-Waututh oral history. In 1998, Tsleil-Waututh's Hereditary Chief John L. George (Sla-holt) said that “the people of Saymopit were set apart (from other Tsleil-Waututh villages) because they weren't ambitious” (Hereditary Chief John L. George (Sla-holt),

interviewed by John Pritchard, June 25th, 1998:40). This comment might be understood as the 'proper' high class way of talking about the subject of offspring from master-slave sexual relations. In any case, in my opinion, a *st'ɛ'xəm* village very well may have existed in the Port Moody area (Say-mah-mit or Say-mah-pit), but that it could not have been tributary to the Squamish, because the Squamish did not begin over-wintering in Burrard Inlet until after about AD 1863, and by then the village in Port Moody was no longer inhabited.

- Kew (1970): Anthropologist Michael Kew (1970:22–23) describes his Musqueam informants' perspective on the indigenous inhabitants of eastern Burrard Inlet:

The speakers of the Musqueam dialect, residing in several locations as noted above, apparently intermingled freely with Indians in Burrard Inlet who were called *səli-lwətal*, and are said to have spoken the Squamish language. The latter did not consider themselves to be closely allied to those Squamish speaking people who with the advent of the sawmilling industry, moved permanently into Burrard Inlet from Howe Sound villages in considerable numbers, and who were assisted by Catholic missionaries in their efforts to establish proprietary rights to a village site. Burrard Inlet was an area shared by the two language groups, between whose members there was frequent intermarriage and many of whom were bilingual. The sites near Roche Point was allotted to a group who were given the name of Burrard Indians, and a small fishing site at the head of the Inlet, was given jointly to the Musqueam and Burrard. The Burrard Indians seem to have considered themselves closely connected with the Musqueams.

Kew's (1970:22–23) account identifies the Tsleil-Waututh (*səli-lwətal*) as the traditional indigenous inhabitants of Burrard Inlet, and emphasizes the closeness of the relationship between Tsleil-Waututh and Musqueam peoples. Kew (1970:22–23) also indicates that Tsleil-Waututh were speakers of the Squamish language, but did not consider themselves "closely allied" with other Squamish-speakers. It also specifies that Squamish only began to occupy Burrard Inlet until after the sawmilling industry was established (~AD 1863). I do not know the number of Kew's (1970) Musqueam informants, but I would expect there were dozens; Kew was married to a Musqueam woman, and to my knowledge, has been deeply involved with Musqueam people and culture for nearly half a century.

- Suttles (1987): The linguistic map in Suttles (1987) indicates that Burrard Inlet was Halkomelem territory. It does not identify any particular group with Burrard Inlet however.
- Suttles (1990): In what is perhaps the most authoritative account of the distribution of Central Coast Salish groups, Suttles (1990:453) identified the "Saleelwat" or "səl'əlwət" (i.e., Tsleil-Waututh) as the inhabitants of Indian Arm. He classified the "Saleelwat" as speakers of Downriver Halkomelem (Suttles

1990:453). Suttles (1990:453) also indicated that Squamish did not occupy the North Vancouver area until after c. 1850. It should be noted that this represents a change from Suttles' earlier work (e.g., 1951, 1955) where a distinct group in Burrard Inlet was not identified.

- Bouchard and Kennedy (1986, 1996a, 1996b). *I do not consider the research by Randy Bouchard (1996a, and 1996b; Bouchard and Kennedy 1986) and Dorothy Kennedy (2000) as unbiased ethnographic/ethnohistoric research.* It is exceedingly biased towards Squamish. Bouchard's (1996a and 1996b) research has been accused in the court of being advocacy rather than impartial (Bouchard April 14, 1997:75–110). As described by Madam Justice Simpson (2001:20–21) in her “Reasons for Final Judgment” in *Mathias v. HMTQ*:

However, a number of expert witnesses for both the Squamish and the Musqueam did not understand that the role of an expert should involve the presentation of an opinion based on a complete and unbiased review of all the relevant evidence. This misunderstanding, and the resulting presentation of one-sided expert reports, was unfortunate and appears to have arisen in part because of the instructions given the experts by counsel. One-sided reports may also have been the inevitable consequence of the witnesses' long associations with their respective clients...However, since most of the primary sources for the experts' opinions were included in the Common Book or elsewhere in the trial record, counsel were able to effectively cross examine opposing experts. In cross-examination, the one-sided aspect of their work was exposed and explored.

Bouchard and Kennedy's research employs highly selective quoting and referencing and excludes highly significant information that contradicts their a priori hypotheses (see Bouchard 1996a:50–54). Bouchard's (1996a, 1996b) as well as key passages from Squamish informants in Barnett (1955:32–33) including Barnett's (1955:32–33) description of Squamish material culture displaying an up-river adaptation. Bouchard in particular has even selectively ignored Squamish oral histories from prominent elders (e.g., Louis Miranda) when historical documents of dubious accuracy provide evidence of more expansive Squamish use and occupancy (Bouchard April 14 1997:74, 91–93). Kennedy has selectively employed information from the OMI documents that support her position, and ignored information that contradicts it. None of Bouchard and Kennedy's research relevant to Burrard Inlet has been peer-reviewed and published and should not be considered unbiased scholarship. I review these specific issues in detail below, and chose not to adopt Bouchard and Kennedy's conclusions regarding Tsleil-Waututh.

- Carlson (2001, 2010): Historian/ethnohistorian Keith Carlson has presented the most recent peer-reviewed ethnographic information relevant to the traditional inhabitants of eastern Burrard Inlet. Carlson's (2010) interpretations are based on historical documents, recorded Tsleil-Waututh oral histories, and interviews with

at least one Tsleil-Waututh person. Carlson (2010:100) suggests that the modern Tsleil-Waututh community “appear to have been a remnant resident Halkomelem group and Interior Salish Lillooet people from the middle Fraser River region.” This conclusion is derived from Carlson’s (2010:100) placement of a Tsleil-Waututh oral history of depopulation and obtaining a bride from the Lillooet area right before contact.

329. As discussed above, in my opinion there is a grain of truth to Carlson’s (2010:100) interpretation of Tsleil-Waututh-Lillooet connections, but I would place the origin of these connections at least 800 years earlier (circa AD 1100). It is my opinion that these Tsleil-Waututh-Lillooet connections are very long-standing, and Carlson (2010) is mistaken in associating this relationship with the earliest smallpox epidemic.

3.11.1.6 Summary of Ethnographic Evidence

330. In many ways, the ethnographic record is the most confused body of evidence regarding the traditional inhabitants of eastern Burrard Inlet. The major reason for this is that there has been exceedingly little ethnographic research on Tsleil-Waututh people; what little ethnographic information there is regarding Burrard Inlet is almost uniformly derived from Musqueam, Squamish and Katzie individuals. It is clear that most early ethnographic works lumped Tsleil-Waututh as either Squamish or Musqueam when describing the traditional occupants of Burrard Inlet. In recent decades, researchers have begun to recognize a distinctive group in eastern Burrard Inlet (at least) called Tsleil-Waututh that were formerly speakers of a dialect of Down-River Halkomelem (*Hunq’imnum*).

3.12 Tsleil-Waututh’s Relationship to Other Coast Salish Groups in AD 1846

3.12.1 Squamish

331. In the past, Squamish leadership and lawyers have claimed that Tsleil-Waututh is in fact a Squamish group or clan, not an independent First Nation; specifically “that the Burrard Band did not exist until the ‘amalgamation’ in 1923, at which time a complete and final division was made between the property of the Squamish Band and that of the newly created Burrard Band” (Slade et al. 1996:24). Because of the Mathias case, there has been a significant amount of research and discussion of this issue. Although Tsleil-Waututh rejected the Squamish Amalgamation in 1923 (Perry 1926), some Squamish people, and leadership have maintained that Tsleil-Waututh is historically and ancestrally a Squamish group (e.g., Miranda 1977:40, 1979:151–153). By this logic, Squamish can claim that Tsleil-Waututh’s territory is just one part of a broader Squamish territory.
332. Squamish people are typically defined by their shared use of the Squamish language and shared culture (Bouchard and Kennedy 1986; Suttles 1990). They have distinct origin accounts that place their ‘First Ancestors’ in Howe Sound and the Squamish Valley (Wells 1966:6-12). Traditionally (that is, in the centuries prior to contact) they lived in villages along the Squamish and Cheakamus rivers (Barnett 1938; Hill-Tout 1900).

Jimmy Frank (Barnett's only Squamish informant) stressed the "difference between Squamish people and 'salt water people' (Barnett 1935-36:8). This statement indicates that Squamish people were traditionally riverine and inland, rather than coastal, like most other Coast Salish peoples. It is my opinion that all conflation of Tsleil-Waututh with Squamish derives from Squamish's migration into Burrard Inlet, primarily in the 1860–70's.

333. It is useful here to briefly describe the process by which the Squamish people began to relocate (i.e., to practice year-round settlement) to western Burrard Inlet. Stated briefly, prior to about AD 1860, all of the Squamish permanent or winter villages were located in Howe Sound and the Squamish Valley, and none were in Burrard Inlet. The only known exception to this is the village at Capilano (Xwmélts'stn or Homulcheson) that was established sometime before AD 1830. The Chief Kiapilano (Capilano, Kiapialnoq, qewəpəlenəx^w) is reputed to be of dual Squamish and Musqueam descent (Blenkinsop 1876; Kennedy 1996b:12–22; Kew 1996:52–55; Mathews 1955:108, 208; Sproat 1876b:16), and many Tsleil-Waututh individuals claim descent from Chief Kiapilano's second wife.
334. Prior to about AD 1860, Squamish people seasonally used certain resources of outer Burrard Inlet with the permission of Tsleil-Waututh and Musqueam peoples. Squamish Chief Louis Miranda described this process in detail (Miranda 1982:12–13):

There was a large indian reserve at Seymour Creek, there was a large indian reserve at Capilano, there was another indian reserve where the Lumberman's Arch is today, and a large indian reserve at False Creek. But they were all originated from Squamish, So if any one refused to give up their indian dancing they could move to any of these reserves and no one would bother them, the missionaries never bothered the other reserves but once they took the Catholic Vows, they were strictly forbidden to attend to any of these dances or potlatches, should any of the Catholic members be seen at one of these dances...But long before the arrival of the Europeans, the people used to travel from Squamish to Horseshoe Bay and into Coal Harbor, for those spots were great herring spawning grounds. That was in the month of March, and the entire Squamish population would move down in groups, half of them would remain in Horseshoe Bay. The other half would move into Coal Harbor, the idea of the group traveling was on account of the fear of encountering the enemy. (the Northern People). They would stay down here for three weeks or so, or until they were definitely sure that they all had put away all the dried and cured herring to do them for the winter then they would all travel back to their homes at Squamish in the same manner. (group traveling) Then in May they again would travel down to Capilano and False Creek. Those at Capilano put up the clams for winters use and those that went to False Creek were the gifted sturgeon fisherman, there weren't very many gifted fisherman, but half of the Squamish population would travel with the fisherman to protect them and when they decided they had sufficient fish put away for the winter, they would contact the

clam diggers, and upon an agreed upon day, they would all strike off for Squamish, that's the second trip. And in July back they would come again, travelling in the same manner, and this time they would head for Point Grey this to catch the silvery smelts which spawn all the way from Jericho beach to the tip of Point Grey.

335. And, following a decisive battle with the northerners:

...but they no longer bothered the Squamish people again, so a lot of people moved down to Capilano, Seymour Creek, there was a big village located where Lumberman's Arch is today, and a lot of them moved into False Creek. So that was how the people of Squamish got down here it was to avoid all the travelling back and forth for the securing of salt water food. But those who remained up at Squamish continued on in the old ways. (Miranda 1982:16)

336. The early ethnographic accounts by Hill-Tout (1900:473) describes the historical movement or historical transition of the Squamish from over-wintering in Squamish Valley to over-wintering in Burrard Inlet succinctly:

The original home and territory of the Sk-qō'mic seems to have been on the banks of the river which gives them their tribal name, and along the shores of Howe Sound, into which the Skuamish runs...According to one of my informants the Indian villages that used to exist on English Bay, Burrard Inlet, and False Creek were not originally true Sk-qō'mic. They were said to be allied by speech and blood to the Lower Fraser tribes.

337. The key disjuncture of Squamish seasonal use of Burrard Inlet to Squamish over-wintering in Burrard Inlet appears to occur sometime around AD 1830–1840, following a decisive Squamish victory over the Lekwiltok (Eukletaws or Lekwiltok, 'northerners') at Homulcheson (Capilano). Hill-Tout (1978:50) describes the battle won by Kiapialnoq over the Lekwiltok (Ukeltaws) at a fort ("a log hut built for the purpose") at Homulcheson. A key aspect of this victory was the use of a surprise volley of musket fire (Hill-Tout 1978:50), probably using muskets acquired from Fort Langley (Arnett 1999:24–26). As Fort Langley was not established until AD 1827, this battle can be confidently placed after that date, perhaps as late as AD 1840. As discussed above Kiapilano/Kiapialnoq had dual Squamish/Musqueam ancestry, and apparent marriage connections to Tsleil-Waututh families. After the threat of raids by Lekwiltok had been removed, Squamish people, through their leaders' kinship connections to Tsleil-Waututh families, and consent from Tsleil-Waututh leaders, could begin to over-winter at Capilano and other locations in outer Burrard Inlet. It should be emphasized that this change in Squamish settlement patterns was probably undertaken within the bounds of Coast Salish protocol (see Snyder 1964:389–420), specifically that Kiapialnoq and his Squamish followers were given permission by Tsleil-Waututh leadership (either Wautsalk II or James Sla-holt, depending on the date of the battle described above) to settle at and "take care of" the Capilano River. This may have involved a marriage between a high-ranking Tsleil-Waututh woman and Kiapialnoq.

338. This is also evident in reading Mathews (1955) discussions regarding Squamish genealogies; all of the Squamish 'chiefs' that had established villages in Burrard Inlet were born in the Squamish Valley or Howe Sound. According to Bouchard and Kennedy (1986:44), Chief George chepxím (Chief of Kitsilano IR No.6) was from ch'ékch'ekts (Chuk-Chuck) in the Squamish Valley; and indeed he carried the title 'chief' from his leadership at ch'ékch'ekts rather than IR No.6. Mathew's (1955:9) interviews with August Jack Khahtsalano, however, indicates that Chief George Chip-kay-am was from "Tooktpaak-mlk, an Indian village some miles up the Squamish River."
339. Similarly, Supple Jack (the father of August Jack Khahtsalano), lived at Chaythoos (Stanley Park) when it was declared a government reserve. It is unclear if Supple Jack was born at Chaythoos or elsewhere, but, according to Bouchard and Kennedy (1986:58), his father Haatsa-lah-nough/Khaht-sah-lah-nogh was originally from the village of t'ekw'tákw'emáy on the Squamish River. It is clear that the ancestors of August Jack Khahtsalano did not have birthright connections to the village sites at either Chaythoos or False Creek, but rather to the Squamish Valley. And as described by Bouchard and Kennedy (1986:59): "(i)n the case of *schílhus* and *xwáyxway*, the genealogical data indicate that in the 1860's and 1870's, the population of these places was composed primarily of people from the villages of *t'ekw'tákw'emáy* and *pukwayúsm*, located in the area where the Cheakamus River meets the Squamish," that is to say, in the Squamish Valley. Squamish people living at those locations were largely born in the Squamish Valley, and had recently settled in Burrard Inlet.
340. The Squamish individual known as Snatt figures prominently in historical accounts of Mission IR No.1, known in Squamish as Slha7án (Ustlawn). The first recognized Squamish chief of Ustlawn (Slha7án) was named Skwatatxwamkin, the uncle of Snatt (Lascelles 1984:8-9). Skwatatxwamkin and some followers originally left the Squamish Valley to settle at Capilano, then resettled at Ustlawn (Lascelles 1984:9). Chief Skwatatxwamkin was asked to leave Ustlawn by Father Durieu, because his wife refused to give up the practice of spirit dancing. Father Durieu then chose Snatt to become the new chief of Ustlawn. *So Snatt's chieftanship at Ustlawn was neither predicated on longstanding association with the settlement there, nor his hereditary relationship to the previous chief, it was based on Snatt's close relationship with a powerful missionary of the Catholic Church.*
341. This pattern is clear, Squamish leaders in the 1860s relocated to western Burrard Inlet to gain employment in the newly established sawmills there. There is exceedingly little evidence to support a conclusion that Squamish had an ancient or traditional affiliation with Burrard Inlet. Barnett (1935-36) describes several locations in outer Burrard Inlet (e.g., Jericho, Kitsilano, and Second Beach) as being summer location "owned" by Squamish winter villages (located in the Squamish Valley). The basis of this ownership is entirely unclear in Barnett's notes (1935-36), it is not linked to First Ancestors, marriage connections, or ancient affiliation. My interpretation is that Jimmy Frank's (Barnett's only Squamish informant) interpretation of ownership of these summer places in Burrard

Inlet is based on the practice of Squamish use of those areas mainly since the 1860s, rather than ancient affiliation.

342. The recent arrival of Squamish settlers on Tsleil-Waututh territory did not go unnoticed by colonial observers. For example, in a letter to Colonial Secretary from C. Brew regarding the lands that would become Stanley Park (June 7, 1869a):

I have the honor to state that a Squamish Indian called "Supple Jack" has squatted for the last three years on the land in question. There are two male relatives now living near him. Captain Stamp has no objection to their remaining where they are. They can be at any time removed; the Ground does not belong to their Tribe.

343. And regarding the settlement at Mission IR No.1:

"Snat" says his people were told by some tyhee at the Camp, "they might settle on the place where Deighton is building; they have no other claim." The place is a long way from any reserve on the Inlet. The Squamish have built some houses and a church, but have no other claim unless the priests have pre-empted for them. The Squamish are squatting on every pieces of good land about, and disputing with white men who want to settle.

In the case before you "Snat" actually made a man named Cunninham pay rent for living near.

The story of the tyhee at the Camp is told about every other half mile on the Inlet. The Squamish never ventured into Burrard Inlet until 1859 or 1860 (Brew 1869b).

344. The 'tyhee' in question above was likely Tsleil-Waututh's Hereditary Chief James Slaholt. He was asserting Tsleil-Waututh's sovereignty over these lands, but rather than causing conflict by ejecting the Squamish from these lands, he gave them permission to occupy this small plot of land at what would become Mission IR No.1. The following day, Brew drafted an additional letter providing greater detail on the Squamish settlement of Burrard Inlet:

I would respectfully state that the Squamish Indians are squatting on the Military Reserve on the Reserves of the Lilote(?) and Musqueam Indians: they are also in other places around the Inlet. They do not belong to this section of the country, but to Howes Sound, out of which until a very recent date they seldom ventured, fearing retaliation for murder and robbery committed on White miners in 1858, and other Indians for a long time. (Letter from Constable Brew to A.T. Bushby, Assistant Commissioner of Lands and Works, dated July 30, 1869b, Burrards Inlet).

345. As discussed above, 'Lilote' and the variant of 'Lilloeten' were among the various names applied to Tsleil-Waututh by colonial authorities; Brew is indicating that the Squamish had very recently settled on lands belonging to Tsleil-Waututh and Musqueam.
346. An 1875 letter from Richard Alexander (of Hastings Mill) regarding the "Burrard Inlet Indians" (i.e., the Catholic Squamish inhabitants of Mission IR No.1) to the British Columbia Superintendency adds further support to the position that the Squamish had only recently begun to settle year-round in Burrard Inlet:

Henry one of the Chiefs of the Mission Indians opposite our mill was very anxious to send a letter to you and asked me to write what he said and the enclosed is the result. He has some grievance or other he wishes to articulate [?] – but as I know from experience what one of their long haranguers is decided going onto the matter on paper and onto him he had better pay you a visit.

There are a great many of them anxious to see you on the land question and I may say that a number of them are rather excited about it. You must know that Squamish (that is up the Squamish River which empties into Howe Sound) is their Native place and where they wish to have their land assigned to them several of them having cultivated potato patches up there for years and their fathers before them. Up there they have never been disturbs (sic) till now. There was a government reserve at the mouth of the river until lately but it has been taken off and parties have recently been up there surveying and staking off land, one Indian telling one that his garden is included in some ones pre-emption what they naturally want is to have their land given them before the new whites interfere with them up there and I must say I think they have justice on their side...(Alexander, September 2nd, 1875)

347. Gilbert Sproat was a colonial official and amateur anthropologist who was recognized for his knowledge of First Nations peoples in British Columbia. As the head of the Joint Independent Reserve Commission ("JIRC") in 1876a, Sproat summarized the situation rather precisely:

The general public opinion in the neighbourhood now appears to be that the claims of the Skwawmish Indians to land at Burrard's Inlet are not founded upon ancient occupancy or use. I do not think they have old associations with the place. They probably came to the inlet and took up residence there at a comparatively late date for the legitimate purpose of endeavoring to make money out of the sawmill owners established in business at that place...

The real home of the Skwawmish Indians is upon the Skwawamish River which flows into Howe Sound. The history of their coming to Burrard's Inlet is supposed by some to be as follows. About 1860, a Mr Smith erected a small sawmill on the north side of the inlet. He was one of the first, if not the first, white settlers on the inlet. A few other white men,

and also some of the Howe Sound Skwawmish Indians <soon> afterwards arrived. The latter soon disputed with the white men about land in the inlet. A larger mill owned by Mr Moody took the place of the mill 'erected by Mr. Smith', and a second mill was established on the south side of the inlet. The Skwawmish Indians were sharp enough to see the advantage of living beside the white men employed at these Mills. They, therefore, so far as I can make out, while retaining their claims to their old lands on the Skwawmish river in Howe Sound, began to frequent and settle upon lands in Burrard's Inlet in considerable numbers. They worked at, and for the Mills, and supplied them with fish and game. When they wished for a change of life and scene, they went back, as they continue to do, to the Skwawmish river at Howe Sound (Sproat, Gilbert. 1876a November 27th. Letter to the Honorable Minister of the Interior in Ottawa RG10, v.3611, f.3756-7. Pp26-27).

348. *In summary, there are numerous lines of evidence that indicate the pattern of Squamish over-wintering in Burrard Inlet is a post-contact and historical development dating to the 1860s. There is no evidence of Squamish settlements or occupation of the Study Area as of and prior to AD 1846.*
349. The winter village of Homulcheson at Capilano was established around 1830 by Kiapilano/Kiapilanoq and was likely populated by Squamish, Musqueam and Tsleil-Waututh people, but, to my knowledge, there is no other evidence of Squamish permanent occupation of anywhere in Burrard Inlet. Moreover, there is no other evidence of Squamish permanent occupation anywhere in eastern Burrard Inlet at the time of sovereignty (1846). No Squamish chiefs of villages in Burrard Inlet are indicated on the earliest Lower Fraser River area Coast Salish petitions (1864 and 1867). But by 1869, predominantly Squamish villages had been established at Mission/IR No.1, Kits IR No.6, Xway-xway/Stanley Park, and perhaps Seymour Creek IR No.2 (there were of course some Tsleil-Waututh and Musqueam people living in various numbers at most of these villages at that time (see Kennedy 1996a, 1996b; Kew 1996). Within a few short years, the bulk of the entire Squamish Nation had come to occupy a considerable portion of Burrard Inlet.
350. It remains culturally important among Coast Salish people that when individuals die, that they are buried (or interred, in the case of 'tree burials') in their homelands (Sonny McHalsie pers. comm. to Jesse Morin, April 2013). In the early 20th century, there were several cases where Squamish reserves were being impacted by development or expropriation and burials were disinterred for reburial in a secure location (e.g., Kitsilano IR No. 6, Seymour Creek IR. No.2, and Stanley Park). In all three of these instances, the Squamish descendants of the people buried in these cemeteries felt it most appropriate to rebury their remains in their homeland of the Squamish Valley, rather in their newly settled lands of Burrard Inlet (see Mathews 1955:271, 398; McKelvie 1924; Roy 2010:95-97). For example, in 1924, the Squamish inhabitants of Jol-gul-hook/Seymour Creek IR No.2 exhumed burials of their ancestors there for reburial in their homeland at Stawamus near Squamish (McKelven 1924; Roy 2010:94). If Burrard Inlet was a

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Squamish homeland, then these individuals would likely have been reburied in Burrard Inlet rather than the Squamish Valley. But, given that the Squamish Valley is the homeland of the Squamish people, it was culturally important to have those ancestors reburied in their real home in the Squamish Valley.

351. During the late nineteenth century, there were numerous intermarriages between Tsleil-Waututh and Squamish peoples, and Squamish became to be the dominant language spoken by Tsleil-Waututh. For that reason, even Tsleil-Waututh's main village at IR No.3 was classified as 'Skwawmish' by the JIRC in 1876, and for Crown administrative purposes, Tsleil-Waututh became a 'Squamish sub-tribe.' This idea of Tsleil-Waututh simply being a 'Squamish sub-tribe' has been oft repeated over the last century. Tsleil-Waututh did not regain their 'administrative identity' until 1923, when they rejected the Squamish Amalgamation, and became the 'Burrard Band' (Perry 1923).
352. The evidence that the Squamish had only recently settled in western Burrard Inlet was not lost on early ethnographers of the region. Barnett stated "nearby, at Capilano Creek close to North Vancouver, there are at present some Squamish, but it is doubtful whether this group originally had any real claims anywhere on Burrard Inlet. Their home was at the head of Howe Sound and for some miles up the two rivers emptying therein" (Barnett 1938:140). Suttles accounts for Squamish movement into the Burrard Inlet (post circa 1850) area in his linguistic map on the Central Coast Salish (Suttles 1990). Suttles' later research (1996b) was more explicit, finding etymological evidence of Halkomelem place names having greater antiquity in Burrard Inlet than Squamish place names (recall that Tsleil-Waututh used to speak Halkomelem).
353. With regards to the accuracy of Barnett's (1955:25) map of Coast Salish seasonal rounds, specifically the Squamish seasonal round, it is clear that Barnett was mistaken. *Barnett's field notes* (1935–36:119) indicate that his Squamish informant actually told him that they went to Moodyville in the summer, not Port Moody, as indicated in Barnett (1955:25). Barnett had mistaken Port Moody for Moodyville (see Bouchard 1996a:105). Indeed, of the places indicated by Jimmy Frank (Barnett's only Squamish informant) Moodyville (just west of Second Narrows) is the easternmost location in Burrard Inlet utilized by the Squamish (Barnett 1935–36:119). This means that evidence of Squamish utilization of eastern Burrard Inlet is actually much weaker than it appears from Barnett (1955:25) (essentially derived from a lack of understanding of local geography). What is completely lacking in Barnett's (1955:25) map is any indication of a permanent group in eastern Burrard Inlet, and what their seasonal round may have consisted of.
354. In a report compiled for the Squamish Nation titled "*Squamish Indian Land Use and Occupancy*," ethnographic/ethnohistoric researchers Randy Bouchard and Dorothy described the framework of understanding Coast Salish core and secondary territory, and described Squamish territory in the following way:

...But for both the Squamish and the Musqueam, Burrard Inlet appears to have been outside of their "core" area [to use a term suggested by Suttles (1984:personal communication)], that is, outside of the area which each

group exclusively occupied. If a group's total territory can be thought of as an apple, then the "core" would be the area where the winter villages were located. The white pulp of the apple would represent secondary areas where resources were exploited by groups whose membership crossed linguistic boundaries and where specific resources, or the technology involved in harvesting these resources, could be controlled by individuals who were leaders of kingroups. The skin of the apple would represent a limited number of sites beyond the secondary areas where people had access to particular resources available through their specific kingroup network.

The core area for the Squamish Indians was the Squamish River Valley. This was where their first ancestors populated the land, and this is where the succeeding generations of Squamish people maintained their winter villages. *Although Howe Sound is generally considered to be part of the Squamish core area, there is inconclusive evidence for winter villages in this area. Some Squamish consultants argue that Gibsons Landing and Potlatch Creek were winter villages, but, as is explained in the place names section, it is probable that their use as permanent residences is relatively recent, and developed out of their earlier utilization as seasonal camps* (Bouchard and Kennedy 1986:46-47, emphasis added).

355. Note the italicized section above; if Howe Sound is removed from Squamish's core territory and reclassified as their secondary territory (following the logic that core territory is defined by proximity to winter villages/settlements), then Squamish core territory is limited to the Squamish/Cheakamus Valleys, and is even more distant from Burrard Inlet. It must be emphasized that Bouchard and Kennedy's map (1986:2) is supposed to indicate "Squamish territory showing core and secondary territories circa 1850" (**Figure 29**). *That is, at the time of sovereignty, Squamish core territory did not include Burrard Inlet.*

356. Regarding the territorial boundary between Squamish, Musqueam, and Tsleil-Waututh:

At Point Grey, a "boundary" was observed which separated the Musqueam (and Squamish) secondary area in Burrard Inlet. As we have discussed, this is the point that Squamish people regard as their "southern boundary." But in recognizing Point Grey as a "boundary," what is really being noted is that this was a place where the rules for access to resources changed (Bouchard and Kennedy 1986:47)

357. And specifically regarding Bouchard and Kennedy's perception of Tsleil-Waututh's core territory:

Returning to Burrard Inlet, let us consider the core area of the selilwet. *If we consider the original selilwet people as a distinct Halkomelem-speaking group prior to the 1840s, then the area east from the Second Narrows, that is, the area around Indian Arm and Port Moody, was undoubtedly their core area.* The extent of their secondary area is open to

conjecture, but we would speculate that because of their apparent association with the Coquitlam people, the selfwet secondary area likely extended past Port Moody to the Fraser River in the vicinity of New Westminster. (emphasis added, Bouchard and Kennedy 1986:48)

358. In my opinion, the Bouchard and Kennedy (1986) discussion of Squamish core territory discussion above is generally accurate, *except that it diminishes Tsleil-Waututh presence in Burrard Inlet west of the Second Narrows*. With Bouchard and Kennedy's own caveat (1986:47) that Howe Sound may indeed not be Squamish core territory, it is even clearer that Squamish's core territory never extended into Burrard Inlet.
359. In summary, there is virtually no evidence to support the conclusion that at AD 1846 Tsleil-Waututh could be considered a Squamish group by any measure. And by contrast, there is substantial information to support the conclusion that Squamish and Tsleil-Waututh were separate tribes or groups at this period. Squamish groups have a deep history associated with Howe Sound and Squamish Valley and spoke a different language than Tsleil-Waututh. Only later in the 1860-1870s when the Squamish began to migrate in large numbers into Tsleil-Waututh territory and when Tsleil-Waututh marriages to Squamish women became especially common, were Tsleil-Waututh conflated with Squamish.

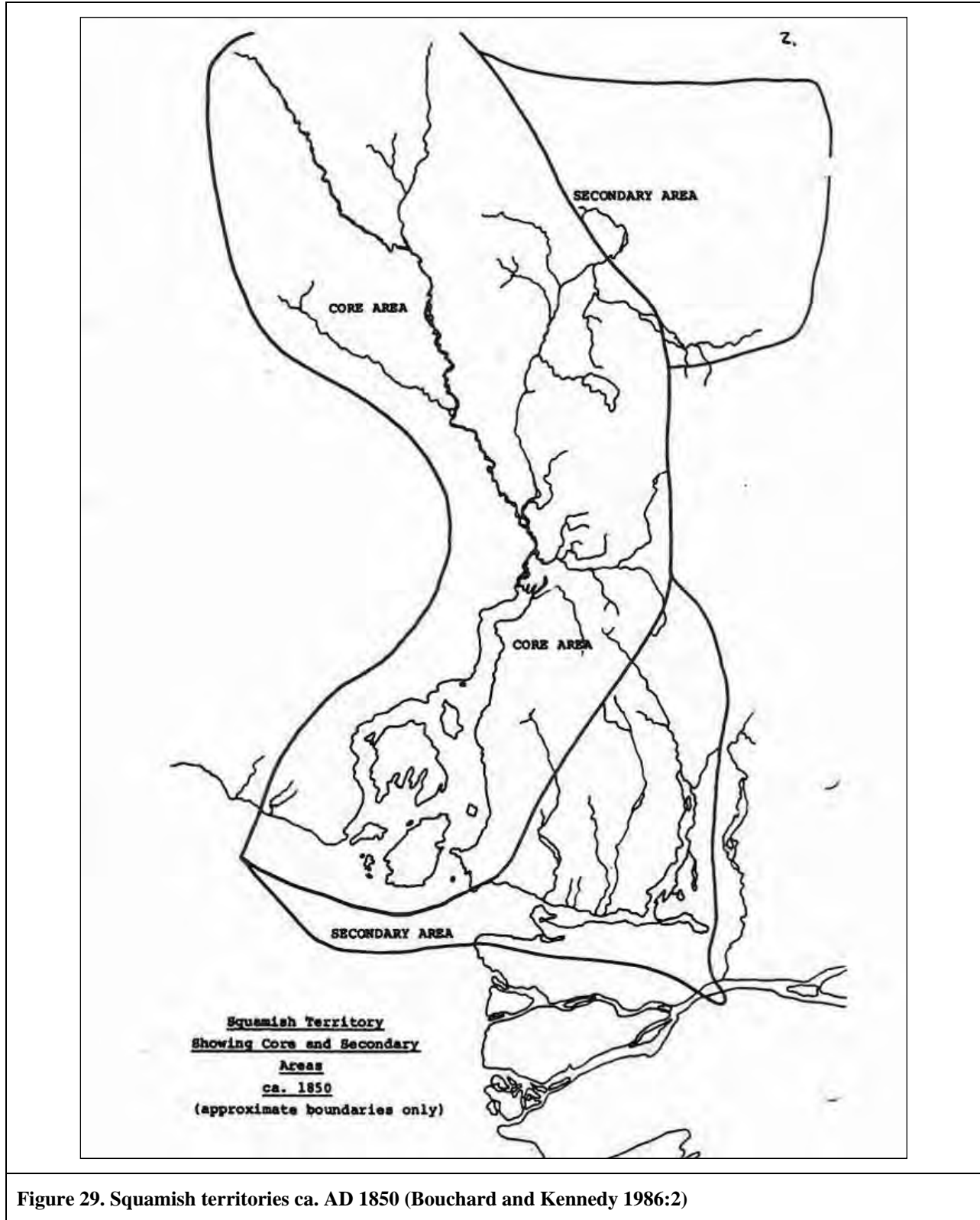


Figure 29. Squamish territories ca. AD 1850 (Bouchard and Kennedy 1986:2)

3.12.1.1 Bouchard and Kennedy's "Squamishization" Hypothesis

360. Out of the plethora of data available, Bouchard and Kennedy (1986) have placed undue weight on a very few specific historic documents and uncritical acceptance of selective Squamish oral histories to develop a hypothesis by which Tsleil-Waututh became "Squamishized" by the mid-1800s (Bouchard and Kennedy 1986; Bouchard 1996a and 1996b; Kennedy 2000). Specifically, Bouchard and Kennedy (1986:34–36) argue that by the mid-1800s the original Tsleil-Waututh population consisted of 2–3 old individuals and that the Tsleil-Waututh community had become socially and politically dominated by Squamish. Along these lines, Bouchard and Kennedy (Bouchard 1996a:118–123; Kennedy 2000:140–144) suggest that from the earliest historic documents (1860s) up to AD 1923, Tsleil-Waututh carried a dual identity (Squamish and Tsleil-Waututh). Because the nature of Tsleil-Waututh identity at AD 1846 is so critical to this discussion, this hypothesis and the data underlying it are examined in detail below.
361. Following Bouchard and Kennedy's (1986:134–135) narrative, after a smallpox epidemic, the greatly reduced Tsleil-Waututh community relocated from Belcarra (Tum-tumay-whueton) to Burrardview (Sleil-Waututh). They relocated for greater safety, as with a much diminished population, they were a much 'easier' target for northern raiders (Kennedy 2000:141). Tsleil-Waututh relocated to Burrardview to live in a fort that was constructed there around AD 1830–40. "The residents fortified the new village at Burrardview, a task that required assistance from kin that moved from Squamish River to help the few, disadvantaged survivors" (Kennedy 2000:142). This fort was constructed by a man of half-Squamish half-Homalco descent. Bouchard and Kennedy (1986:133) 'date' the construction of this fort to AD 1830–40 by Launders' (1869a) date of Tsleil-Waututh's relocation, and general historical trends in warfare at the time. This date was not determined by any direct evidence regarding the fort itself (no first hand observations or descriptions are known to exist), or any other line of evidence regarding the timing of this relocation. Recall forts are described as early as AD 1792 in the Coast Salish world (Gunther 1972:63). According to Bouchard and Kennedy (1986: 134–135; Bouchard 1996a:118–120), by AD 1869, there were only 2–3 old Tsleil-Waututh people still living at Burrardview and the remainder of the population was Squamish.
362. There is very little evidence that Bouchard and Kennedy (1986; Kennedy 2000:141–143) can actually draw on to support their "Squamishization hypothesis." I review this evidence in detail below and offer my opinion that their "Squamishization hypothesis" should be afforded no merit whatsoever. Bouchard and Kennedy (1986:134–135; Bouchard 1996:118–120; Kennedy 2000) place very heavy emphasis on J.B. Launders' (reserve surveyor) field notes (1869a and 1869b). They do so despite the fact that it is contradicted by many other lines of data and the fact the Launders' survey took place without the presence of Tsleil-Waututh's hereditary chief James Sla-holt (Launders 1869a). Bouchard and Kennedy's position also ignores a substantial volume of evidence supporting an alternative hypothesis (i.e., Sleil-Waututh and other villages were occupied contemporaneous to Tum-tumay-whueton, and when the people from Tum-tumay-whueton relocated, they joined other Tsleil-Waututh people already at the community of

Sleil-Waututh). Further, they ignore evidence of a slightly later, very likely post-AD-1846 relocation of the Tsleil-Waututh community at Tum-tumay-whueton to Sleil-Waututh. This relocation is perhaps better phrased as a shift in Tsleil-Waututh settlement patterns whereby Tum-tumay-whueton was no longer used as a winter village site, while Sleil-Waututh continued to be used as a winter village site.

363. The passage from Launderers that is afforded so much significance is:

This Village is called Lillooet and was established by Indians from the portage of that name perhaps 30 or 40 years ago there are yet 2 or 3 Old people of that tribe still living here – all the remainder of the Indians here and all over Burrard Inlet are of the Squamish tribe, very much divided. (Launderers 1869 Sept-Oct 1869. Notebook 2/69, P.H. 1, Group 1. Maps and Plans Vault, Surveyor-General Branch).

364. Significantly, it is entirely unclear whether Launderers spoke Halkomelem or Squamish, or whether conversations with local peoples took place in 'Chinook Jargon'. *What is clear, is that when Launderers (1869a) surveyed Burrardview (IR No.3), the Tsleil-Waututh leader James Sla-holt was not present: "This morning I got the spokesman of the Tribe (in the absence of the Chief) to see Mr. Brew about the desired addition to Indian Reserve (No. 3)..." (Launderers 1869). It is not clear how Launderers obtained his information or who acted as "spokesman", but it is clear that he did not receive it from the accepted leader of the community (James Sla-holt). I think that, in the absence of the community leader, the self-designated spokesman deliberately misled Launderers. Below, I dissect this statement into its 3 key components and discuss each in turn:*

- a) "This Village is called Lillooet (Tsleil-Waututh) and was established by Indians from the portage of that name..."
- b) "...established by Indians from the portage of that name perhaps 30 or 40 years ago..."
- c) "...there are yet 2 or 3 Old people of that tribe still living here – all the remainder of the Indians here and all over Burrard Inlet are of the Squamish tribe, very much divided."

365. The first component of Launderers' (1869) statement indicates that the inhabitants of "Lillooet" (Sleil-Waututh) was established by people from 'Lillooet Portage'. As reviewed by Bouchard and Kennedy (1986:134; Bouchard 1996a:118) this refers to Tsleil-Waututh's relocation from Tum-tumay-whueton to Sleil-Waututh. More specifically, it describes how one Tsleil-Waututh community (the largest one) stopped over-wintering at Tum-tumay-whueton and merged with other Tsleil-Waututh communities at Sleil-Waututh and Whey-ah-wichen (see Crease 1863). The portage in question likely refers to the narrow strip of land separating Tum-tumay-whueton from Bedwell Bay. Tsleil-Waututh oral traditions describe this relocation and this portage (see *Tsleil-Waututh Oral History* above). I have not come across any information wherein this

portage was actually called “Lillooet” or Tsleil-Waututh, but it seems reasonable that it would have been associated with the Tsleil-Waututh people who lived there at Tum-tumay-whueton. The timing of Tsleil-Waututh's cessation of over-wintering at Tum-tumay-whueton and merger with the Tsleil-Waututh community at Sleil-Waututh will be discussed in detail in a later section (see s. 4.2.1, *DhRr 6/Belcarra Park/Tum-tumay-whueton*). Many Tsleil-Waututh individual's whose primary place of residence had been at Tum-tumay-whueton had relocated to Sleil-Waututh sometime before AD 1869 when Lauanders visited the community at Sleil-Waututh (“Lillooet”).

366. There are oral histories regarding the construction of a fort or palisade at Sleil-Waututh (Thornton 1966:168), and this likely did occur in the early 19th century. Several forts/palisades appear to have been built across the Coast Salish region around 1820–40 (Angelbeck 2009; Suttles 1951:30), but they are also described as early as AD 1792 (Gunther 1972:63). Bouchard and Kennedy (1986:133; Kennedy 2000:142–143) have associated this construction of a fort with the motivation for Tsleil-Waututh's move from Tum-tumay-whueton. There is no independent dating of this fort, no eyewitness accounts of it, and its location is said to have “washed away by the sea” (George 1990:2, 4).
367. However, aside from Lauanders (1869a), there is no evidence to indicate that this was the “establishment” of the community at Sleil-Waututh. *Indeed, there is substantial evidence to indicate that there was an already existing community at Sleil-Waututh.* As mentioned above, and described in detail below, there are extensive archaeological deposits (deeply stratified shell middens) that have been radiocarbon dated and provide evidence of substantial occupation (i.e., a village) from about 3,000 years ago to about a century before contact the (291 BP or AD 1495–1661) (see s. 3.10, *The Archaeological Record*, above). This inference is supported by a suite of radiocarbon dates from the middens here and the artifacts recovered from the eroding portions of these sites. Additionally, there are a large number of European trade goods from these sites indicating occupation in the decades after contact. Further research into these middens would probably provide further evidence of occupation at contact. This is overwhelming evidence that Sleil-Waututh was an occupied village at the time other Tsleil-Waututh people relocated here from Tum-tumay-whueton.
368. Bouchard and Kennedy (1986:135–136) review this archaeological information as it was available at the time (which did not include the radiocarbon dates or historic artifacts described here), and acknowledge that, for Tsleil-Waututh, “this latter area was probably one that was very familiar to them, by virtue of their long-established tradition of occupation of both sides of the inlet here,” but then do not even consider that there may have been an additional Tsleil-Waututh community already at Burrardview when Tsleil-Waututh people from Tum-tumay-whueton relocated there. There is no archaeological indication that this village was “established” in the early 19th century; it appears to have been occupied more or less continuously for millennia.
369. In addition to archaeological evidence supporting long-term occupancy here, there are Tsleil-Waututh oral histories. There are Tsleil-Waututh oral histories regarding Tsleil-

- Waututh individuals that can be identified in the Tsleil-Waututh Genealogy (2014) (e.g., Tasawlonwhoe/Ha-ma-que-ya and Zauteslacha) living at Burrardview before the period of muskets, and based on the genealogical sequence, likely before contact (George 1930). Ambrosine George Virag (Tsleil-Waututh elder) insisted that Sleil-Waututh/Burrardview “had always been a village” (George 1983:2). *That is to say, there are Tsleil-Waututh oral histories describing Tsleil-Waututh occupancy here prior to the supposed AD 1830–40 settlement here.*
370. Bouchard (1996a:117) indicated that Tsleil-Waututh elder Herbert (Paddy) George linked Tsleil-Waututh’s move from Tum-tumay-whueton/Belcarra to Sleil-Waututh/Burrardview with the construction of the fort there. *Paddy George does not say this in the interview, he says that his grandfather, James Sla-holt, “lived for a while in this fort” (George 1990:2). Here, Bouchard (1996a:117) is deliberately changing the meaning of the statement to fit his hypothesis, rather than adjusting his hypothesis. This is not accepted practice in anthropology.*
371. James Sla-holt’s occupation of both Sleil-Waututh and Tum-tumay-whueton fits a common Coast Salish pattern of multiple residences, rather than timing of relocation. It is worth noting James Sla-holt also maintained houses at Musqueam IR No.2, Mission IR No.1, and Inlailawatash IR No.4. More specifically, I would expect that James Sla-holt and many other Tsleil-Waututh people lived in the fort at Sleil-Waututh/Burrardview during the seasons when raids were anticipated (i.e., late spring and summer (Jeness 1934)), and continued to over-winter at Tum-tumay-whueton until around AD 1858–61. To my knowledge, there is no independent evidence for dating the construction of the fort at Sleil-Waututh.
372. The only oral history that actually specifically speaks to the timing of this relocation (i.e., cessation of over-wintering at Tum-tumay-whueton) places the event between AD 1858–64, during the Governorship of James Douglas (John L. George Sla-holt cited in Lugg 1985). Additionally, Tsleil-Waututh chief Waut-salk II was killed in battle around AD 1840 (Menzies 1934) and interred at Boulder Island (off shore from Tum-tumay-whueton) rather than at Sleil-Waututh. *If the Tsleil-Waututh community had been living at Sleil-Waututh in AD 1840, Waut-salk would have likely been buried there. But instead, he was interred on Boulder Island, and not reburied at Sleil-Waututh until around AD 1874 (see the Oral History Section above).* The balance of evidence supports the conclusion that Tsleil-Waututh individuals from Tum-tumay-whueton merged with the already existing community of Tsleil-Waututh people at Sleil-Waututh/Burrardview sometime around the middle of the 19th century, probably between AD 1858 and 1861.
373. Some historical documents are of use in establishing the timing of Tsleil-Waututh’s relocation but none corroborate Launder’s (1869a) suggestion that this event occurred around AD 1830–40. First, the earliest known documents referring to a village of “Lillooet” are a newspaper article regarding smallpox inoculations (The British Columbian 1862) and an entry in an Oblates baptismal register in AD 1862. Second, the Crease Map (1863) indicates that a village existed at Burrardview by 1863. No village is

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indicated at Belcarra, but the name “Tum-tumay-whueton” is located at a village at Roche Point, perhaps indicating that the village of Tum-tumay-whueton had recently (not 30 years ago) relocated to Roche Point. Aside from Launder's (1869a), to my knowledge, other than indicating its presence by AD 1862, the historical record is essentially silent on when Tsleil-Waututh was established. But, as described above, the archaeological record and body of Tsleil-Waututh oral histories strongly suggest that it was occupied for centuries before this time.

374. If Launder's (1869) was correct that there were only 2–3 old Tsleil-Waututh people living at Burrardview in AD 1869, this should be apparent in both Tsleil-Waututh's genealogical records and the AD 1876/77 Blenkinsop census. *But instead, both sources of information strongly contradict Launder's' (1869a) statement.*
375. According to the current Tsleil-Waututh genealogy there are at least 19–20 named adult Tsleil-Waututh individuals comprising about 8 families living around AD 1869 (Tsleil-Waututh Genealogy 2014). Note that this corresponds well with Launder's (1869a) estimate of “9 or 10 families” at IR No.3. Three of these individuals are Squamish in origin and were married into the Tsleil-Waututh community. As residence appears to have been highly flexible during this period, some of these individuals may not have been living at Burrardview in AD 1869. The only family that does not appear in the Tsleil-Waututh genealogy but does occur in the Squamish genealogy and appears to have been living at Burrardview is that of Eyaoset. As discussed below, while Eyaoset appears to have been Squamish/Homalco in ancestry he married a woman born at Burrardview (presumably Tsleil-Waututh). So, according to the Tsleil-Waututh genealogy, there were far more than 2–3 adult Tsleil-Waututh people alive at AD 1869 and Squamish individuals were a clear minority at Burrardview in AD 1869.
376. The slightly later 1876/77 Blenkinsop census corroborates this pattern. What is most remarkable about this, is that Bouchard and Kennedy (1986:139–145) actually review this information in detail and then proceed to completely ignore it. *Again, this selective reading and interpretation of relevant evidence is not accepted practice in anthropology.* In their review, Bouchard and Kennedy (1986:139–145) are emphatic about the few individuals of Squamish descent at Burrardview, and downplay the majority of individuals' ancestry as “uncertain.” As Bouchard and Kennedy (1986) were working from Oblates records and Squamish oral histories and not Tsleil-Waututh oral histories, it is not surprising that some individuals would be unknown to the Church at the time and Squamish individuals 100 years later. *The most parsimonious interpretation of such individuals of 'unknown ancestry' living at Sleil-Waututh is that they are Tsleil-Waututh people.* Indeed, any interpretation of alternate or unknown ancestry should require detailed explanation. Tsleil-Waututh's recorded oral histories and genealogy confirm that most of these individuals were of Tsleil-Waututh ancestry. My review of the individuals listed Blenkinsop's (1876/77) census of Burrardview results in approximately 7 adult Squamish and 16 adult Tsleil-Waututh individuals living at Burrardview in November 1876. In only one case (Eyaoset and later his son Tekwap) does there appear to be a Squamish family living at Burrardview, all other Squamish individuals are married into

- the Tsleil-Waututh community. Such a pattern of directional exogamy (that is, numerous marriages from one village into another) is typical for Coast Salish people (Kennedy 1995, 2000:188–189; Suttles 1987) and does not provide evidence of “Squamishization.”
377. It is unclear how Bouchard and Kennedy (1986) have determined Eyaoset's ancestry or age. Based on available information, I think their conclusion is derived from Squamish oral history as recorded in the Chief Tom letter (1916), Tsleil-Waututh's response to that letter (Burrard 1917), or Louis Miranda's list of Squamish names (see Kennedy 2000). According to the Squamish Nation's genealogy, Eyaoset was born in AD 1827 (Squamish Nation 1993, 2000). The 1917 letter written by Tsleil-Waututh, in response to the Chief Tom letter, indicates that Eyaoset's father was from Church House (Bute Inlet) and was thus probably Homalco (Burrard 1917), and that Eyaoset's family had no rights to the area. This response letter (Burrard 1917), rejecting Tommy Jonny's band membership and rights to IR No.3, is ignored by Bouchard and Kennedy, except for the genealogical information it contains.
378. If the fort at Burrardview (Sleil-Waututh) was built between AD 1830 and 1840 (Bouchard and Kennedy 1986:133) (and it is quite uncertain), Eyaoset would have been 3–13 years old during its construction, an unlikely candidate for leading its construction. Further, many such Coast Salish forts were actually built earlier than this, certainly by AD 1830 (Suttles 1951:31) and AD 1792 (Gunther 1972). Simon Fraser described a fort at Musqueam in AD 1808 (Lamb 1960:105–106). Angelbeck (2009:168–218) describes an array of pre-contact Coast Salish defensive structures. *As some Coast Salish forts were indeed built much earlier than indicated by Bouchard and Kennedy (1986), then Launders (1869a) date for Tsleil-Waututh's relocation cannot be taken as an accurate proxy of the date of its construction.* The fort at Burrardview may indeed pre-date Eyaoset's birth. Viewed in this light, a man named Eyaoset of part Squamish ancestry may indeed have lived at Burrardview around AD 1830, but it is exceedingly unlikely that he or other unnamed Squamish individuals acted as a protectors to the Tsleil-Waututh people as characterized by Bouchard and Kennedy (1986; Kennedy 2000:142). The weight afforded by Bouchard and Kennedy (1986) to the very spartan documentation of Eyaoset is completely unjustifiable. The logical impossibility of a 3 or a 13 year old constructing a fort and acting as a defender of a whole people speaks for itself.
379. In summary then, the passage from Launders (1869a) that Bouchard and Kennedy (1986) afford so much weight can be demonstrated as being inaccurate in regards to the timing of the establishment of the village at Sleil-Waututh and the ancestry and affiliation of the individuals living therein at AD 1869. It is not clear who gave Launders (1869a) this information or how it was related to him, but it does not accord well with other lines of evidence. Bouchard and Kennedy's (1986) own examination of this data (especially the Blenkinsop census and Eyaoset's genealogy) undermines rather than supports their “Squamishization hypothesis.” In short, there are far more parsimonious explanations of the ethnohistorical record than Bouchard and Kennedy's (1986; 1996; 2000) “Squamishization hypothesis” (see sections above).

3.12.2 Sto:lo

380. Sto:lo (People of the River) Nation is a confederation of numerous Halkomelem speaking bands or nations located along the Fraser River, primarily centered in the Chilliwack area. Sto:lo peoples share a common culture and language (or group of dialects) based on a shared use of the Fraser River that distinguishes them from other such peoples, such as the Squamish (Sonny McHalsie, pers. comm. to Jesse Morin April 2013). Following this line of logic, Tsleil-Waututh are a Sto:lo people because they traditionally spoke a Halkomelem dialect, and had recognized resource rights to the Fraser River. Sharing Sto:lo culture, however, is distinct from sharing Sto:lo political organization. Tsleil-Waututh leadership has never acknowledged its place as Sto:lo and conversely, it is unclear as to what level of territorial rights Sto:lo leadership would assert to any of Burrard Inlet.

3.12.3 Musqueam

381. As with Squamish, Musqueam leadership and lawyers have occasionally claimed that Tsleil-Waututh is in fact a 'part' of Musqueam or the Musqueam community, rather than being a separate First Nation (Barnett 1935–36:3; Musqueam 1923; Point 1996b:31–33, 1996b:36–38, 59–62; Sparrow 1996:32–35). Following this logic, all of Tsleil-Waututh's village sites and territory are then subsumed by the broader Musqueam claim. Indeed, Musqueam variably makes such claims of other groups, such as Kwikwetlem, Kikayt, and Tsawwassen as well (see Barnett 1935–36:3, 1955:34). Essentially the same simplistic claim could be reversed and made by Tsleil-Waututh—that Musqueam is in fact actually a Tsleil-Waututh group. But such claims are both historically and culturally inaccurate, and are dishonest to the body of ethnohistoric evidence regarding the relationship between these two peoples.

382. Tsleil-Waututh's relationship with Musqueam is very deeply rooted, and Musqueam was, prior to about AD 1860, the nation with which Tsleil-Waututh shared the closest political, economic and familial ties. Because of this very close relationship, it is worth reviewing the available evidence to describe the distinctiveness of Tsleil-Waututh compared to Musqueam. To my knowledge, there are no oral traditions that indicate any violence between Musqueam and Tsleil-Waututh people.

383. From a broad ecological perspective, it is obvious why Musqueam and Tsleil-Waututh Nations were so intertwined and interdependent. First, these tribes are immediate neighbors, with Tsleil-Waututh's core territory located in Burrard Inlet, and Musqueam's core territory located on the North Arm of the Fraser River at Point Grey (Barnett 1955:33). Despite the spatial proximity between the two tribes, there are profound differences in the array of resources available within each area. Inner Burrard Inlet had extremely rich shellfish beds, for example, and Musqueam core territory has much less productive shellfish beds. Rivers in Inner Burrard Inlet/Indian Arm (e.g., Capilano River, Seymour Creek, Indian River) have or had rich fall salmon runs that have no comparison in Musqueam territory. Conversely, Musqueam territory has/had access to the enormous

runs of Fraser River sockeye and eulachon, and resident sturgeon, all which were only ever available in small numbers in Burrard Inlet. Further, Musqueam territory on the Fraser Delta was extremely rich in waterfowl, and while waterfowl was present in Burrard Inlet, they would have never been present in the same numbers as at the Fraser Delta. Essentially, the territories of each tribe provided some, but not all of the critical subsistence resources required by each tribe. Based on this information, it makes sense as to why Musqueam and Tsleil-Waututh would have always endeavored to maintain close relationships.

384. Historically speaking, Tsleil-Waututh has had the strongest ties to Musqueam of all the other First Nations groups. There are many kinship ties between Tsleil-Waututh and Musqueam people. Waut-salk (I), for example, was married to a Musqueam woman named Whi-why-loat (Transcript of sworn evidence provided by Leonard George, February 10, 1997:1471; Tsleil-Waututh Genealogy), and all living Tsleil-Waututh community members can trace their ancestry to this relationship. Waut-salk (II) had four wives, one of which was a Musqueam woman name N-sie-tsar or Nstar (Transcript of sworn evidence provided by Leonard George, February 10, 1997:1471; Tsleil-Waututh Genealogy). Following Waut-salk (II), Tsleil-Waututh Hereditary Chiefs have married Squamish women for four generations. Recall that all Coast Salish people, but especially high class people/elites practice exogamy (marrying out of one's home community). Exogamy is particularly important for high class people/elites, because those marriage relationships form the basis of political relationships between individual First Nations (Barnett 1955:182, 184; Carlson 2001; Kennedy 2009; Snyder 1964:74–86, 176, 256; Suttles 1987:17–21). Based on the trend of Tsleil-Waututh political leaders first marrying into Musqueam families and later marrying into Squamish families, it seems clear that maintaining political and social relationships with their closest neighbors was an important duty. Exogamous marriages were the primary social mechanism in Coast Salish societies for accessing resources beyond one's natal territory (Snyder 1964; Suttles 1987). If Tsleil-Waututh were actually Musqueam, then these marriages between their leaders would have been at best redundant.
385. As discussed above, prior to about 1870 or so, Tsleil-Waututh's language appears to have been a dialect of Down-River Halkomelem (*Hun'qumyi'num'*), similar to, but distinct from Musqueam (Alexander and Grier 2000:7–8; Suttles 1990; Tsleil-Waututh 2004:60–61). Prior to about 1910, before Down-River Halkomelem was named by linguists/anthropologists, it was often called "Cowichan" (Suttles 1990:473, 2004:xxiv). Later, and more colloquially, Down-River Halkomelem was often simply referred to as "Musqueam" (Kew 1970:9–10). This trend has really continued essentially to the present, as Suttles' (2004) final publication was titled, "*Musqueam: A Reference Grammar of Downriver Halkomelem.*" This conflation of Musqueam the people versus Musqueam as a Down-River Halkomelem dialect causes considerable confusion in interpreting historical records wherein people or places are described as "Musqueam."
386. As discussed above in the introductory section of this paper, Coast Salish identity is strongly reinforced by oral histories that tie people to places (Arnett 1999:17; Carlson

2010; Thom 2005:83). In that section, I presented numerous examples of Tsleil-Waututh oral histories that adhere to a broad Coast Salish cannon, but are specific in details to Tsleil-Waututh and to Burrard Inlet. The Musqueam First Ancestor stories are located in the core of Musqueam territory on the North Arm of the Fraser River. In the Musqueam case, their oral histories involve Pá'pkeltel's (the Musqueam First Ancestor) who encounters the *Xexá:ls*/Transformers at the village of Malé, located on the present Musqueam IR No.2 (Boas 2006:93–101). The name 'Musqueam', and the oral history behind it, are indeed closely tied to Musqueam core territory on the North Arm of the Fraser River (Suttles 1963, 2004:464–470).

387. Some of the earliest historical records regarding Tsleil-Waututh and Musqueam give no indication that the two nations were one political or social entity. For example, the AD 1864 Seymour petition lists one chief from Musqueam—"Tlakom, Muskoyum" and one chief from Burrard Inlet—"Sleultou, Slelouet" (that is, Sla-holt, Tsleil-Waututh) (Petition to Seymour 1864). If Tsleil-Waututh was somehow politically or culturally subsumed into Musqueam, then it is very unlikely that the Tsleil-Waututh Hereditary Chief James Sla-holt would have been a signatory on a petition from the "Indian Chiefs of the Lower Fraser Tribes". Local colonial, Constable Brew, seemed to draw clear distinctions between the Tsleil-Waututh and the Musqueam:

I would respectfully state that the Squamish Indians are squatting on the Military Reserve on the Reserves of the Lilote(?) and Musqueam Indians: they are also in other places around the Inlet. They do not belong to this section of the country, but to Howes Sound, out of which until a very recent date they seldom ventured, fearing retaliation for murder and robbery committed on White miners in 1858, and other Indians for a long time (Letter from Constable Brew to A.T. Bushby, Assistant Commissioner of Lands and Works, dated July 30, 1869, Burrards Inlet).

388. Inlailawatash/IR No.4 was originally set aside for the 'Skwamish and Miskeams' in 1877 (Sproat 1877), but was always primarily a Tsleil-Waututh village and resource site. After the Burrard Band rejected the Squamish Amalgamation in 1923 (Perry 1923), the Squamish Nation relinquished their interest in IR No.3 and IR No.4. Although poorly documented, a Musqueam–Tsleil-Waututh amalgamation was briefly considered around 1926, but was rejected by Tsleil-Waututh (Burrard 1926; George 1983). If Tsleil-Waututh and Musqueam had a prior history of being a single cultural or political entity, I would have anticipated that this amalgamation would have been successful. Later in 1927, Musqueam Chief Jack Stogan formally relinquished any interest in IR No 4, acknowledging that they were solely Tsleil-Waututh's (Musqueam 1927). If Musqueam had truly believed, and could prove that Tsleil-Waututh was part of Musqueam, I believe that they would have not relinquished interest in Inlailawatash/IR No.4, and instead would have emphasized their interest there.
389. Wilson Duff's (1949–1950) interview with Simon Pierre describes Tsleil-Waututh Hereditary Chief James Sla-holt as 'Musqueam' and that "Musqueam owned Indian

Arm” (cited in Kennedy 1996a:44). And further, Simon Pierre (Duff 1949–1950) described Chief Jimmy Harry (Chief of Seymour River as of 1897) as a Musqueam person and Jol-gul-hook as a Musqueam village (Kennedy 1996a:44). Kennedy (1996:44) notes that the Oblate records describe Jimmy Harry as a Squamish person. There is confusion within the ethnographic and historical records regarding the cultural affiliation of several key individuals who inhabited Burrard Inlet.

390. It is my opinion that Tsleil-Waututh's *Hunq'imnum* dialect and close relationship with Musqueam have often caused them to be 'lumped' with Musqueam. It is evident that, in the past, Tsleil-Waututh was often conflated with Musqueam. And, as discussed above the Musqueam 'First Ancestors' are Male on Musqueam Reserve, none are from Burrard Inlet. Aside from kinship ties by particular Musqueam individuals to Tsleil-Waututh families, Jol-gul-hook lies well beyond core Musqueam territory at the North Arm of the Fraser River. Historical conflation of Musqueam and Tsleil-Waututh does not advance the Musqueam claim to Burrard Inlet.
391. Chief Kiapilano (~AD 1780–1870), established the village of Homulcheson at Capilano River at the entrance to Burrard Inlet (~1840). Kiapilano is claimed by Musqueam people to have been a Musqueam person and has been claimed by Squamish people to have been of mixed Squamish-Musqueam descent. (Blenkinsop 1876; Kennedy 1996b:12–22; Kew 1996:52–55; Mathews 1955:108, 208; Sproat 1876b:16). This is really the eastern-most evidence for any type of territorial claim by Musqueam for Burrard Inlet, and it is very problematic. Indeed, the Crown has already described Musqueam's primary villages and core territory as being located on the lower reaches of the North Arm of the Fraser River (*Mathias v. The Queen*, FCT 480 2001:48–49, paragraphs 167, 168). That is, Musqueam's villages and core territory were well-outside of the Study Area.
392. In my opinion, it is clear that Tsleil-Waututh had and continues to maintain close relationships with the Musqueam Indian Band. However, I find little evidence to support that they were a single entity or tribe, and considerable evidence to support the conclusion that they were separate groups. In my opinion, it is the use of the term 'Musqueam' to refer to the dialects Down-River Halkomelem spoken by Tsleil-Waututh is the source of much of this confusion.

3.13 Continuity Between Historic and Current Tsleil-Waututh Use and Occupation of Eastern Burrard Inlet

393. There are numerous lines of evidence that, when taken together, make it clear that the modern Tsleil-Waututh community has descended from the pre-contact and sovereignty era occupants of eastern Burrard Inlet. Additionally, there is no evidence for the sudden appearance or displacement of a pre-existing group in eastern Burrard Inlet around AD 1846. Similarly, the modern Tsleil-Waututh governance structures have, in some form, descended or evolved from sovereignty era Tsleil-Waututh systems of governance and stewardship. As almost all of this evidence has already been discussed in detail above, I only briefly comment on this evidence here.

3.13.1 Modern Communities

394. The modern Tsleil-Waututh community is located at Sleil-Waututh/IR No.3 in North Vancouver. The majority of Tsleil-Waututh band members live on this reserve, and the minority live in surrounding communities and other reserves. As described in detail above, two large archaeological villages are located at Sleil-Waututh that represent more than 3,000 years of occupation here. Tsleil-Waututh also have reserves at Inlailawatash on the Indian River (IR No.4 and 4a). A large archaeological site at this location represents more than 800 years of occupation. Tsleil-Waututh has a cabin and other facilities at IR No.4, and the area is regularly used by Tsleil-Waututh people for resource harvesting and spiritual purposes.

3.13.2 Oral Histories

395. In sections above (see s. 3.3.1, 3.3.2, 3.3.3, and 3.3.4), I described a range of Tsleil-Waututh oral histories that describe their historical relationships to their territory, and indicated that such oral histories legitimize a Coast Salish First Nation's claim to its territory. Below, I describe the major types of oral histories that support Tsleil-Waututh's historical affiliation with their territory:

- Tsleil-Waututh hold oral histories regarding their creation in Burrard Inlet (Leonard George 1997, Gabriel George 2014).
- Tsleil-Waututh hold oral histories regarding the actions of their ancestors in pre-contact times in Burrard Inlet (Carter 1966; George 1930; Leonard George 1997; MacDonald et al. 1998; Gabriel George 2014; Sparks and Border 1989; Tsleil-Waututh 1998).
- Tsleil-Waututh hold oral histories regarding 'First Contact' in Burrard Inlet (George and Joe 1983).
- Tsleil-Waututh hold oral histories regarding multiple ancestral villages around Burrard Inlet, with named chiefs of several of those villages (Carter 1966; George 1990; Tsleil-Waututh 1998).

396. *This oral history evidence alone strongly supports the contention that the modern Tsleil-Waututh community is the descent group from the pre-contact and sovereignty era aboriginal occupants of eastern Burrard Inlet. I know of no information that contradicts this statement.*

3.13.3 Tsleil-Waututh's Genealogy

397. Tsleil-Waututh's genealogical record perhaps provides the most robust source of evidence of continuity of use and occupation of eastern Burrard Inlet. This evidence describes an unbroken chain of descent of Tsleil-Waututh people from their pre-contact chief Waut-salk (I) who lived from about AD 1750–1800 (Tsleil-Waututh 2014). Almost

every living Tsleil-Waututh individual can trace their descent back to Waut-salk (I) (**Figure 30**). This evidence is highly significant because it spans the entire historic era, it associates named people with particular villages, and it can be corroborated with other historic documents. It further describes a clear line of Tsleil-Waututh hereditary leadership from AD 1750 up to the present.

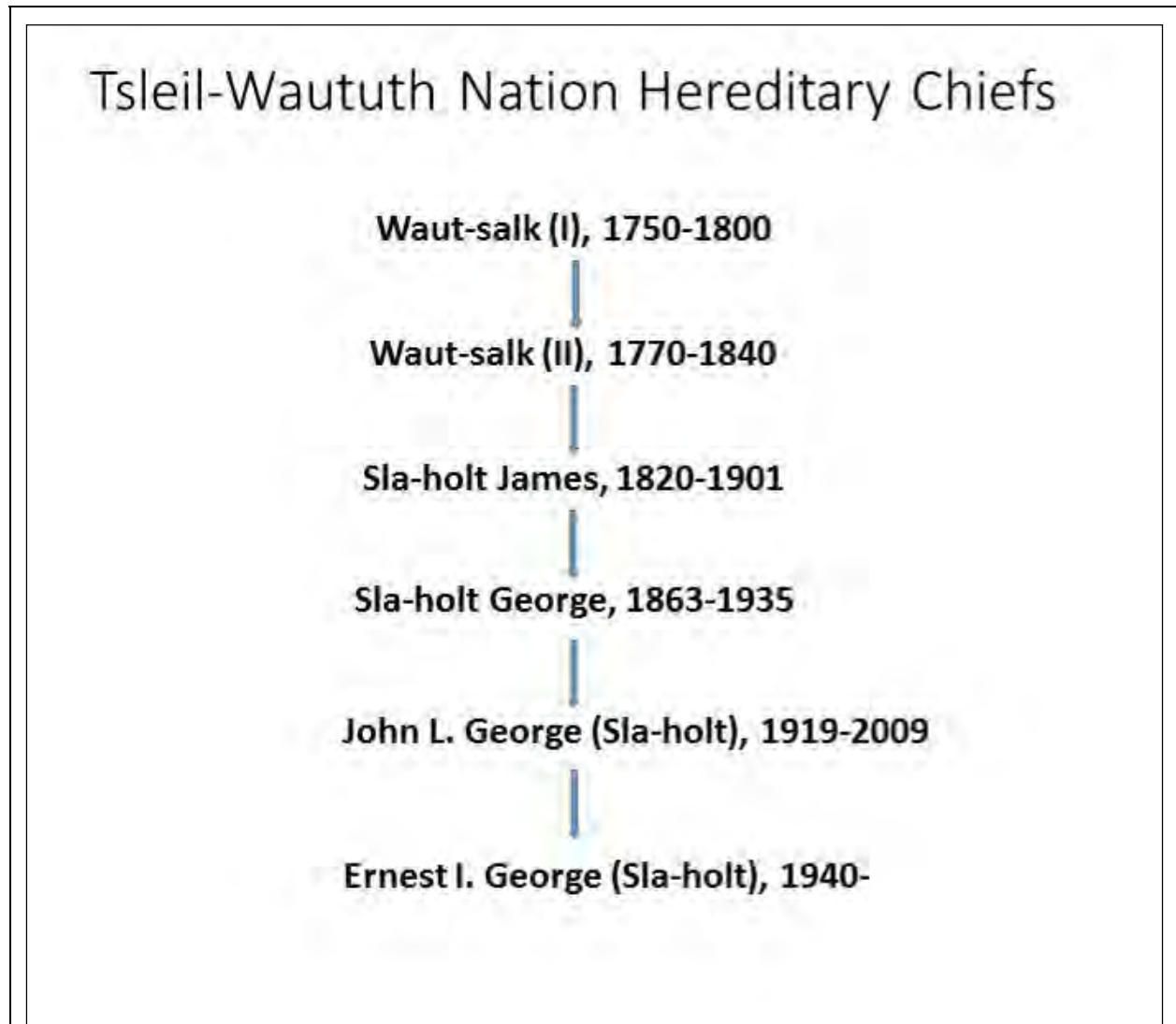


Figure 30. Tsleil-Waututh Nation hereditary chiefs since prior to contact. Note that in all cases except for Ernest George, the role of hereditary chief was passed from father to son. Ernest George received the name Sla-holt and the role of Tsleil-Waututh's here from his stepfather—John L. George

3.13.4 Language and Place Names

398. Tsleil-Waututh's pre-contact and sovereignty era language is generally agreed upon to be a dialect of Down-River Halkomelem (Suttles 1990), but is essentially undocumented. Tsleil-Waututh place names, however, likely contain aspects of this lost dialect. Additionally, Tsleil-Waututh holds the richest body of aboriginal place names for eastern Burrard Inlet, including the only name recorded by contact-era (i.e., AD 1792) explorers of the region (Wagner 1933:240). This body of place names supports long-term (i.e., probably centuries at least) occupation of this area by Tsleil-Waututh and their ancestors.

3.13.5 The Archaeological Record

399. As described above, the archaeological record provides a rich body of evidence indicating long-term occupation and use of eastern Burrard Inlet (discussed in detail below). There are no abrupt changes within the archaeological record of the last 1,000 years or so indicative of a major influx in population. There is a notable cluster of large shell middens indicative of village sites in eastern Burrard Inlet that correspond well to Tsleil-Waututh's oral histories of their villages sites. Several attributes of the archaeological record suggest that the pre-contact aboriginal inhabitants of eastern Burrard Inlet were distinct from their neighbours:

- The style of the Indian Arm pictographs is distinctive compared to pictographs of adjacent valleys, suggesting they were produced by a distinct population.
- Artifact assemblages from Burrard Inlet are dominated by flaked stone, rather than ground stone, with a notable emphasis on flaked stone points, especially small triangular side notched points, and points made of green andesite. These attributes distinguish Burrard Inlet from adjacent regions and suggests that a distinctive population inhabited the locality.

400. In summary, the archaeological record provides exceedingly strong evidence of long-term continuity of occupation of eastern Burrard Inlet, and supports the conclusion that this locality was inhabited by a distinct Coast Salish population.

3.13.6 The Historical Record

401. As described in detail above, the historical record identifies a group called 'Lilloet' or 'Slilooet' in eastern Burrard Inlet. This group corresponds to the Tsleil-Waututh communities and people that inhabited the area then. Multiple sources of historical evidence exist from about AD 1862, and they consistently identify a distinctive group in eastern Burrard Inlet called something like 'Tsleil-Waututh,' and they identify several well-known Tsleil-Waututh people. This evidence is briefly reviewed below with regards to continuity in occupation:

3.0 The Tsleil-Waututh Historically and Today

- a) At AD 1862, OMI missionaries baptize and inoculate several Tsleil-Waututh individuals at a village called "Slelouet" (Sleil-Waututh) (January 6, 1862 OMI Baptismal Records; June 7th, 1862, *The British Columbian*).
 - b) The 'Crease Map' (Crease 1863) identifies the North Shore area as Tsleil-Waututh territory, and identifies Tsleil-Waututh communities at Sleil-Waututh and Whey-ah-wichen.
 - c) Several petitions from Coast Salish peoples to the colonial authorities include Tsleil-Waututh hereditary chief James Sla-holt as a signatory, often as the only chief representing anyone from Burrard Inlet (Petition of Indian Chiefs to Governor Seymour, May 24, 1864, Great Britain Colonial Correspondence, CO 60/19, Seymour to Cardwell, British Columbia Archives, Victoria; Petition to Governor Seymour Feb 19, 1867, Dispatch No. 33, February 19th, 1867. Great Britain Colonial Correspondence, CO 60/27, Seymour to Cardwell; Petition of Fraser Valley Chiefs to Governor Musgrave Regarding the Sale of Cranberry Patches in the Lower Fraser Valley, January 7, 1870, British Columbia Colonial Correspondence, Holbrook to Musgrave, F778/38, reel B-1334, British Columbia Archives, Victoria; Petition to Powell from Lillooet, Lower Fraser and Bute Inlet Indians, 1873, RG10, vol 3602, file 1794, reel C-10104, National Archives of Canada, Ottawa).
 - d) At AD 1869, Colonial authorities allocate a reserve at Sleil-Waututh (Burrard IR No.3), and note the chief of the community as "Slack-whelt" (Sla-holt) (Launders 1869a).
 - e) From AD 1869 to the present day, there is clear continuity in the governance and administration of Burrard IR No.3 by the ancestors of the modern Tsleil-Waututh population.
402. The earliest historical record is exceedingly clear that a distinct aboriginal group called something like 'Tsleil-Waututh' inhabited and occupied eastern Burrard Inlet. Only slightly later, did colonial authorities begin to conflate Tsleil-Waututh with Squamish or other First Nations.

3.13.7 The Ethnographic Record

403. The ethnographic record is both contradictory and confused regarding the identity of the aboriginal inhabitants of eastern Burrard Inlet (see Barnett 1955; Duff 1952a and 1952b; Suttles 1951). This is primarily because no anthropologist ever worked with Tsleil-Waututh people, while many prominent anthropologists worked with neighboring communities. This has provided a distinctively slanted perspective on the aboriginal inhabitants of the area, and must be interpreted in that light. Recently, a stable academic consensus has emerged that recognizes Tsleil-Waututh's association with eastern Burrard Inlet and Indian Arm (Carlson 2010; Suttles 1990). However, the ethnographic record provides little detail into the nature of Tsleil-Waututh use and occupancy here.

3.13.8 Traditional and Modern Tsleil-Waututh Governance

404. As described in sections above, pre-contact Coast Salish social organization was predicated along lines of kinship with leaders or *si?em* as recognized representatives of individual houses or lineages. *Si?em* were ranked against one another in terms of status and prestige. However, these were not political offices, but rather people who excelled in organizing human affairs. *Si?em* had limited power to coerce others, but were respected in their decision making.
405. Because no ethnographers worked with Tsleil-Waututh in the historic era, specific details on 'traditional' Tsleil-Waututh leadership are exceedingly limited. Tsleil-Waututh people recognize a hereditary chieftainship, although most ethnographic accounts specifically deny such a role existed prior to contact (see Suttles 1989). Tsleil-Waututh's hereditary chieftainship passes from father to his most able (not necessarily first born) son or daughter (Ernest George Sla-holt pers. comm. to Jesse Morin 2012). The hereditary chief is in charge of choosing his successor. The Tsleil-Waututh hereditary chief holds the name/title Sla-holt or Waut-salk, and chieftainship is supposed to alternate between Sla-holts and Waut-salks every few generations (the details are unclear). The genealogy of Tsleil-Waututh's hereditary chiefs is generally well-documented. The current Tsleil-Waututh hereditary chief is Ernest George (Sla-holt) (AD 1940–present); his stepfather, John L. George (Sla-holt) (AD 1919–2009), was the hereditary chief before him; his father, George Sla-holt (AD 1863–1935), was the hereditary chief before him; his father, James Sla-holt (~AD 1820–1901), was the hereditary chief before him; his father, Waut-salk (II) (~AD 1770–1840), was the hereditary chief before him; his father, Waut-salk (I) (~AD 1750–1800), was the hereditary chief before him. *This is an unbroken chain of descent spanning the pre-contact to modern eras.* Tsleil-Waututh's current hereditary chief, Ernest George Sla-holt, emphasizes that traditional decision making was carried out by consensus rather than coercion (pers. comm. to Jesse Morin 2012). This means that the role of the hereditary chief was to facilitate discussion of a specific topic until a consensus was reached by all family heads.
406. The present system of Tsleil-Waututh governance is in part a continuation of their traditional systems of governance and in part a system forced on to Tsleil-Waututh by the Canadian state. As described above, Tsleil-Waututh still has a recognized hereditary chief. In addition, Tsleil-Waututh also has a Traditional Council comprised of the heads of the 8 major Tsleil-Waututh families. The role of Traditional Council is typically to discuss matters of major importance to Tsleil-Waututh, to carry those matters to their respective families, then to discuss these matters with other Traditional Council members with the goal of achieving a consensus on a particular topic. The Traditional Council system approximates the traditional system of Tsleil-Waututh self-governance, that is, heads of households in an individual village or villages.
407. In addition to Tsleil-Waututh's traditional system of self-governance, Tsleil-Waututh also has an elected chief and council, as implemented by the Canadian state through the *Indian Act*. One chief and four councillors are elected every two years. Elected chief and

3.0 The Tsleil-Waututh Historically and Today

council periodically meet to discuss and endorse (or not) all financial and strategic decisions. Each elected council member is responsible for one or more particular department of Tsleil-Waututh's administration (e.g., Public Works, Housing, Treaty, Lands and Resources). Much of Tsleil-Waututh's direct interaction between other levels of government and industry takes place through the Treaty, Lands and Resources Department, rather than directly through elected chief and council. Tsleil-Waututh's Traditional Council forwards its recommendations to elected chief and council, and elected chief and council formally endorse policy decisions and associated budget allocations.

3.13.9 Summary of Continuity

408. Given the range of mutually reinforcing evidence the only plausible conclusion that can be reached is that Tsleil-Waututh as a modern distinct aboriginal group has a long historical presence in eastern Burrard Inlet. *This direct historical association of Tsleil-Waututh with eastern Burrard Inlet spans the pre-contact to modern eras. In all probability, this direct historical association spans several centuries, if not millennia before contact.* The modern system of Tsleil-Waututh self-government can be understood as both a state imposed system and a continuation of a traditional system of self-government.

3.14 Who Are the Tsleil-Waututh?

409. First, the modern Tsleil-Waututh Nation are the descendants of a Down-River Halkomelem-speaking Coast Salish First Nation whose territory was centered on Burrard Inlet. Tsleil-Waututh's oral histories regarding their origins, their pre-contact history, and their land use all locate Tsleil-Waututh ancestors in and around Burrard Inlet prior to contact and through AD 1792 and AD 1846. Tsleil-Waututh holds a rich body of place names for locations in eastern Burrard Inlet, far more such place names than has been described by any other group. Tsleil-Waututh's genealogy extends back to about AD 1750, and three named chiefs of different villages in eastern Burrard Inlet are identified. To my knowledge, no other First Nation has identified and demonstrated a genealogical link between a single pre-contact chief of any village in eastern Burrard Inlet.
410. Prior to contact, there is copious archaeological evidence of at least 8 and as many as 12 villages in eastern Burrard Inlet and a large number of other camps, resource harvesting areas, and spiritual/sacred sites. Many of these villages appear to have been occupied more or less continuously from about AD 1000 up to around contact. The number of villages contracted from about AD 1780–1860, but there is no evidence of an abandonment of the region, or the influx of the Tsleil-Waututh people, or any other people, from elsewhere. Tsleil-Waututh oral histories identify at least 6 of these villages, and identify 3 named pre-contact chiefs of these villages. There is a clear correspondence between Tsleil-Waututh's oral histories, place names, and the archaeological record in this area.

411. While the late nineteenth and early twentieth century historical and ethnographic evidence is remarkably contradictory, there are many lines of evidence that support the conclusion that Tsleil-Waututh was a distinct group at AD 1792 and AD 1846. It should go without saying that Tsleil-Waututh oral histories always emphasize that they—Tsleil-Waututh, the People of the Inlet—are a distinct cultural group. Tsleil-Waututh occupied a naturally bound geographic area—Burrard Inlet. Prior to contact, and through AD 1846, most of Tsleil-Waututh people's daily interactions would have occurred within the Inlet and surrounding area and with other Tsleil-Waututh people.
412. Prior to about the AD 1880, when use of the Squamish language became dominant, Tsleil-Waututh is understood to have spoken a distinct dialect of Down-River Halkomelem. This would have distinguished them from all of their neighbors, but would have been mutually intelligible with other Halkomelem speakers along the Lower Fraser and eastern Vancouver Island. This ancient affiliation of Tsleil-Waututh with other Halkomelem-speaking peoples of the Fraser River rather than with Squamish is significant.
413. Certain aspects of the archaeological record (projectile point type and raw material use, and style of rock art) of eastern Burrard Inlet from about AD 800–1792 differ notably from other contemporaneous areas of the Lower Mainland, especially the North Arm of the Fraser River, Howe Sound, and Pitt Lake. Stated simply, the local practices and traditions of making stone projectile points and rock paintings is different—to various degrees—in Tsleil-Waututh, Musqueam, Squamish, and Katzie territories. When viewed at this level, the pre-contact inhabitants of eastern Burrard Inlet were distinct from their neighbours.

4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

414. In this section, I shift from discussion of the nature of Tsleil-Waututh identity to the scope of Tsleil-Waututh's use and occupancy of the Study Area. I was asked to offer opinions on the following specific questions:

a) Did Tsleil-Waututh regularly use lands and waters in the Study Area as of, and prior to, 1846? If so, please describe, with specific reference to the relevant factual basis:

i) the location, nature, intensity, and frequency of Tsleil-Waututh's use of lands and waters in the Study Area as of, and prior to, 1846; and

ii) if and how Tsleil-Waututh communicated to third parties that it used the lands and waters in the Study Area for its own purposes as of, and prior to, 1846.

• Examples of regular use could include permanent or semi-permanent village sites, agriculture-related activities, burial grounds, cycle of residential moves and associated resource harvesting and/or mining activities, routes (and modes) employed to travel via lands and waterways, any other use of lands or waters for fishing, hunting, trapping, or otherwise exploiting resources, and internal legal orders relating to governance and decision-making over resource management and/or stewardship relating to the Study Area.

415. To address the questions of part a above, I review the following range of information. First, to describe the pre-contact context of Tsleil-Waututh use and occupancy of the Study Area I describe the archaeological evidence of village sites and their history of occupation (s. 4.2, *Archaeological Villages*). Next, I review the technological basis of the Tsleil-Waututh subsistence economy, namely their food-getting technology (s. 4.3, *Tsleil-Waututh Food-Getting Technology*), and their means of transport (s. 4.4, *Canoes* and s. 4.5, *Trails*). Then, I provide some background of the specific historical context of AD 1846 (s. 4.6, *The Historical Context of AD 1846*) because this was a tumultuous period that differed in many ways from earlier 'traditional' Tsleil-Waututh life-ways. Next, I present a method of modelling pre-contact Coast Salish daily foraging ranges (i.e., the distance people would travel on a daily basis to harvest food and return with that food to their home) (s. 4.7, *Areas of Intensive and Regular Use Around Tsleil-Waututh Village Sites*) and then apply that modelling technique (Least Cost Catchments, LCC) to the five Tsleil-Waututh villages that were inhabited at AD 1846 (s. 4.8, *Tsleil-Waututh Landscape/Seascape Use Within the Study Area: The Scope of Regularly Intensively Used Areas*). Then, I also apply the LCC modelling method to a number of archaeological sites interpreted as small temporary camps (s. 4.9, *The Tsleil-Waututh Seasonal Round*). Finally, I present my interpretation of Tsleil-Waututh's seasonal round as of AD 1846 (s.

4.10, *Summary of Tsleil-Waututh Landscape/Seascape Use and Occupancy Prior to and as of AD 1846*).

416. Based on all the available evidence, I conclude that prior to contact (AD 1792), Tsleil-Waututh occupied between 8 and 14 villages in the Study Area. Many of these villages are well-dated and represent three millennia of occupation. These villages were occupied by up to several thousand people in total. The areas surrounding these villages was found to have been especially intensively and regularly used for resource harvesting. At AD 1846 Tsleil-Waututh occupied at least 5 villages, most of which were fortified. At AD 1846 Tsleil-Waututh regularly and intensively made use of all the lands and waters in the Study Area. This area is described visually in **Figure 31**. The specific portions of the landscape/seascape that were identified as being regularly and intensively used for Tsleil-Waututh subsistence, technology and travel include:

- All of the marine waters were regularly used for resource harvesting; this includes fishing a myriad of species, hunting a variety of waterfowl, and hunting sea mammals and swimming terrestrial mammals.
- All of the marine waters were regularly used for canoe travel; this includes travel to and from other villages and camps, travel to Outer Burrard Inlet, and resource harvesting undertaken while travelling (e.g., trolling).
- All of the intertidal and foreshore environments were regularly used for harvesting activities; this includes harvesting shellfish and crabs, management of and harvesting resources from fish weirs and similar traps/facilities, near-shore fishing for a variety of species, harvesting fish roe, hunting birds, collecting seaweeds, landing canoes, and hunting sea mammals and terrestrial mammals.
- All of the near-shore (~1 km) terrestrial areas were variably used for places of habitation and places of regular resource harvesting. This includes many places of habitation (i.e., villages and camps), cemeteries, storage facilities, defensive constructions, places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where game was hunted, and all of these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- All of the terrestrial environments within about 8 km from well-documented villages or camps were used for harvesting plants, hunting and trapping animals, and collecting materials for technological purposes. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was

harvested, places where game was hunted. All of these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.

- All of the terrestrial environments adjacent to sizable rivers, streams and lakes in North Shore Mountains immediately north of Burrard Inlet were used for fishing, hunting, trapping, harvesting plant foods and technological materials. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places from which firewood was harvested, places where game was hunted. All of these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- Specific remote and steep environments including cliffs, rockshelters, and similarly relatively inaccessible areas, and/or in proximity to bodies of water or waterfalls (e.g., pictograph locations) were used for spiritual/ceremonial purposes. This includes places of spiritual practice/training.
- High elevation areas were used for hunting valuable game like mountain goat and other resources collected. This includes very steep and precipitous terrain such as cliffs.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

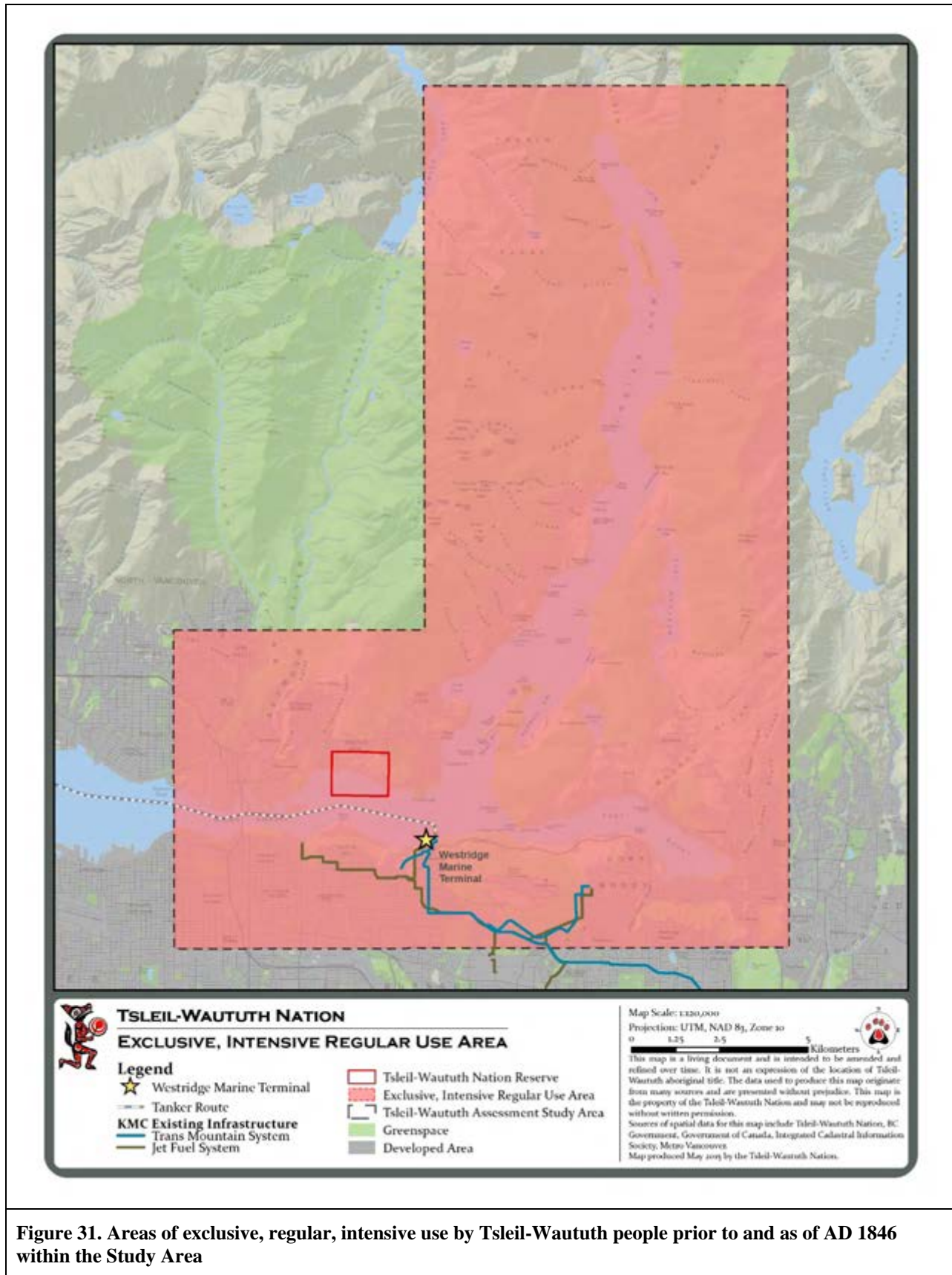


Figure 31. Areas of exclusive, regular, intensive use by Tsleil-Waututh people prior to and as of AD 1846 within the Study Area

417. In relation to Tsleil-Waututh's defense of their territory, I was asked to offer opinion on the following questions:

b) Did Tsleil-Waututh interact with third parties in relation to the lands and waters identified in a) as of, and prior to, 1846? If so, please describe, with specific reference to the relevant factual basis, whether Tsleil-Waututh had the intention and capacity to exclude third parties from the Study Area as of, and prior to, 1846.

• Examples of such exclusion(s) and/or capacity to exclude could include:

- Instances where third parties were actually excluded or expelled from lands and waters in the Study Area;*
- Acts of military defense (e.g. documented battles, defensive installations, etc.);*
- Where access by third parties may have been allowed, whether rules or protocols would have applied to such access (i.e. were others only allowed to access the lands or waters with Tsleil-Waututh's permission according to Tsleil-Waututh or other laws or protocols); and*
- Examples of requests by third parties to access the Study Area that were granted or refused by Tsleil-Waututh.*

Please answer (b) with reference to any relevant surrounding factual context relating to the Study Area, including the characteristics of Tsleil-Waututh, the nature of other groups in the Study Area, and the characteristics of the lands and waters in the Study Area.

418. To address these questions, I reviewed the body of evidence describing Tsleil-Waututh defending their territory and regulating access to the resources of their territory. Evidence describing Tsleil-Waututh's defense of their territory includes accounts of battles, description of fortified sites, and description of defensive network of villages and look-outs. Evidence describing Tsleil-Waututh's regulating rules of access to the resources of their territory includes permission seeking behaviours and severe repercussions for trespassing.

419. After reviewing this evidence, I conclude that at AD 1846 Tsleil-Waututh did regulate access to their territory and resources. They had both the intention and capacity to exclude third parties. Around AD 1846, these third parties would often be large and well-armed Lekwiltok or Haida raiding parties. The defensive features, palisades and trench embankments, associated with most of their AD 1846 villages of indicates that they anticipated raids, and defended themselves and their territory rather than retreating or yielding territory. Several of the AD 1846 Tsleil-Waututh villages appear to have been

linked in a defensive network. While many battles are described in Tsleil-Waututh oral histories, there is no evidence of territorial loss through warfare with other First Nations. Based on all this evidence, around AD 1846 Tsleil-Waututh undertook a military-like defense of their territory and people, and succeeded in doing so.

420. The evidence regarding access to resources in Tsleil-Waututh territory by third parties was also reviewed. Coast Salish conceptions of the nested levels of resource patch ownership, and protocols requesting access, form the baseline from which Tsleil-Waututh evidence of regulating access should be understood. In this framework, non-Tsleil-Waututh people would draw upon familial relationships with Tsleil-Waututh families to visit and request access to harvest resources with them. Several examples of this permission seeking behaviour were identified in TUS studies. All of the Study Area was regulated in this fashion by the sum of individual Tsleil-Waututh households (for household-owned resource patches) and all Tsleil-Waututh people (for tribally-owned resource patches).
421. In relation to Tsleil-Waututh's use of the land and waters of the Study Area, I was asked to offer opinion on the following questions:

c) Does Tsleil-Waututh still use the lands and waters identified in a)? If so, please describe, with specific reference to the relevant factual basis, whether and to what extent the following exist in the Study Area:

- *the location of modern Tsleil-Waututh communities;*
- *the location of modern Tsleil-Waututh harvesting activities;*
- *modern Tsleil-Waututh governance, resource management, and/or stewardship activities; and*
- *travel via traditional routes and modes;*

relative to the lands and waters identified in a).

422. To address these questions in section 4.0, I describe a range of TUS data and Tsleil-Waututh initiatives that describe their modern harvesting practices, travel, and governance/resource management. I conclude that Tsleil-Waututh does still use the lands and waters of their territory. I conclude that Tsleil-Waututh's modern community is located at IR No.3 in North Vancouver and Tsleil-Waututh has two additional small reserves on Indian River (IR 4 and 4a). The Tsleil-Waututh TUS data describing 20th century harvesting activities is very rich, and clearly identifies local pollution and resulting resource collapse Burrard Inlet in the 1960–1970s. Most specifically, the very local environment surrounding Sleil-Waututh/IR No.3 used to be very rich in shellfish and other resources, and now it is not. While traditional local foods are still harvested by some Tsleil-Waututh people, such foods comprise only a small part of modern diets, even compared to about 50 years ago.

4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

423. Few resource harvesting activities are presently undertaken within the Study Area. Sockeye salmon from the Fraser River (beyond the Study Area) is the primary traditional food still harvested by Tsleil-Waututh. Traditional travel via canoe is still undertaken for leisure/exercise by Tsleil-Waututh people in the Study Area and part of their cultural tourism business.
424. In recent decades, Tsleil-Waututh has launched a number of stewardship initiatives to rehabilitate the local ecology and expand the availability of healthy wild foods.

4.1 Introduction to Tsleil-Waututh Land Use and Occupancy of the Study Area

425. Prior to and as of AD 1792 and 1846, Tsleil-Waututh, like all Coast Salish peoples, were hunter-gatherer-fishers (Barnett 1955; Suttles 1990). That is to say, ancestral Tsleil-Waututh harvested the natural resources of the lands and waters of, and beyond, the Study Area as they became seasonally available, and stored them for future use. Marine, riverine and intertidal resources were by far the most important to Tsleil-Waututh diet and economy. Tsleil-Waututh people would seasonally relocate their settlements to where they could effectively harvest the most abundant resources. This is known as a seasonal round (Barnett 1955; Suttles 1990).
426. For coastal relocations, Tsleil-Waututh people would travel via canoe, in some cases creating large decks between canoes and travelling with house planks and considerable goods (see Barnett 1955). Very large distances could be covered in this way. The Cowichan, for example, would travel from Vancouver Island to Richmond this way (Barnett 1955:25; Suttles 1990). For inland relocations, this would involve following well established trails into the mountain valleys, and establishing camps some hours distance from the nearest village. For Tsleil-Waututh, like all Coast Salish people, this primarily involved relocating from one's primary (winter) village to other small camps or seasonal aggregation sites to harvest locally available resources, and to store those resources at one's primary village (Mitchell 1983). Archaeologists would characterize this sort of settlement-subsistence system as "logistic mobility" (Binford 1980). In sections below, I discuss Tsleil-Waututh's seasonal round with specific reference to areas of land/resource use in association with seasonal villages and smaller camps.
427. In summary then, Tsleil-Waututh's settlement pattern was primarily structured around several primary village sites that were occupied by some people throughout the year. People living in these villages would have regularly and intensively harvested resources from the areas surrounding these villages, especially intertidal and marine areas. As resources became seasonally available, some Tsleil-Waututh people would relocate to them. Resources would be mass harvested at these places and then stockpiled back at the villages for winter use. A series of such seasonal relocations are likely. This generalized pattern describes Tsleil-Waututh's settlement-subsistence system. This pattern is elaborated upon in sections below.

428. The environment of the Salish Sea region is ecologically exceedingly rich, but resource abundance is geographically and temporally variable (Mitchell 1971; Suttles 1968, 1990). That is to say, many resources become generally abundant during particular seasons (e.g., berries in the summer), but certain hyper-productive resources such as sockeye salmon, or schooling herring, are only available for short periods of time in limited areas. The Coast Salish subsistence economy was not just predicated on a rich resource base and a series of seasonal moves to take advantage of these resources, but also a sophisticated technology to harvest and store those resources for future subsistence, potlatching, and exchange. In order to properly contextualize Tsleil-Waututh's past seasonal round, I first describe the archaeological evidence of village sites in the Study Area, Tsleil-Waututh's food-getting technology, then Tsleil-Waututh's modes of transport—canoes and trails.

4.2 Archaeological Villages

429. In the Northwest Coast generally, and the Salish Sea region particularly, archaeologists rely on a number of attributes to infer that a given site is a 'winter village' rather than a temporary camp. Archaeologists typically frame this issue in terms of interpreting past "settlement systems," i.e., distinguishing long-term residential sites from short-term camp sites, from archaeological data alone (e.g., Acheson 1998; Binford 1980; Fitzhugh 2003; Fitzhugh and Habu 2002; Matson and Mange 2007; Maschner 1997; McLay 1999; Pokotylo 1978; Savelk 1987; Sealy 2006; Taylor et al. 2011; Thompson 1978).

430. Binford's (1980) model of hunter-gatherer settlement systems is by far the most widely employed such model in archaeology. Briefly, Binford (1980) describes two major types of settlement-subsistence systems among hunter-gatherers. The first system is described as "residential foraging," wherein relatively small groups of people forage in an area surrounding their base camps, and move base camps very often as local resources are depleted. The archaeological sites produced by such a system are small, dispersed, and relatively uniform in size and composition. The second system is described as "logistic collecting", wherein groups primarily reside in one or more relatively permanent settlements from which specific task groups harvest large quantities of resources, preserve them, and then bring these resources back to the primary settlements. The archaeological sites produced by this type of system are variable in size, including both large residential settlements and small resource procuring camps (task camps), and variable in composition, with residential settlements containing the widest diversity of artifacts, resources and features, and specific task camps containing a more narrow range of artifacts, resources and features. Although not without criticism, Binford's (1980) has been applied globally, and is recognized as a major theoretical advance in the interpretation of archaeological remains (Ames 2002).

431. The ethnographic and late prehistoric Coast Salish people used what is best described as a logistic collecting settlement system (Ames and Maschner 1999; Matson and Coupland 1995; McLay 1999; Mitchell 1990). Coast Salish winter villages provide an excellent example of a relatively permanent residential settlement. Prior to winter, the large plank

- houses at such settlements would have been stockpiled with smoked and dried salmon, clams, meat, shellfish, berries and fish oils supplied by specific task groups who procured and cured these resources, before returning with them to their settlement (see the *Tsleil-Waututh Seasonal Round* below). Such resources were staple foods through the winter, and allowed households to sponsor large feasts and potlatches (Snyder 1964).
432. The outlines or surface depressions of ancient plank houses are the most straight-forward manner of interpreting a past winter village sites. While these exist elsewhere within the Coast Salish world (e.g., Grier 2003; Matson 2003; Matson and Coupland 1995:208; Ritchie 2010), none have been described for Burrard Inlet (they do exist however at Inlailawatash on the Indian River). This is perhaps not unexpected, as the Burrard Inlet area is among the most intensively developed land in the province, and the surface remains of houses would be far more likely to be damaged than buried midden deposits. Most of the large shell middens in Burrard Inlet have been impacted through landscaping or development activities. In the absence of house outlines, other evidence of past plank houses such as linear arrangements of large post holes, large hearths, or apparent living surfaces (i.e., house floors) are commonly used to identify a village site (Ames and Maschner 1999:151–164).
433. Generally speaking, large stratified shell middens are interpreted to be village sites, and smaller shell middens or non-shell midden sites are interpreted to be various types of temporary camps or resource extraction locations (Acheson 1998; Coupland 1991; Lepofsky et al. 2007; McLay 1999). The cut-off size of a 'large archaeological site' (LAS) is typically determined through comparison with a large regional sample of all sites (Acheson 1998; McLay 1999). This is important because site size can vary dramatically in relation to local geography (especially in proportion to availability of flat well-drained land). On Haida Gwaii, Acheson (1998:33) used a cut-off of >1,000 m² for shell middens interpreted as "settlements" versus "encampments". On Valdez Island in the Salish Sea, McLay (1999:48) used a cut-off of 2,700 m² for village versus camp sites. Recently, Letham (2014) used site areas >3,000 m² (along with another of other attributes of shell middens) to identify villages in the Sechelt inlet system.
434. Other attributes used to interpret winter villages from temporary camps are the diversity of the faunal assemblage, the diversity and coarseness of the archaeological assemblage, and the presence of burials. Specifically, winter village sites are expected to contain a very wide range of food resources, while temporary camps are expected to contain a narrower range of resources (Cannon 2002; Pierson 2011). The logic behind this is that winter villages would have been supplied with resources from a range of temporary camps and intensive use of the local environment, while temporary camps would have focused on a few resources at a given location. Along similar lines, winter villages are expected to have diverse or "coarse grained" artifact assemblages, i.e., those tools used in a wide array of activities including producing other tools and harvesting non-local resources (Binford 1980; Coupland 1991). Temporary camps, on the other hand, are expected to contain a less diverse, more specific tool kit for undertaking more specific tasks (Binford 1980). Winter village sites are also expected to have associated cemeteries.

Burials, up to hundreds of them, are associated with most shell middens that have been interpreted as villages around the Lower Mainland.

435. With these working expectations, Table 4 summarizes the information for all (as of March 3 2015) well-described pre-contact archaeological sites in eastern Burrard Inlet. Before discussing the patterns evident in this data, I discuss some of the weaknesses in this dataset. Unlike Acheson (1998), McLay (1999) and Letham (2014), I did not directly measure the sites included here; this data is derived from other studies that primarily estimated “original site size” rather than directly measuring the sites (Yip and Gose 1978). Estimation of size, rather than direct measurement was probably employed because: 1) it is much more expedient, and 2) some of these sites have been heavily impacted by modern development. Also, some of these individual sites should be more appropriately “lumped” into fewer larger sites (e.g., DhRq 1 with DhRr 9, and DhRr 15 with DhRr 20). Re-defining such sites would result in fewer but much larger sites. Finally, the land surrounding Port Moody arm is generally flat and gently sloping, while the rest of eastern Burrard Inlet has rocky headlands and only limited flat land adjacent to the foreshore. Shell midden sites in Port Moody tend to be shallow, discontinuous and expansive. Consequently, the two largest sites (DhRq 1 and DhRr 3), and three of the five largest sites are all in Port Moody. With these caveats in mind, I discuss this summary table for archaeological sites in Burrard Inlet below.

4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

Table 4. Attribute table for shell midden sites in eastern Burrard Inlet. Note the horizontal line here separates villages from camps based on a 2700 m² site area (after McLay 1999)

Borden Number	Site Area (m ² , estimated original size)	Deeply Stratified	Features Present	Diverse Artifact Assemblage	Diverse Faunal Assemblage	House Platforms**	Living Surfaces	Burials	Reference
DhRq 1	15000	yes	yes	yes	yes	no	unknown	yes	Yip and Gose. 1978:101
DhRr 3	14250	unknown	unknown	unknown	unknown	unknown	unknown	unknown	Yip and Gose. 1978:93
DhRr 8	14000	yes	yes	yes	yes	possible	possible	yes	Yip and Gose. 1978:93
DhRr 20	10800	yes	unknown	yes	unknown	no	unknown	yes	Yip and Gose. 1978:93
DhRr 16	9477	no	no	yes	no	no	unknown	unknown	Yip and Gose. 1978:93
DhRr 6	8000	yes	yes	yes	yes	no	unknown	yes	Yip and Gose. 1978:93
DhRr 18	7800	yes	yes	yes	yes	no	yes	yes	Yip and Gose. 1978:93
DhRr 369*	7800	no	yes	no	no	no	yes	unknown	Ham and Yip 1992:77
DhRr 15	6075	yes	unknown	yes	unknown	no	unknown	yes	Yip and Gose. 1978:93
DhRr 28	6000	unknown	unknown	unknown	unknown	no	unknown	unknown	Yip and Gose. 1978:93
DhRr 9	5600	no	yes	unknown	unknown	no	unknown	yes	Yip and Gose. 1978:93
DhRr 101	2400	unknown	unknown	unknown	unknown	unknown	unknown	unknown	Antiquis 1999:24
DhRr 17	1800	yes	yes	yes	yes	unknown	unknown	unknown	Yip and Gose. 1978:93
DhRr 373	750	yes	yes	no	no	no	no	unknown	Ham and Yip 1992:153
DhRr 22	450	unknown	yes	unknown	unknown	no	unknown	yes	Yip and Gose. 1978:93
DhRr 26	207	no	check	check	check	no	check	no	Yip and Gose. 1978:93
DhRr 370	100	no	no	no	no	no	no	unknown	Ham and Yip 1992:102
DiRi 11	50	unknown	unknown	unknown	unknown	no	unknown	unknown	Archaeology Branch Site Form
DhRr 23	30	no	unknown	no	unknown	no	unknown	unknown	Yip and Gose. 1978:93
DhRr 372	5	no	no	no	no	no	no	unknown	Ham and Yip 1992:148
DhRq 6	4	unknown	unknown	unknown	unknown	no	no	unknown	Archaeology Branch Site Form
DhRr 24	2	no	unknown	unknown	unknown	no	no	unknown	Yip and Gose. 1978:93
DhRr 25	2	no	unknown	unknown	unknown	no	no	unknown	Yip and Gose. 1978:93

*DhRr 369 is not a shell midden.

**House platforms are flat rectangular features on the ground surface indicative of where a plank house once stood.

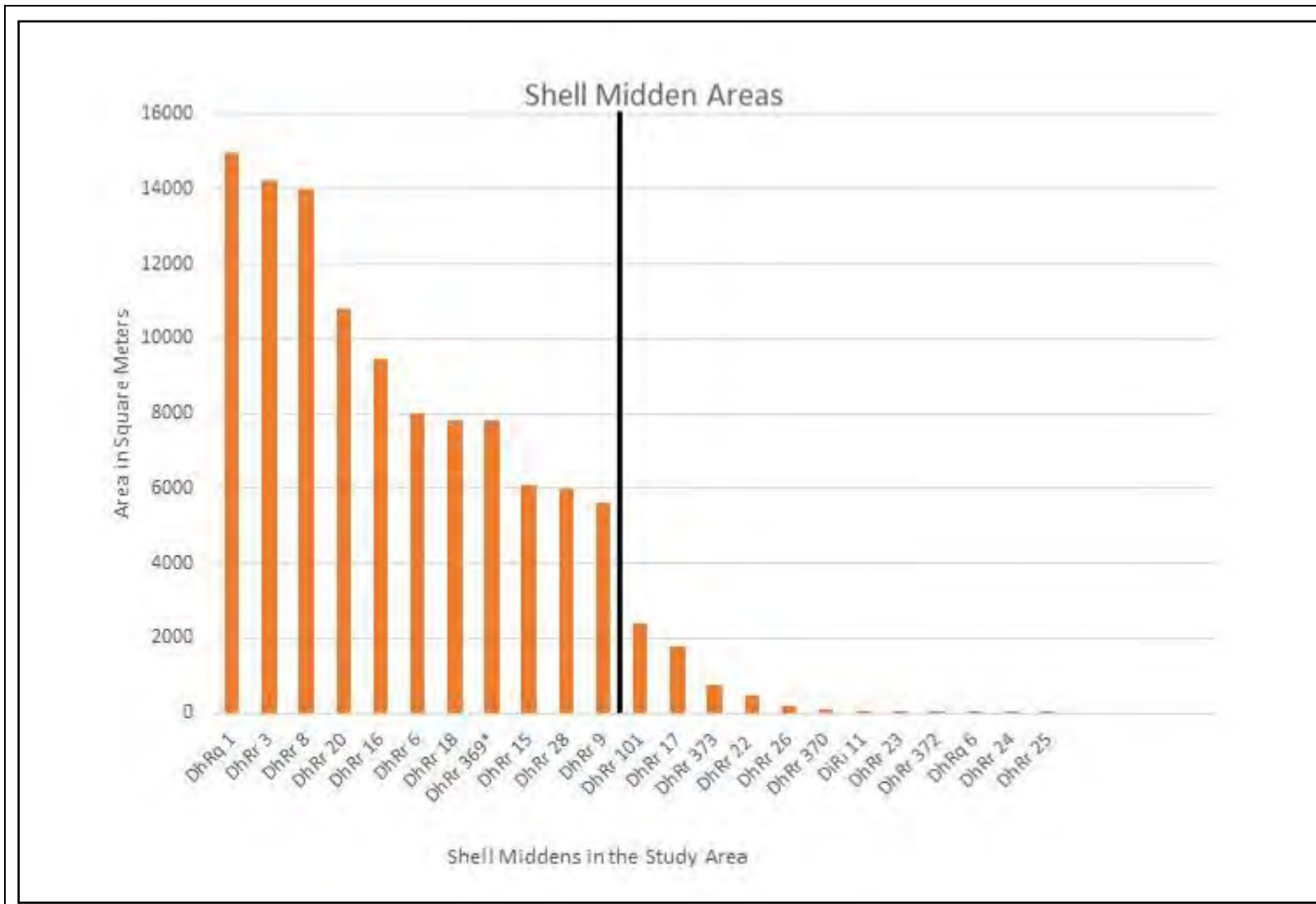


Figure 32. Bar chart of shell midden size within the Study Area. The vertical line indicates the 2700m2 cut-off used to distinguish villages from camps (after McLay 1999)

436. Inspection of **Table 4** indicates that shell midden sites in eastern Burrard Inlet grade from very large (15,000 m²) to very small (2 m²) with the only natural break in terms of size falling between 2,500–5,000 m². Using a 2,700 m² cut-off for winter village sites (McLay 1999) would include all those sites left of the vertical line in (**Figure 32**). Here, I follow McLay's (1999) cut-off of 2,700 m² to distinguish villages from camps for the simple reason that McLay's regional study was within the Coast Salish area (Valdez Island).
437. As discussed above, however, several of these large sites in the Port Moody area are reported as not being stratified, being very shallow in depth, and being discontinuous or patchy (e.g., DhRr 9, DhRr 3, DhRr 28) (McMillan 1982; Sources 2012). For these reasons, and based on current information, I do not consider these sites as separate villages here. However, it is highly likely that DhRr 9 and DhRr 28 were actually part of the village that was most densely occupied around Noon's Creek (DhRq 1). Along similar lines, the adjacent shell middens DhRr 17 and 101 are probably best considered one large village, and DhRr 15 and 20 considered on more large village. In the following sections I review the evidence of occupation of several sites that are best interpreted as prehistoric villages. I discuss each of these in turn with attention to the evidence for occupation at AD 1792 and AD 1846. However, by far the most important aspect of the archaeological to the issues at hand are the millennia of relatively continuous dense occupation evident at these sites. And again, habitation of these sites implies intensive use of all the seasonally available resources in the area surrounding the site, and the other seasonal sites used by the village's inhabitants.

4.2.1 DhRr 6/Belcarra Park/Tum-tumay-whueton

438. The Belcarra Park site (DhRr 6) is a deep (~200 cm deep) and large shell midden located on the Belcarra Peninsula approximately on eastern shore of Indian Arm, approximately where Indian Arm meets Burrard Inlet (**Figure 11**). In 1972, Professor Charles Borden, the 'father of B.C. archaeology' described the site as being 12 feet deep, but after park landscaping (i.e., bulldozing) as 8 feet deep (Borden 1972; Warner and Carlson 1976). These landscaping activities destroyed a significant portion of the most recent deposits at this site. Of all the sites sampled in this research, the Belcarra Park site is the most widely known (Charlton 1980). This site was a major settlement, if not the paramount settlement of the region.
439. Charlton (1980:50) identified a number of hearths and large post holes that were probably associated with large plank houses here. Charlton (1980) encountered one ancient burial in his excavations here, while another plague-related mass burial is also reported (Warner and Carlson 1976). Pierson (2011:35–54) analyzed a large sample of fish and shellfish remains from DhRr 6 and found the assemblage to be very rich and diverse and consistent with a village (**Table 5**). The diverse artifact assemblage described by Charlton (1980) is also consistent with a village. The assemblage of celts from DhRr 6 is similar to other celt assemblages from pre-contact Coast Salish villages (Morin 2012:324–329).

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Table 5. Fauna (animal and fish food resources) recovered from Tum-tumay-whueton/DhRr 6 (Pierson 2011)

Fish	Shellfish	Sea Mammals
Big skate (<i>Raja binoculata</i>)	Barnacle sp. (<i>Balanus spp.</i>)	Delphinidae
Blackfin sculpin (<i>Malacocottus cf kincaidi</i>)	Blue mussel (<i>Mytilus edulis</i>)	Harbour seal (<i>Phoca vitulina</i>)
Buffalo sculpin (<i>Enophrys bison</i>)	Butter clam (<i>Saxidomus gigantean</i>)	
Capelin (<i>Mallotus cf pretiosus</i>)	Clam spp.	
Cod (Gadidae)	Crab spp. (Decapoda)	
English sole (<i>Parophrys vetulus</i>)	Gastropod	
Eulachon (<i>Thaleichthys pacificus</i>)	Green sea urchin (<i>Strongylocentrotus droebachiensis</i>)	
Flatfish spp. (Pleuronectiformes)	Horse clam (<i>Tresus spp.</i>)	
Flathead sole (<i>Hippoglossoides elassodon</i>)	Nuttall's cockle (<i>Clinocardium nuttallii</i>)	
Lingcod (<i>Ophiodon elongatus</i>)	Pacific littleneck clam (<i>Protothaca staminea</i>)	
Longfin smelt (<i>Spirinchus sf villosus</i>)	Snail spp.	
Northern anchovy (<i>Engraulis mordax</i>)		
Northern sculpin	Land Mammals	
Pacific herring (<i>Clupea pallasii</i>)	Artiodactyl sp.	
Pacific staghorn sculpin (<i>Leptocottus armatus</i>)	Beaver (<i>Castor canadensis</i>)	
Peamouth chub (<i>Mycheilus caurinus</i>)	Black bear (<i>Ursus americanus</i>)	
Perch (Embiotocidae)	Black-tailed deer (<i>Odocoileus hemionus</i>)	
Pile perch (<i>Rhacochilus vacca</i>)	Marten (<i>Martes americana</i>)	
Plainfin midshipman (<i>Porichthys notatus</i>)	Mink (<i>Mustela vison</i>)	
Ratfish (<i>Hydrolagus colliei</i>)	Mountain goat (<i>Oreamnos americanus</i>)	
Red irish lord (<i>Hemilepidotus cf hemilepodus</i>)	Raccoon (<i>Procyon lotor</i>)	
Rock greenling (<i>Hexagrammos lagocephalus</i>)	Small canid (<i>Candiae</i>)	
Rock sole (<i>Lepidopsetta bilineata</i>)	Snowshoe hare (<i>Lepus americanus</i>)	
Rockfish (<i>Sebastes spp.</i>)	Wapiti (<i>Cervus elaphus</i>)	
Salmon (<i>Oncorhynchus spp.</i>)		
Sand sole (<i>Psettichthys cf melanostictus</i>)	Birds	
Sculpin spp. (Cottidae)	American wigeon (<i>Anas americana</i>)	
Shiner perch (<i>Cymatogaster aggregata</i>)	Bald eagle (<i>Haliaeetus leucocephalus</i>)	
Silverspotted sculpin	Bay ducks (<i>Athaya sp.</i>)	
Smelt spp. (<i>Hypomesus spp.</i>)	Bonaparte's gull (<i>Larus philadelphia</i>)	
Spiny dogfish (<i>Squalus acanthias</i>)	Bufflehead/goldeneye (<i>Bucephala spp.</i>)	
Starry flounder (<i>Platichthys stallatus</i>)	Canada goose (<i>Branta canadensis</i>)	
Surf scoter (<i>Melanitta perspicillata</i>)	Gadwall (<i>Anas strepera</i>)	
Surf smelt (<i>Hypomesus pretiosus</i>)	Harlequin duck (<i>Historionicus historionicus</i>)	
Three-spine stickleback (<i>Gasterosteus aculeatus</i>)	Mallard (<i>Anas platyrhynchos</i>)	
Whitespotted greenling (<i>Hexagrammos stelleria</i>)	Northern pintail (<i>Anas acuta</i>)	
	Northern shoveler (<i>Anas clypeata</i>)	

440. Nineteen radiocarbon dates are available from DhRr 6 (Charlton 1980; Morin 2014; Pierson 2011) and these indicate a continuous (or nearly continuous) occupation here from 1200 BC to about AD 1600 (**Table 6**). This radiocarbon evidence is strongly indicative of regular and repeated habitation at DhRr 6 for about 3,000 years, and of habitation that was supported by regular intensive use of the resources of the surrounding area, especially marine waters and intertidal areas.

Lab Code	Radiocarbon Age (BP)	Calibrated Range*	Reference
AA102305	423 +/-39	AD 1418 - 1626	Morin 2014
AA103307	670 +/-35	AD 1272 - 1393	Morin 2014
AA102307	850 +/-39	AD 1046 - 1266	Morin 2014
GaK-3904	1070 +/-90	AD 720 - 1164	Charlton 1980
AA102308	989 +/-39	AD 987 - 1155	Morin 2014
D-AMS4679	1067 +/-25	AD 897 - 1020	Morin 2014
AA103309	1100 +/-37	AD 873 - 1020	Morin 2014
D-AMS4677	1109 +/-26	AD 887 - 991	Morin 2014
AA103311	1174 +/-37	AD 728 - 971	Morin 2014
D-AMS4675	1304 +/-29	AD 659 - 772	Morin 2014
GaK-3905	1620 +/-90	AD 235 - 621	Charlton 1980
D-AMS4678	1519 +/-24	AD 435 - 606	Morin 2014
GaK-3906	1710 +/-90	AD 94 - 543	Charlton 1980
AA102306	2107 +/-41	350 - 2 BC	Morin 2014
unknown	2190 +/-90	403-1 BC	Chisholm 1986
D-AMS4674	2269 +/-27	398 - 210 BC	Morin 2014
D-AMS4676	2462 +/-25	756 - 415 BC	Morin 2014
AA103308	2797 +/-34	1037 - 843 BC	Morin 2014
Beta-259938	2940 +/-40	1270 - 1014 BC	Pierson 2011

*2 -sigma calibrated range using Calib 5.0

441. The lack of more recent radiocarbon dates by no means precludes contact-era occupation here. Indeed, Puget’s (Bartroli 1997:75) description of a “well inhabited” north shore could be interpreted to mean that he observed clear indications of occupation at Tumtumay-whueton in the summer of 1792. The uppermost and most recent deposits of this site were removed (i.e., bulldozed and used in landscaping) during the initial landscaping of the park in the early 1970s (Borden 1972; Warner and Carlson 1976). The mass burial reported here was interpreted to date from the mid-1800s, and the 15 individuals were inside a European-style wooden box (Warner and Carlson 1976).

442. The historic artifacts reported by Charlton (1980:49) are associated with a post-contact occupation here; perhaps an indigenous occupation or perhaps a slightly later settler (i.e., John Hall). In most cases, it is relatively easy to differentiate indigenous settlements that have begun to acquire European trade goods from European settlements. For example, many regional studies have explored how indigenous peoples who still lived in traditional

houses and partook in a traditional economy began to integrate European trade goods into their material culture (Martindale 1999; Martindale and Jurakic 2006; Mass 1994; Poulson 2005; Sellers 2014). Such integration of material culture never occurs wholesale, but rather specific types of European goods are obtained and integrated into the indigenous material culture. Common examples of this include the indigenous acquisition of: trade beads, muskets, iron tools, pipes and tobacco, kettles and clothes. When archaeologists recover such objects in an otherwise completely indigenous context (i.e., excavating through shell midden layers in the remains of an ancient plank house), it is clear that these objects were used and deposited by indigenous, rather than European people (see Martindale 1999; Poulson 2005; Sellers 2014). There are many cases of indigenous people re-working European goods for their own needs. This includes fashioning files into chisels and using broken glass as cutting tools (Martindale and Jurakic 2006).

443. European settlements are typically exceedingly easy to identify archaeologically because: 1) they have a near-complete suite of European material culture, not just a few items, and 2) they always occur in a European context, that is a European style house or cottage, rather than a plank house. The specific case of the historic artifacts at Belcarra is difficult to interpret because it is known that a major Tsleil-Waututh village existed there until about 1858–62, but about a decade thereafter, the land was pre-empted by John Hall who lived there with his Tsleil-Waututh wife. Thus in this case, it is difficult to assign these historic artifacts to the indigenous or the European inhabitants at Belcarra.
444. As described in sections above (see s. 3.3.1, 3.3.2, 3.3.3, and 3.3.4), many Tsleil-Waututh oral histories are located at Tum-tumay-whueton (DhRr 6). This village was the primary home of Tsleil-Waututh's hereditary chiefs (Waut-salk and Sla-holt), and Tsleil-Waututh oral history places their relocation from Tum-tumay-whueton at around AD 1853–62, after the second smallpox epidemic (John L. George cited in Lugg 1985). Some historical evidence suggests an earlier move around AD 1830–40 (Launders 1869a), but there are also apparent eye-witness accounts of a large native encampment here in AD 1864 (The Province May 14 1910), and a map that predates the pre-emption (AD 1882, John Hall) of this area (the map is undated) indicates a potato patch here (Launders n.d.). The Crease Map (1863) does not indicate a village here, but describes "Tum-tumay-whueton" near Roche Point (Crease 1863). This evidence was discussed above in section 3.11.1.2.
445. Overall, the archaeological evidence at DhRr 6 provides compelling evidence of a major Coast Salish village occupied for about 3,000 years. This is substantial evidence of continuity in occupation here. Again, I emphasize that occupation of this village implies that its inhabitants were regularly and extensively using the surrounding landscape/seascape for their subsistence and technological needs. The archaeological data does not date the timing of Tsleil-Waututh's cessation of over-wintering at Tum-tumay-whueton with any precision. Other lines of evidence (oral history, historical documents), suggest that this location was occupied at AD 1792, and the balance of evidence supports the conclusion that Tsleil-Waututh still occupied Tum-tumay-whueton as a village in AD 1846.

4.2.2 DhRr 15 and 20/IR No.3/Sleil-Waututh

446. The two midden sites DhRr 15 and DhRr 20 are adjacent to one another along the shoreline of Burrard Inlet on IR No.3 (Sleil-Waututh) (**Figure 11**). There is no good reason to suppose that these were separate villages rather than a single village. On paper, they are separated by perhaps 100 m and in reality artifacts can be found along the shore 'between' the two. There have only been minimal archaeological investigations of these sites, so compared to other village sites, much less can be said regarding the archaeology here. The midden sites here are both large and deep: DhRr 20 is about 145 cm deep and DhRr 15 is about 160 cm deep. They contain a rich assemblage of shellfish (e.g., butter clam, littleneck clam, basket cockle, and blue mussel), fish (salmon, herring, flounder and sculpin), birds and ungulates (Wigen 2014). Large quantities of midden from these two sites have apparently been heavily eroded at the foreshore, as thousands of artifacts and fire-cracked rocks blanket the intertidal areas here.
447. A series of samples were extracted from the two midden sites at Sleil-Waututh (DhRr 15 and 20) (one column sample from each midden), and submitted for radiocarbon dating (Morin 2014; Ritchie 2014). These are the first radiocarbon samples from these large sites. When calibrated, these 13 dates provide strong evidence of near-continuous occupation here for about a millennium before contact. Similar to Tum-tumay-whueton, there was also evidence of very early occupation here, some 3,000–4,000 years ago. This series of radiocarbon dates provides strong evidence of regular ancestral Coast Salish occupation of this area from at least AD 1000 to about AD 1634 (**Table 7**). The most recent dates do not signal an end to occupation here after AD 1634, they are simply the most recent dates obtained up to this point (**Table 7**). Further archaeological investigation, especially areal excavation, would likely produce evidence of Tsleil-Waututh occupation here between AD 1634 and the early nineteenth century. Again, Puget's ambiguous account (Bartroli 1997:75) indicates that he saw signs of occupation here in AD 1792.

Table 7. Radiocarbon dates from DhRr 15 and 20

Site	Lab Code	Radiocarbon Age (BP)	Calibrated Range*	Reference
DhRr 20	AA103310	380 +/-36	AD 1442-1634	Morin 2014
DhRr 15	AA103549	377 +/-37	AD 1443-1634	Morin 2014
DhRr 20	AA103314	409 +/-38	AD 1428-1631	Morin 2014
DhRr 20	AA103315	416 +/-37	AD 1424-1627	Morin 2014
DhRr 20	AA103312	652 +/-35	AD 1278-1396	Morin 2014
DhRr 15	AA103547	959 +/-37	AD 1015-1164	Morin 2014
DhRr 15	AA103550	974 +/-29	AD 1015-1155	Morin 2014
DhRr 20	D-AMS 4682	1727 +/-28	AD 244-389	Morin 2014
DhRr 20	D-AMS 4683	1847 +/-27	AD 73-221	Morin 2014
DhRr 20	D-AMS 4686	2998 +/-27	1147-1372 BC	Morin 2014
DhRr 20	D-AMS 4685	3017 +/-44	1129-1394 BC	Morin 2014
DhRr 20	D-AMS 4684	3053 +/-26	1262-1406 BC	Morin 2014
DhRr 15	AA103545	3834 +/-40	2151-2460 BC	Morin 2014

*2 -sigma calibrated range using Calib 5.0

448. Burrard IR No.3 is known to contemporary Tsleil-Waututh people as ‘Sleil-Waututh’, named after the people who live there (Tsleil-Waututh 2001:228). It is alternatively known in English as ‘Burrardview’ and by its Squamish names ‘Atsenach’ (meaning bay), or ‘K’iyaxn’ (meaning fence or stockade). This last name, ‘K’iyaxn’, refers to the fort that once stood here (see below). A large fort or palisade is reported at IR No.3 near the location of the old George family residence (BC Archaeology Branch Site Form DhRr 15; Thornton 1966:168). The Tsleil-Waututh name for the beach on which this fort was situated was Tat-ose, meaning “facing out” (Dan George interview with Kathleen Alsop 1968). This name alludes to the viewshed of the location, and Dan George specifically noted that this location was used as a stand to protect against invading Indians.
449. Bouchard and Kennedy (1986) suggest that Squamish oral history indicates that this palisade was built by a man named Eyaouset, presumably to defend against the increased frequency of Lekwiltok raids. As discussed above, I opined that this claim is extremely dubious because Eyaouset was 3 years old in AD 1830 (Kennedy’s Squamish Genealogy). Paddy George (Tsleil-Waututh) described this fort as being “in front of John George’s house,” that is, in front of the church on IR No.3, and consisted of “stakes about 20 feet high” (George 1990:2). He additionally noted that James Sla-holt (Paddy’s grandfather) lived within this fort after some Tsleil-Waututh people moved from Tum-may-whueton to IR No.3 (1990:2, 4). As described by Thornton (1966:168):

Just below where the George family lives there used to be an enormous fort, which the tribe had built for their protection, and from which to give battle. It covered an immense area of ground, and was constructed of whole logs, with a palisade of tree trunks staked closely around it. No trace of it remains today.

450. The remains of this fort have now been “washed away by the sea” (George 1990:2, 4). While several known Coast Salish forts were built around AD 1820–30 (Suttles 1951:30–33), they were also observed by the Spanish at contact (AD 1792) (Angelbeck 2009:261; Gunther 1972:63), and Simon Fraser (AD 1808) (Lamb 1960). That is to say, besides the Squamish oral history related to Eyoset, there is virtually no clear date for the construction of this fort at Sleil-Waututh. In my opinion, this palisade was sometime between about AD 1793–1830, to protect the inhabitants of this village. I say it was built after AD 1792 because it was not specifically noted by either the English or Spanish explorations of Burrard Inlet in June 1792, and it is probable that if it had existed at the time, it would have been noted. That being said, I do not consider an absence of information at this time to be strong evidence of an absence of the stockade at this time. These inhabitants included the near year-round Tsleil-Waututh occupants here.
451. Many gunflints from this site (DhRr 15) are held in private collections, some of which are held by Tsleil-Waututh's Treaty, Lands and Resources Department (**Figure 33**). Gunflints were a key component of flintlock guns from AD 1600–1850 prior to the introduction of percussion cap and breech loading rifles (Ballin 2012; Kenmotsu 1990). All of the specimens from DhRr 15 are made of non-local grey flint/chert that probably comes from the Brandon quarries in England in use from AD 1790–1880, are rectangular in shape, and were likely made from flint blades (Ballin 2012). Muskets were amongst the most-desired trade goods sought by Coast Salish peoples (MacLachlan 1998); indeed, in the face of raiding by Lekwiltok armed with muskets, muskets became essential for Coast Salish survival.



Figure 33. Gunflints (used in flintlock muskets) from DhRr 15 (Carter Collection). All were likely produced at Brandon England

452. Because there is no corroborating evidence of European habitation here, these artifacts represent a Tsleil-Waututh occupation of this village during this early historic period (at least). Further, muskets would not have become available to local Coast Salish people until the establishment of Fort Langley in AD 1827. Neither Vancouver (Bartroli 1997) nor Galiano-Valdez (Wagner 1933) noted any muskets in Coast Salish hands in 1792 (none were noted until north of Quadra Island) (Lamb 1984). Therefore, it is highly probable that these gunflints can be linked to Tsleil-Waututh occupation of Sleil-Waututh around AD 1827–1880. It should also be noted that there are more gunflints from DhRr 15 than from all other sites in the rest of Burrard Inlet combined, indicating the intensity of the historic era occupation here, and preoccupation with defense. *To my knowledge, this is the largest assemblage of gun flints from a single site in all of the Coast Salish world. This is significant because it suggests a large, apparently well-armed population here at that time, not a small remnant population.*
453. Blue glass trade beads and clay pipe fragments are also reported in large numbers from Sleil-Waututh (DhRr 15) (**Figure 34, Figure 35**). While pipes were clearly also used by Europeans, blue glass beads were not. These artifacts (gunflints, trade beads, and clay pipes) post-date contact (AD 1792), and were probably obtained by Tsleil-Waututh people via trade with Fort Langley (after AD 1827) or Fort Victoria (after AD 1841). The presence of these objects provides further evidence for Tsleil-Waututh occupation of this village site during the time of sovereignty (AD 1846).
454. In summary, the archaeological record provides evidence of some 4,000 years of use and occupancy of Sleil-Waututh. Of this period, there is strong evidence of near continuous ancestral Coast Salish occupancy of the area from about AD 1000-1634. Puget (Bartroli 1997:75) describes a contact-era occupation here as well. The assemblage of historic-era artifacts from here is clear evidence of an early nineteenth century occupation at Sleil-Waututh that corresponds to the oral histories regarding a fort or palisade here. The weight of evidence indicates that Sleil-Waututh was occupied as a village at AD 1846.

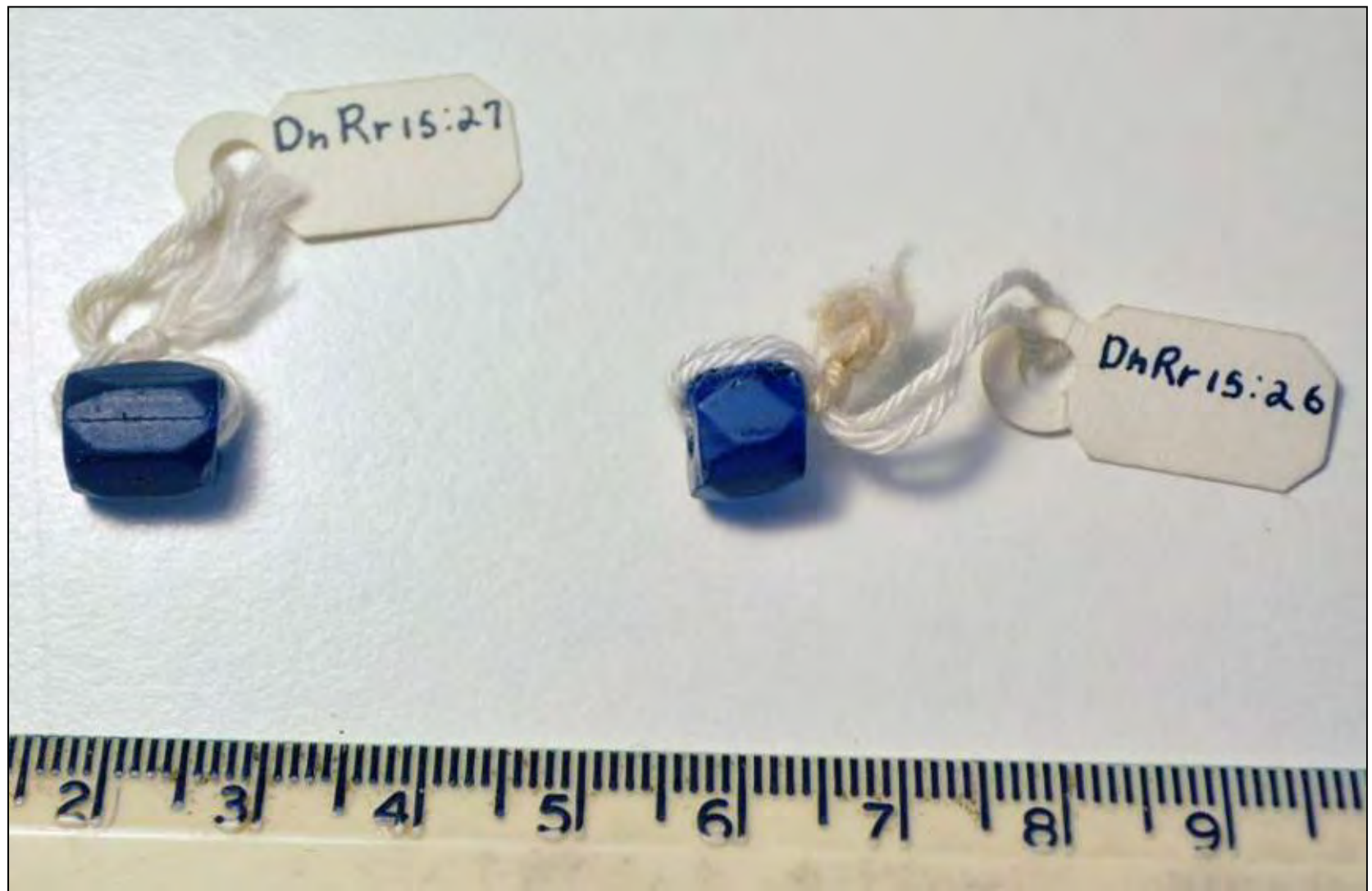


Figure 34. Blue glass trade beads recovered from DhRr 15 (Carter Collection)



Figure 35. European clay pipe fragments from DhRr 15 (Carter Collection)

4.2.3 DhRr 8/Cates Park/Whey-ah-wichen

455. DhRr 8 is a large shell midden at Roche Point/Cates Park that very likely was a village location (**Figure 11**). The Cates Park site (DhRr-8) was first recorded by Charles Borden, Jim Gardner and David Sanger in 1960 and was substantially excavated by Art Charlton in 1972 (Charlton 1974). Several small archaeological studies have been undertaken at DhRr 8 (Alexander and Grier 2000; Rodgers 2007). On the basis of shallow midden deposits (circa 60 cm) and an absence of features indicative of houses, Charlton (1974:9) suggested that DhRr 8 should be considered something other than a village site—a temporary resource gathering area. I disagree with this interpretation. Charlton (1974) excavated a particularly shallow portion of the site, and much deeper stratified deposits and an apparent house floor are visible just 40 m east of where he excavated (**Figure 36**, Morin 2013). Charlton (1974:15) indicates that analysis of the shellfish remains indicates that they were primarily harvested during winter months here. He suggests both brief occupations here throughout the year and a fall-winter season of occupation (Charlton 1974:18). This fits the pattern of a village site much more than a temporary camp. The diverse artifact assemblage reported by Charlton (1974) and Alexander and Grier (2000) is more similar to a village assemblage rather than a temporary camp. Tsleil-Waututh oral history also describes DhRr 8 as a village location (BC Archaeological Site Inventory Form for DhRr 8, 1972; Lepofsky et al. 2007). I am of the opinion that DhRr 8 is more similar to a village than a temporary camp.



Figure 36. Profile of shell midden at Whey-ah-wichen (DhRr 8). Note the horizontal black layer, a possible house floor, between shell-rich layers. Photo by Jesse Morin, 2012

456. Eleven radiocarbon dates are available for DhRr 8 (**Table 8**). Ten of these were derived from Charlton’s (1974) excavations here and one more was obtained from an eroding hearth feature just east of where Charlton excavated (Morin 2013; Ritchie 2014). These radiocarbon dates provide evidence of a nearly continuous record of occupation here from about AD 400 to 1875. Again, the radiocarbon dates do not provide clear evidence for when Tsleil-Waututh occupation ceased here. Burials are reported from this site. One such burial was interpreted as post-contact in age (Oliver 1998:12). Another prehistoric burial was found associated with about 50,000 stone beads, certainly a leader or some other wealthy individual (BC Archaeological Site Inventory Form for DhRr 8). A wide range of fauna has been identified from excavations at DhRr 8 (**Table 9**). However, the excavators here (Charlton 1974) did not appear to have systematically collected or analyzed fish bones from this site. This should not indicate to the reader that fish were not harvested here, but rather, that the archaeologists were somewhat negligent in not paying attention to them. Additional investigation here would likely provide additional evidence of fish harvesting.
457. The Crease Map (Crease 1863) indicates a village here as late as AD 1863; this village is described as “Sillooet Indians, Tum-tumay-whueton(?)” Puget’s description of the appearance of a well-inhabited north shore likely describes a contact-era village site here at Whey-ah-wichen (Bartoli 1997:75; Lamb 1990:13). Three early historic clay pipe fragments of European origin found by a local collector at Whey-ah-wichen are now held by Tsleil-Waututh’s Treaty, Lands and Resources Department (**Figure 37**). Charlton’s (1974) excavations also recovered two such pipe fragments. These artifacts post-date contact (AD 1792), and were probably obtained by Tsleil-Waututh people via trade with Fort Langley (after AD 1827) or Fort Victoria (after AD 1841). The presence of these objects provides further evidence for Tsleil-Waututh occupation of this village site during the time of sovereignty (AD 1846).

Table 8. Radiocarbon dates from DhRr 8

Lab Code	Radiocarbon Age (BP)	Calibrated Range*	Reference
AA103068	212 +/-37	AD 1534 - 1875	Morin 2014
AA103072	373 +/-36	AD 1445 - 1634	Morin 2014
AA103071	452 +/-36	AD 1408 - 1611	Morin 2014
D-AMS4321	492 +/-23	AD 1411 - 1444	Morin 2014
AA103070	624 +/-37	AD 1288 - 1402	Morin 2014
AA103067	798 +/-37	AD 1174 - 1278	Morin 2014
D-AMS5805	928 +/-24	AD 1031-1161	Morin 2014
D-AMS4322	1020 +/-21	AD 985 - 1031	Morin 2014
AA103074	1179 +/-37	AD 721 - 969	Morin 2014
AA10369	1291 +/-38	AD 653 - 853	Morin 2014
AA103073	1581 +/-38	AD 405 - 563	Morin 2014

*2-sigma calibrated range using Calib 5.0

458. Tsleil-Waututh's Chief Dan George provided Tsleil-Waututh oral histories regarding DhRr 8 to archaeologists in 1972 (Don Abbott and Stephen Carter), and this information was integrated into the provincial 'site form' for DhRr 8 (BC Archaeological Site Inventory Form for DhRr 8, 1972). Chief Dan George recounted that this site was said to be the primary village of the Tsleil-Waututh before Tum-tumay-whueton (Belcarra) (BC Archaeological Site Inventory Form for DhRr 8). Chief Dan George noted that battles had taken place at Whey-ah-wichen, a fortified palisade and tower were built at or near the site, and there was a wooden cannon that accidentally blew up during use (BC Archaeological Site Inventory Form for DhRr 8). The archaeological presence of a fort or lookout tower has not been confirmed here, but similar fortifications were constructed around the Coast Salish world around AD 1792–1840 (Angelbeck 2006:261; Gunther 1972:63; Suttles 1951:20–31) in response to increased raids from northern Lekwiltok. He further indicated that the Tsleil-Waututh name for this place was 'facing both directions'.
459. Based on the archaeological evidence alone, there is unambiguous evidence for near-continuous ancestral Coast Salish occupation of DhRr 8 for close to 1,500 years before contact. The archaeological evidence also supports occupation through AD 1792 and AD 1846.



Figure 37. European ceramic pipes from DhRr 8. Carter Collection (held at Tsleil-Waututh Treaty, Lands and Resources Department)

Table 9. Fauna (animal and fish food resources) recovered from Whey-ah-wichen/DhRr 8 (Lepofsky et al. 2007; Williams 1974)

Fish	Shellfish
Rockfish (<i>Sebastes spp.</i>)	Blue mussel (<i>Mytilus edulis</i>)
Salmon (<i>Oncorhynchus spp.</i>)	Butter clam (<i>Saxidomus gigantean</i>)
	Fat gaper (<i>Tresus capax</i>)
	Friiled dogwinkle (<i>Nucella almellose</i>)
Birds	Nuttal's cockle (<i>Clinocardium nuttallii</i>)
Anseriformes	Pacific littleneck clam (<i>Protothaca staminea</i>)
Bufflehead/goldeneye (<i>Bucephala spp.</i>)	Pacific Oyster (<i>Crassostrea gigas</i>)
Glaucous-winged gull (<i>Larus glaucescens</i>)	Shield limpet (<i>Lottia pelta</i>)
Grebe (<i>Podicipedidae</i>)	Soft-shell clam (<i>Mya arenaria</i>)
Gull (Laridae)	Weatherwane scallop (<i>Patinopecten caurinus</i>)
Horned grebe (<i>Podiceps auritus</i>)	
Mallard (<i>Anas platyrhynchos</i>)	Land Mammals
Northwestern crow (<i>Corvis caurinus</i>)	Beaver (<i>Castor canadensis</i>)
Scoters (<i>Melanitta spp.</i>)	Black bear (<i>Ursus americanus</i>)
	Black-tailed deer (<i>Odocoileus hemionus</i>)
Sea Mammals	Canid (<i>Canidae</i>)
Delphinidae	Mountain goat (<i>Oreamnos americanus</i>)
Harbour seal (<i>Phoca vitulina</i>)	Raccoon (<i>Procyon lotor</i>)
	River otter (<i>Lontra canadensis</i>)
	Squirrel (<i>Tamarasciurus spp.</i>)
	Wapiti (<i>Cervus elaphus</i>)

4.2.4 DhRr 18/Strathcona Park/Say-umiton

460. The Strathcona Park site (DhRr 18) is a moderately sized shell midden (remaining portions ~2,000 m², up to 1.5 m deep (Lepofsky et al. 2007) on the western shore of Indian Arm, opposite Tum-tumay-whueton, located in a small, sheltered cove south of Deep Cove. This site was excavated by Professor Dana Lepofsky in 2000 (Lepofsky and Karpiak 2001). Shell deposits are known to extend under the grassed area of the park and there is an extensive distribution of lithic (stone tools and tool making debris) artifacts on the beach (Lepofsky and Karpiak 2001). Three burials were reported from somewhere on the eastern side of the site (Lepofsky and Karpiak 2001). *Faunal and botanical analyses of remains from these deposits were interpreted to indicate year-round occupation* (Lepofsky et al. 2007; Trost 2005:97–98). Similarly, the range of artifacts recovered here is more similar to a village than a temporary camp, but some heavy wood-working tools typical of villages are rare here (see Lepofsky et al. 2007). Lepofsky's (Lepofsky and Karpiak 2001; Lepofsky et al. 2007) excavations here identified the remains of a structure that did not appear to be a plank house. I am confident that DhRr 18 is a village site rather than a temporary camp.

461. **Table 10** presents the radiocarbon dates derived from Lepofsky’s excavations of DhRr 18 (Lepofsky and Karpiak 2001). Four of these dates cluster rather closely together; indeed three of these dates are practically identical. These were all derived from separate contexts associated with the structure excavated there. The slightly older date (i.e., 1173 BP) was derived from a charred cedar plank, while the others were derived from charcoal and seeds. The slightly older date is likely from ‘old wood’, such as a plank from a cedar tree that was hundreds of years old before it was harvested and used, and thus does not accurately date the occupation of this structure. The other three dates indicate that this structure was utilized around AD 1020–1170. The more recent date was derived from a feature outside of the structure and is about 600 years more recent. These radiocarbon dates provides strong evidence of ancestral Coast Salish use and occupancy of this site from about AD 726–1634, but do not provide direct evidence of inhabitation here at contact or sovereignty. This does not mean that DhRr 18 was not occupied then, it only means that archaeologists have not obtained samples from this site that date to those times. Again, Puget (Bartroli 1997:75) describes signs of indigenous occupation in this area in June of 1792.
462. A very wide range of species have been identified from the excavations at DhRr 18 (**Table 11**). As described in detail in Lepofsky et al. (2007), almost all of these food resources were available in the immediate vicinity of that village (defined there as a 10 km radius from the village). And while some species may have been harvested at some greater distance and brought back to the site, this is impossible to distinguish in this data.

Table 10. Radiocarbon dates from DhRr 18

Lab Code	Radiocarbon Age (BP)	Calibrated Range*	Reference
D-AMS 5810	359 +/-28	AD 1452-1634	Morin 2014
D-AMS 5809	953 +/-24	AD 1023-1155	Morin 2014
D-AMS 5808	958 +/-28	AD 1021-1155	Morin 2014
AA102310	958 +/-39	AD 999-1168	Morin 2014
AA102309	1173 +/-39	AD 726-973	Morin 2014

*2-sigma calibrated range using Calib 5.0

Table 11. Fauna (animal and fish food resources) recovered from Say-umiton/DhRr 18 (Trost 2005)

Fish	Shellfish
Buffalo sculpin (<i>Enophrys bison</i>)	Bent-nose macoma (<i>Macoma nasuta</i>)
Chum Salmon (<i>Onchorhynchus keta</i>)	Blue mussel (<i>Mytilus edulis</i>)
English sole (<i>Parophrys vetulus</i>)	Butter clam (<i>Saxidomus gigantean</i>)
Eulachon (<i>Thaleichthys pacificus</i>)	Cockle
Greenling (<i>Hexagrammus spp.</i>)	Crab spp. (Decapoda)
Northern anchovy (<i>Engraulis mordax</i>)	Dentalium (<i>Dentalium spp.</i>)
Pacific herring (<i>Clupea pallasii</i>)	Fat gaper (<i>Tresus capax</i>)
Pacific staghorn sculpin (<i>Leptocottus armatus</i>)	Filled dogwinkle (<i>Nucella almellose</i>)

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Table 11. Fauna (animal and fish food resources) recovered from Say-umiton/DhRr 18 (Trost 2005)

Fish	Shellfish
Perch (Embiotocidae)	Gastropods
Pink Salmon (<i>Oncorhynchus gorbuscha</i>)	Green sea urchin (<i>Stronglyocentrotus droebachiensis</i>)
Plainfin midshipman (<i>Porichthys notatus</i>)	Land snails
Rock sole (<i>Lepidopsetta bilineata</i>)	Lewis' moon shell (<i>Polinices lewisii</i>)
Rockfish (<i>Sebastes spp.</i>)	Limpets (Archeogastropoda)
Salmon (<i>Oncorhynchus spp.</i>)	Littleneck clam (<i>Mercenaria mercenaria</i>)
Sculpin spp. (Cottidae)	Macoma spp.
Snake prickleback (<i>Lumpenus sagitta</i>)	Misc. barnacle spp.
Spiny dogfish (<i>Squalus acanthias</i>)	Misc. sea urchin spp.
Starry flounder (<i>Platichthys stallatus</i>)	Native oyster (<i>Ostrea lurida</i>)
Sturgeon (<i>Accipenser spp.</i>)	Nuttal's cockle (<i>Clinocardium nuttallii</i>)
Sucker fish (<i>Catsomus spp.</i>)	Pacific gaper (<i>Tresus nuttallii</i>)
Surf smelt (<i>Hypomesus pretiosus</i>)	Pacific horse clam (<i>Tresus capax</i>)
Walleye pollock (<i>Theragra chalcogramma</i>)	Pacific littleneck clam (<i>Protothaca staminea</i>)
Land Mammals	Birds
Artiodactyl sp.	American wigeon (<i>Anas americana</i>)
Bear (<i>Ursus sp.</i>)	Anseriformes
Beaver (<i>Castor canadensis</i>)	Bald eagle (<i>Haliaeetus leucocephalus</i>)
Black bear (<i>Ursus americanus</i>)	Bufflehead/goldeneye (<i>Bucephala spp.</i>)
Black-tailed deer (<i>Odocoileus hemionus</i>)	Canada goose (<i>Branta canadensis</i>)
Bobcat (<i>Lynx rufus</i>)	Duck
Canid (<i>Canidae</i>)	Falcon/hawk
Carnivor spp.	Glaucous-winged gull (<i>Larus glaucescens</i>)
Cougar (<i>Puma concolor</i>)	Great blue heron (<i>Ardea herodias</i>)
Large artiodactyl	Grebe (<i>Podicipedidae</i>)
Mink (<i>Mustela vison</i>)	Gull (Laridae)
Rodent	Loon (<i>Gavia spp.</i>)
Small artiodactyl	Mew gull (<i>Larus canus</i>)
Squirrel (<i>Tamarasciurus spp.</i>)	Northern shoveler (<i>Anas clypeata</i>)
Wapiti (<i>Cervus elaphus</i>)	Passeriformes
Sea Mammals	Steller's Jay (<i>Cyanocitta stelleri</i>)
Harbour seal (<i>Phoca vitulina</i>)	Swan (<i>Cygnus spp.</i>)
Pinnipeds	

4.2.5 DhRr 17/Caraholly Point

463. The Carraholly site (DhRr 17) is a medium sized shell midden on the north shore of Burrard Inlet (**Figure 11**). This site was excavated in 1971 (Struthers 1973; Yip and Gose 1978), but remains very poorly reported. Based on the minimal archaeological information we have from Carraholly, it appears to be a village site. The range of artifacts identified in the excavations suggested a range of occupation from about 5000-1000 BP (BC Archaeology Branch Site Form for DhRr 17; Struthers 1973), but the harpoon points recovered from this site are temporally diagnostic to the Marpole and Gulf of Georgia phases (Struthers 1973). A series of radiocarbon dates, run on samples obtained from Struthers’ (1973) excavations, are reported by McMillan (1982) of 2780 BP, 1240 BP, and 410 BP indicating an occupation spanning Locarno Beach, Marpole and Gulf of Georgia phases (**Table 12**). The date of 1240 BP was derived from shell, and should not be considered accurate because of the ‘marine reservoir effect’ (see Southon and Fedje 2003). It should be emphasized that this range of dates, excluding 1240 BP (as mentioned above), roughly ‘brackets’ the occupation sequence here, and does not provide an exhaustive or exclusive record of when this site was occupied. That is to say, in the absence of additional dates these dates provide a range of occupation from 1208 BC to about AD 1654. Based on these limited dates, and the range of artifacts recovered from the site, Carraholly Point appears to have been a village location for about three millennia. Again, Puget (Bartroli 1997:75) describes signs of indigenous occupation in this area in June of 1792 (Lamb 1990:13).
464. The excavators of DhRr 17 (Struthers 1974) apparently placed very little effort at either collecting or analyzing faunal remains from the midden there (**Table 13**). Future refined investigations at this site would likely provide additional information about past subsistence practices here.

Table 12. Radiocarbon dates from DhRr 17

Lab Number	Radiocarbon Age (BP)	Calibrated Range*	Reference
Gak-4930	410 +/- 80	AD 1331-1654	McMillan 1982
Gak-4928	1240 +/-80	n/a reject – on shell	McMillan 1982
Gak-4929	2780 +/-90	1208-796 BC	McMillan 1982

*2-sigma calibrated range using Calib 5.0

Table 13. Fauna (animal and fish food resources) recovered from Carraholly/DhRr 17 (Struthers 1974)

Land Mammals	Shellfish
Black-tailed deer (<i>Odocoileus hemionus</i>)	Blue mussel (<i>Mytilus edulis</i>)
Wapiti (<i>Cervus elaphus</i>)	Cockle (<i>Clinocardium nuttali</i>)
	Littleneck clam (<i>Mercenaria mercenaria</i>)
	Mud clams (<i>Mya arenaria linneaus</i>)
Fish	
Salmon (<i>Oncorhynchus spp.</i>)	Whelk (<i>Thais lamellosus</i>)

4.2.6 DhRq 1/Noon’s Creek/Say-mah-mit

465. The shell midden/archaeological site DhRq-1 was first reported over a century ago by Harlan Smith (Smith 1907:361). It was subsequently visited and tested by Abbott and Kidd in 1950, Post and Van Male in 1963 (Stantec 2010:12), and was excavated by Charlton in 1971 (Charlton 1971, 1972) and by Barton in 1982 (Barton 1990). Charlton (1972) interpreted DhRq-1 to be a seasonal campsite rather than a village. However, the depth of cultural deposits and the abundance of heavy woodworking tools recovered suggest that it is likely a village site (heavy woodworking tools such as celts and wedges are common at village sites and rare at campsites) (see Barton 1990). More recently, Stantec (2010) has undertaken archaeological excavations and monitoring associated with the replacement of a bridge over Noon’s Creek. These activities encountered 24 human bones and fragments belonging to at least two separate individuals (Stantec 2010:79), and several discrete features (refuse dumps and thermal features) (Stantec 2010).
466. While most evidence suggests a Marpole-aged occupation (~500 BC–800 AD) here, there are lines of archaeological evidence suggesting a Gulf of Georgia-aged (~AD 800–1792) and contact era occupation here as well. One artifact, made of glass, but flaked in the manner of other stone tools, was interpreted by Stantec (2010:40) to provide evidence of early historic era Coast Salish occupation here. This is important, because it demonstrates that in the early historic era, indigenous people here were using broken glass to make traditional artifacts (Martindale and Jurakic 2006). The only radiocarbon sample submitted for analysis by Stantec (2010:80) from basal deposits here yielded a date of 130±30 BP, and was rejected by the archaeologists as probably representing a recent root, rather than preserved cedar timber as originally assumed. A large collection of artifacts held at the Port Moody Museum (the ‘Hutchingson Collection’) is likely derived from collecting/looting activities at or near DhRq 1 by a local resident. This collection includes a blue trade bead, a brass bracelet, and four ceramic pipe stems. These artifacts suggest occupation here around AD 1780–1880. The numerous triangular side-notched projectile points from this collection, suggest occupation here from around AD 800–1850. That is to say, there is some archaeological evidence for occupation here from AD 800–1880.

467. Pierson (2011:28) independently submitted a charcoal sample from basal deposits from her column sample from the site that yielded a radiocarbon date of 1860 BP. I selected 6 samples of charcoal from Barton’s 1982 (1990) excavations for radiocarbon dating (**Table 14**) (Morin 2014). The accepted available radiocarbon dates from DhRq 1 span from about 86 BC to AD 560. That is to say, the portion of DhRq 1 excavated by Barton (1990) appears to be a single component belonging to the Marpole Phase. As this site is quite large (by size the largest in eastern Burrard Inlet), it is entirely possible that different areas of the site were occupied at other periods. While earlier excavators (e.g., Charlton 1971, 1972) had interpreted the site to be a seasonal camp, the faunal and artifact assemblages recovered from here are much more similar to other village sites than temporary camps (Barton 1990; Pierson 2011:50).
468. Stantec’s (2010) and Pierson’s (2011) investigations at DhRq 1 have documented a very wide range of fauna in the midden there (**Table 15**). In particular, utilization of a very wide range of fish and shellfish is evident. The abundance of eulachon here (**Table 15**) differentiates this site from the other villages and suggests either a local eulachon run in Noon’s Creek, or perhaps access to the eulachon in the Fraser River, which is about a 2 hour walk (Pierson 2011).

Table 14. Radiocarbon dates from DhRq 1

Lab Code	Radiocarbon Age (BP)	Calibrated Range*	Reference
AA102314	1594+/-40	AD 389 - 560	Morin 2014
AA102315	1672+/-40	AD 252 - 529	Morin 2014
AA102316	1677+/-40	AD 249 - 526	Morin 2014
AA102311	1737+/-40	AD 180 - 411	Morin 2014
AA102313	1774+/-67	AD 86 - 409	Morin 2014
Beta-259937	1860 +/-40	AD 67 - 242	Pierson 2011
AA102312	1962+/-45	86 BC - AD 132	Morin 2014

*2-sigma calibrated range using Calib 5.0

Table 15. Fauna Recovered from Say-mah-mit/DhRq 1 (Pierson 2011; Stantec 2010)

Fish	Shellfish
Big skate (<i>Raja binoculata</i>)	Bent-nose macoma (<i>Macoma nasuta</i>)
Buffalo sculpin (<i>Enophrys bison</i>)	Blue mussel (<i>Mytilus edulis</i>)
Dogfish shark (<i>Squalus arcanthias</i>)	Butter clam (<i>Saxidomus gigantean</i>)
English sole (<i>Parophrys vetulus</i>)	Clam spp.
Eulachon (<i>Thaleichthys pacificus</i>)	Friiled dogwinkle (<i>Nucella almellose</i>)
Flathead sole (<i>Hippoglossoides elassodon</i>)	Green sea urchin (<i>Stronglyocentrotus droebachiensis</i>)
Hake (<i>Merluccius productus</i>)	Horse clam (<i>Tresus spp.</i>)
Lingcod (<i>Ophiodon elongatus</i>)	Limpets (Archeogastropoda)
Longfin smelt (<i>Spirinchus sf villosus</i>)	Native oyster (<i>Ostrea lurida</i>)
Midshipman (<i>Porichthys notatus</i>)	Nuttal's cockle (<i>Clinocardium nuttallii</i>)
Northern anchovy (<i>Engraulis mordax</i>)	Olympic oyster (<i>Ostrea conchaphilia</i>)
Northern sculpin (<i>Icelinus cf borealis</i>)	Pacific littleneck clam (<i>Protothaca staminea</i>)
Pacific cod (<i>Gadus marcocephalus</i>)	Sand clam (<i>Macoma</i>)
Pacific herring (<i>Clupea pallasii</i>)	Sitka periwinkle (<i>Littoria sitkana</i>)
Pacific staghorn sculpin (<i>Leptocottus armatus</i>)	Snail spp.
Peamouth chub (<i>Mylocheilus caurinus</i>)	
Perch (Embiotocidae)	Land Mammals
Pile perch (<i>Rhacochilus vacca</i>)	Beaver (<i>Castor canadensis</i>)
Plainfin midshipman (<i>Porichthys notatus</i>)	Black bear (<i>Ursus americanus</i>)
Red irish lord (<i>Hemilepidotus cf hemilepodtus</i>)	Blacktail deer (<i>Odocoileus hemoius</i>)
Rock sole (<i>Lepidopsetta bilineata</i>)	Dog, (<i>Canis familiaris</i>)
Rockfish (<i>Sebastes spp.</i>)	Elk, wapiti (<i>Cervus elaphus</i>)
Salmon (<i>Oncorhynchus spp.</i>)	Mule deer (<i>Odocoedeus hemionus</i>)
Sculpin spp. (Cottidae)	Porcupine (<i>Erethizon dorsatum</i>)
Shiner perch (<i>Cymatogaster aggregata</i>)	Racoon (<i>Prucyon lotor</i>)
Smelt spp. (<i>Hypomesus spp.</i>)	Ungulate sp.
Spiny dogfish (<i>Squalus acanthias</i>)	
Starry flounder (<i>Platichthys stallatus</i>)	Birds
Sucker sp.	Double-crested cormorant (<i>Phalacrocorax auritus</i>)
Surf smelt (<i>Hypomesus pretiosus</i>)	Duck sp.
Tomcod (<i>Microgadus proximus</i>)	Goose (<i>Angerinea</i>)
Three-spine stickleback (<i>Gasterosteus aculeatus</i>)	Loon (<i>Gavia immer and stellate</i>)
Whitespotted greenling (<i>Hexagrammos stelleria</i>)	
	Sea Mammals
	Harbour seal (<i>Phoca vitulina</i>)

4.2.7 DhRr 369, 373 and 16/Reed Point

469. The Reed Point area on the south shore of Burrard Inlet, near the boundary of Burnaby and Port Moody, has a wide range of archaeological remains (an archaeological site complex). This area is currently recorded as several distinct sites, three of which collectively should be considered a single village (DhRr 16, a shell midden, DhRr 369, a shell midden and trench embankment, and DhRr 373, a shell midden and elderberry processing area). Given the amount of development here and the impact to the archaeological record (the marina, the railway and the Barnett Highway), it is impossible to know how much more extensive these sites or this site complex was. The development of the modern Reed Point Marina and associated parking facilities have destroyed the vast majority, if not all, of the midden portion of DhRr 16 (Apland and Beattie 1972:1),

while the construction of a railway along the south shore of Burrard Inlet likely destroyed the majority of the habitation area once enclosed by the trench embankment site here (Keddie 1984, 1988; Ham and Yip 1992:43). While none of these sites individually would traditionally be considered a village site, collectively these three sites provide evidence for: a wide range of activities over a number of seasons; repeated use of the same locations for the same activities, and intensive purposeful investment in constructing large features here, that is to say. That is to say, they provide evidence of intensive use and occupation of the location over several seasons, but apparently not similar to a normative winter village site.

470. Ham’s (1992) excavations at DhRr 369 (formerly DhRr 65) identified the trench embankment site. Trench embankment sites consist of an excavated trench and adjacent parallel mound that surround all or a portion of a habitation site (Angelbeck 2009; Keddie 1984, 1988; Mitchell 1968). Ham’s (1992) excavations here did not identify a clear residential portion of the site; it may have been destroyed by modern development. Trench embankment features are recognized as defensive arrangements that were probably often associated with stockades (Ames and Maschner 1999:210–211; Anglebeck 2010; Keddie 1984, 1988). Trench embankment sites occur within the Salish Sea area and date from about AD 800 to contact; they are most common on eastern Vancouver Island and the Gulf Islands (Anglebeck 2009; Bryan 1963; Keddie 1984, 1988; Matson and Coupland 1995:270; Mitchell 1968; Moss and Erlandson 1992). Based on a suite of radiocarbon dates, Ham and Yip (1992:89) have dated the construction of the defensive trench at Reed Point Marina to AD 1770–1850 (**Table 16**).

Table 16. Radiocarbon dates from DhRr 369 and DhRr 373

Site	Lab Number	Radiocarbon Age (BP)	Calibrated Range*	Reference
DhRr 369	Beta 49451	100 +/-80	AD 1666-1956	Ham and Yip 1992
DhRr 369	Beta 49460	102 +/-1%	AD 1697-1917	Ham and Yip 1992
DhRr 369	Beta 49462	130 +/-50	AD 1669-1946	Ham and Yip 1992
DhRr 369	Beta 49451	180 +/-60	AD 1643-1895	Ham and Yip 1992
DhRr 369	Beta 49463	190 +/-60	AD 1530-1898	Ham and Yip 1992
DhRr 373	Beta 49442	200 +/-60	AD 1524-1953	Ham and Yip 1992
DhRr 369	Beta 49454	400 +/-70	AD 1418-1643	Ham and Yip 1992
DhRr 369	Beta 49452	610 +/-50	AD 1286-1413	Ham and Yip 1992
DhRr 373	Beta 49435	1710 +/-70	AD 134-532	Ham and Yip 1992
DhRr 373	Beta 49440	1830 +/-90	16 BC - AD 407	Ham and Yip 1992
DhRr 373	Beta 49439	1860 +/-60	AD 20 - 326	Ham and Yip 1992
DhRr 373	Beta 49436	1870 +/-70	37 BC - 331 AD	Ham and Yip 1992
DhRr 369	Beta 49453	1990 +/-90	341 BC - AD 234	Ham and Yip 1992
DhRr 373	Beta 49437	2110 +/-70	361 BC - 23 AD	Ham and Yip 1992
DhRr 373	Beta 49438	2110 +/-70	361 BC - 23 AD	Ham and Yip 1992

*2-sigma calibrated range using Calib 5.0

471. This trench embankment site is particularly relevant evidence of Tsleil-Waututh's identity here as distinct people, because it demonstrates the active defense of their homeland against outsiders, and corroborates Tsleil-Waututh oral histories about battles with northern raiders and defensive sites and lookouts around Burrard Inlet. *This site is also highly significant because, based on the radiocarbon dates recovered from it, it has a very high probability of being occupied from pre-contact times and both at AD 1792 and AD 1846.* Given the absence of historical information regarding a village here, it seems likely that this location was no longer used as such by about AD 1863 or so, or some historical description would be expected (e.g., on the 'Crease Map'). *Given Ham and Yip's (1992) data, it seems very likely that a fortified Tsleil-Waututh village existed at this location, and its use probably spanned contact and sovereignty.* Similar to Sleil-Waututh/IR No. 3 and Whey-ah-wichen, this village was fortified in anticipation of attacks from outsiders, probably Lekwiltok (see Angelbeck 2009; Angelbeck and McLay 2011; Angelbeck and Grier 2013).
472. The site named DhRr 373 (formerly DhRr 69) consists of a rich deposit of artifacts, features and fire cracked rock (FCR) and was interpreted as a women's berry processing camp (Ham and Yip 1992:262). This site displayed excellent stratification of living floors and preservation of floral remains—especially berry seeds. Professor Dana Lepofsky's paleoethnobotanical analysis of samples from this site recovered a wide array of plant remains and suggested that at least a portion of this site was “devoted to intensive plant processing” (Ham and Yip 1992:206). Lepofsky (Ham and Yip 1992:207) found that the dominant food plant species recovered were red elderberries (ripe in late summer), salal (ripe in late summer), and thimbleberries (ripe in mid-summer), and inferred that summer was the primary season of occupation here (Ham and Yip 1992:209). The stratigraphic sequence at the site is indicative of repeated use of this location, and the radiocarbon dates from this site indicate three periods of occupation: 1) around 360 BC–AD 25, during the early Marpole Phase, 2) around 40 BC–AD 500, during the middle Marpole Phase, and 3) around AD 1500–1950, during the late Gulf of Georgia Phase and into the contact/historic era (Ham and Yip 1992:192, **Table 16**). These two most recent dates are important because they demonstrate aboriginal use of this locale for processing plant foods around the key dates of AD 1792 and AD 1846; indeed these two most recent dates span both the pre- and post-AD 1792 periods.
473. This site is atypical for the region because of its relatively limited archaeological visibility (compared to a large shell midden), and the fact that “DhRr 69 is the first plant processing site to be analyzed on the coast” (Ham and Yip 1992:210) (note changed site number since 1992). Ham and Yip's (1992) excavations at this site provide a unique window into the past summer harvesting activities of Tsleil-Waututh women, activities that are usually weakly represented in the archaeological record. Ham and Yip's (1992) interpretation was primarily based on the ethnographic association of women and plant harvesting/processing activities.
474. While no radiocarbon dates are available from the midden portion of the site complex (DhRr 16), the prehistoric artifact assemblage generally indicates a 2500 BP-contact

occupation. A single clay pipe-stem manufactured between 1888–1896 indicates that this site (DhRr 16) was also used into the early historic period (Apland and Beattie 1972). The sparse faunal and artifact assemblages recovered during the 1972 excavations of this site indicated to the site excavators of the site that the site may have been more of a base camp than a village (Apland and Beattie 1972:3).

475. These three sites together then have evidence of: 1) defensive earthworks usually associated with a village, 2) large berry processing features associated with a seasonal camp, and 3) a shell midden with a fairly narrow range of artifacts and fauna, more typical of a seasonal camp than a village. While this combination of attributes is not typical of a village site, these three sites provide enough evidence of roughly contemporaneous uses to make it functionally analogous to a village site. This site complex has clear pre-contact components, and appears to have been occupied for at least 2,000 years and through AD 1792 and AD 1846.

4.2.8 DiRr 18/IR 4 and 4a/Inlailawatash

476. There is archaeological evidence of a substantial indigenous settlement near the mouth of Indian River. The archaeological site DiRr 18 has recently been documented to be far larger than previously described, including IR No.4 and IR No.4a (**Figure 38**). This settlement is located on both banks of the Indian River just upstream from its mouth. The site(s) consists of numerous residential features including house platforms, large post holes, decayed structural timber, considerable quantities of fire-cracked rock, and a very considerable linear trench embankment feature. Historic era artifacts are abundant here, while prehistoric artifacts are generally rare. Two radiocarbon dates obtained from an ancient hearth exposed in a natural cut-bank produced dates of 812 BP and 895 BP (Morin 2014). When calibrated, these two dates cluster from about AD 1040–1270.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

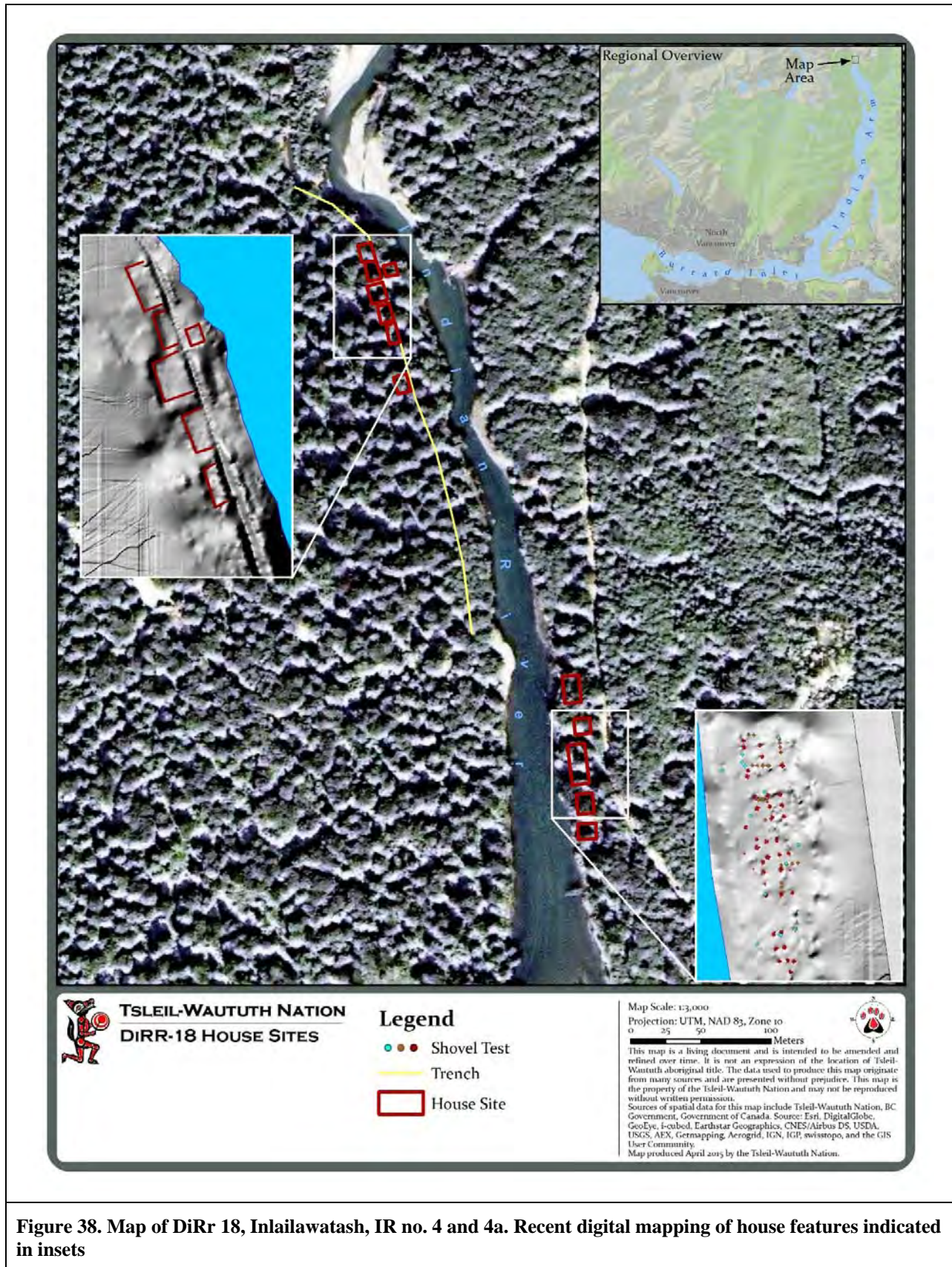


Figure 38. Map of DiRr 18, Inlailawatash, IR no. 4 and 4a. Recent digital mapping of house features indicated in insets

477. While there is essentially no strictly archaeological evidence regarding the season of use of the site, its location—near the mouth of river with a very productive fall fishery—strongly suggests use during that time at least. Smoked chum salmon from the Indian River is typically described as the traditional winter staple food by knowledgeable Tsleil-Waututh elders (Tsleil-Waututh 2000, 2011). The height of the Indian River chum run is late October. However, every second year, the pink salmon (up to 1.2 million) return to the Indian River in July. And, First Contact occurred at Indian River on June 25, 1792 (Wagner 1933). Summer, as well as fall occupation, is probable here. No shell midden deposits have been identified here to date, again suggesting occupation during seasons other than winter/spring.
478. The direct historic association of the modern Tsleil-Waututh Nation and the pre-contact indigenous inhabitants of DiRr 18 is remarkably clear. While the Tsleil-Waututh name for this village is Inlailawatash ('the go inside place'), other Halkomelem-speakers have called it 'Saleelwat' (səlɪlwətaʔl, Tsleil-Waut), meaning belonging to Indian River (Mathews 1955:30; Suttles 1990:455). When IR No.4 was first surveyed in 1877, it was called, "Tse-lail-a-watash River" (Jemmet 1881). Although it was first allocated to Squamish and Musqueam (Tsleil-Waututh was administratively considered a Squamish band at the time), Squamish amalgamation in 1923 (Perry 1923) formalized Tsleil-Waututh's (Burrard No. 3 at the time) ownership of IR No.4. Musqueam relinquished any interest in IR No.3 and IR No.4 in 1932. Tsleil-Waututh oral histories describe battles and raids at Inlailawatash, specifically one wherein Chief Waut-salk (II) was killed (Menzies 1934). In the recent past, Inlailawatash has been the breadbasket for the Tsleil-Waututh community. Tsleil-Waututh elders recall their grandparents smoking hundreds of salmon every fall here.

4.2.9 Summary of Archaeological Villages

479. A basic comparison of site areas in eastern Burrard Inlet indicated that there could be up to 12 archaeological villages in the region (**Figure 11, Table 4**). A detailed examination of the archaeological record of eastern Burrard Inlet contains robust evidence of 8 villages:
- DhRr 6/Tum-tumay-whueton;
 - DhRr 15 and 20/Sleil-Waututh;
 - DhRr 8/Whey-ah-wichen;
 - DhRr 18/Say-umiton;
 - DhRr 17/Caraholly (including DhRr 101);
 - DhRq 1/Say-mah-mit;
 - DhRr 16, 369 and 373/Reed Point; and

- DiRr 18/Inlailawatash.

480. A basic description of each site is provided above, and it is clear that all sites, except for perhaps three conform to archaeological expectations of winter village sites. The three exceptions are Reed Point (DhRr 16, 396 and 373), Say-mah-mit (DhRq 1), and Inlailawatash (DiRr 18). The Reed Point site complex should be considered a ‘summer village’ and that perhaps the winter village component here had been destroyed. Inlailawatash is an excellent example of a summer-fall fishing village. Say-mah-mit has often been characterized as a temporary camp rather than a winter village, but this evidence is equivocal and that more recent research here is more indicative of a winter village than a seasonal camp.
481. In addition to the broad archaeological expectations expected of camps versus winter villages described above, archaeologists can also identify the specific seasons of site occupation from plant, animal and fish remains that are only available at certain times of the year (“seasonality studies”). Such seasonality studies have been undertaken to varying levels of intensity in several archaeological village sites in eastern Burrard Inlet. A summary of this data is presented below (**Table 17**). Generally speaking, most sites with available data have evidence of being occupied primarily from the winter to early spring. Reed Point and Sleil-Waututh, however, currently have evidence for summer/fall and spring/summer occupations, respectively. The data from these two villages is primarily derived from plant remains rather than fish and shellfish remains (Ham and Yip 1992; Lyons 2014; Wigen 2014). I would anticipate that larger scale investigations would also identify winter use at these sites. It should be noted that, in the example with by far the largest sample and most thorough investigation, Say-umiton/DhRr 18, essentially year-round occupation has been identified (Trost 2005). It remains to be seen if similar intensive analysis of the other sites would also indicate year-round occupation.

Table 17. Seasonality of occupation of village sites. Months with seasonality evidence (based on plant and animals remains reported indicated)

Borden #	Village	J	F	M	A	M	J	J	A	S	O	N	D	References
DhRr 6*	Tum-tumay-whueton	x	x	x						x	x	x	x	Charlton 1980
DhRq 1	Say-mah-mit	x	x	x	x		x	x	x				x	Stantec 2011
DhRr 369, 373	Reed Point						x	x	x	x	x	x		Ham and Yip 1992 Lepofsky et al. 2007; Lepofsky and Karpiak 2001; Trost 2005
DhRr 18	Say-umiton	x	x	x	x	x	x	x	x	x	x	x	x	Charlton 1974
DhRr 8	Whey-ah-whichen	x	x	x	x					x	x	x	x	Lyons 2014; Ritchie 2014; Wigen 2014
DhRr 20	Sleil-Waututh		x	x	x	x	x	x	x					

DhRr 17 not included here because there are no specific seasonality indicators reported

*Note Charlton (1980:51) does not specify which species he used to determine seasonality

482. By archaeological standards in British Columbia, this is an exceedingly well-dated cluster of villages. Aside from a few exceptional areas (see Prentiss et al. 2008; Morin et al. 2008/2009), large, complex, and highly significant sites are often dated by only a handful of radiocarbon dates (such as Marpole; see Clark 2013; Matson and Coupland 1995). Indeed, the range of dates now available from DhRr 6 (n=17) compares favorably with all of the other major dated shell middens in the Lower Mainland region (e.g., DgRr 1/Crescent Beach n=19; DgRr 2/St. Mungo, n=49; DgRr 6/Glenrose, n=20; DgRs 1/Beach Grove, n=29; DhRt 6/Locarno Beach, n=11; DhRs 1/Marpole, n=7; Tsawwassen/DgRs 2, n=38).
483. *Based on archaeological evidence alone, one group of villages in eastern Burrard Inlet appear to have been inhabited relatively continuously for about 3,000 years; this includes, Belcarra/Tum-tumay-whueton (DhRr 6), IR No.3/Sleil-Waututh (DhRr 15/20), and perhaps Carraholly Point (DhRr 17). Another group of these villages is occupied more recently; this includes Strathcona Park/Say-umiton (DhRr 18), Cates Park/Whey-ah-wichen (DhRr 8), Noon's Creek/Say-mah-mit (DhRq 1), and perhaps Reed Point (DhRr 16/369/373). Based on archaeological evidence alone, IR No.3/Sleil-Waututh (DhRr 15/20), Cates Park/Whey-ah-wichen (DhRr 8), and Reed Point (DhRr 16/369/373) were very likely inhabited at AD 1792 and AD 1846. All of the other archaeological villages may have been inhabited at AD 1792 and AD 1846, but currently available archaeological data does not provide evidence for such. In no case does the existing excavated sample of a given archaeological village site approach even 1% of the recorded area of that site. Further, excavation and dating of these sites would almost likely provide evidence of a broader temporal range of inhabitation than is currently known. Again, because the people who occupied these villages were hunter-gatherer-fishers, it is near certain that they had to regularly and intensively use the areas surrounding these villages for subsistence and technological goods.*
484. As described above in an introductory section to this report, large, stratified (multi-component) archaeological sites in the Lower Mainland region are not randomly distributed, but rather are clustered in discrete localities. Further, these localities usually conform to the core territory of a specific Coast Salish group/First Nation. Based on the archaeological evidence reviewed above, there is definitely a cluster of such sites in eastern Burrard Inlet, and this cluster conforms to Tsleil-Waututh's core territory. Following Carlson's (2010) model of Coast Salish tribal entities consisting of a settlement cluster in a discrete watershed, *the cluster of villages here are strongly indicative of such a tribal unit.*
485. *That is to say, even if there was no known First Nation that claimed eastern Burrard Inlet as their territory, and none was identified in the historical or ethnographic literature, it would be sound to infer the existence of a pre-contact tribal unit inhabiting this territory based on archaeological data alone. With relevance to the date of AD 1846, again, based on archaeological evidence alone, it would be sound to infer the existence of a contact-era tribal unit inhabiting this territory. Given that the archaeological data presented here is corroborated by Tsleil-Waututh oral histories, place names, genealogical data, and*

other historical documents, the inference that these sites are ancestral Tsleil-Waututh villages is a very robust one.

4.3 Tsleil-Waututh Food-Getting Technology

486. Coast Salish people in general, and Tsleil-Waututh people in particular, had a highly complex technology for procuring food resources from a range of environments (Barnett 1955; Collard et al. 2011; Suttles 1990; Tsleil-Waututh 2000). A sample of this technology is described below. For the sake of convenience, these tools are separated in tables below into categories of hunting (**Table 18**), fishing (**Table 19**), and other (**Table 20**).
487. The seasonal high productivity of food resources, especially fish, in the Salish Sea has been commented on for decades (Suttles 1968). However, this seasonal hyper-abundance does not automatically equate to high levels of energy (food) capture by people; mass harvesting and preservation technology is key in procuring and storing large quantities of such resources for use in seasons when productivity is low (Hayden 1981, 1992; Shalk 1977). It is this combination that provided the economic underpinning for Coast Salish society, and allowed the dense and permanent settlement patterns observed at European contact. Coast Salish fishing technology is perhaps the best example of mass harvesting technology. Reef-nets set along key salmon sea migration routes (especially around Point Roberts) (Suttles 1951), and dip nets along the rocky shores of the Fraser Canyon could effectively harvest hundreds of salmon per hour (Bierwert 1999:227–229; Kew 1992). On smaller rivers and streams, fish weirs and traps could similarly be used to capture huge numbers of salmon with relatively little effort (Bierwert 1999:227–229). Combined with effective processing and preservation technology (Morin 2004), families could preserve (dry/smoke) hundreds or thousands of salmon for future use or trade (Bierwert 1999:227–229; Kew 1992; Kennedy and Bouchard 1992; see references in Morin (2004)). And, while this mass harvesting and preservation technology as applied to salmon is widely known, similar techniques were also applied to small fish such as herring, smelt and eulachon (Barnett 1955:31; Duff 1952b:70). These fish were caught with different (smaller meshed) nets and herring rakes in enormous numbers (see McKechnie et al. 2014), and were dried/smoked for future use or trade. The traditional Coast Salish technology required to harvest clams in large quantities includes digging sticks (to dig) and burden baskets (to collect and pack). Using canoes in conjunction with these two collecting tools greatly increases the stretch of coastline, and hence amount of clam habitat from which people could effectively harvest clams from their home village.
488. Another notable feature of Coast Salish food harvesting technology is the extensive use of traps or 'untended facilities' for capturing food in inland locations (Collard et al. 2011; Oswalt 1976). Traps, snares, deadfalls etc. are different from most other food-getting tools in that once they are set up they capture the fish or animal without further human intervention. Coast Salish peoples widely used such tools to: capture salmon at weirs overnight, harvest herring spawn, catch ducks, and to catch deer, bear and other small game (Barnett 1955:63–102; Suttles 1951; 1990). This passive food-getting technology is

notable because it entails relatively little expenditure of energy to harvest food. Unlike tracking and killing a deer which could take days, once a deer pitfall is set up, it could be checked daily with very little effort. In combination with mass harvesting/preservation technologies, the extensive use of traps or 'untended facilities' by Tsleil-Waututh people allowed them to procure a very rich subsistence base from the local environment without depleting those resources.

Table 18. Central Coast Salish Hunting Technologies (Barnett 1955; Suttles 1990:458; Tsleil-Waututh 2000:53)

Tool	Location	Use
Pitfall	Forest	Deer
Snare	Forest	Deer, grouse
Bow and Arrow	Forest	Deer, elk, bear, mountain goats, beaver, raccoons, swans, ducks, geese
Sling	Ocean	Ducks
Nets	Mountain passes, shoreline	Deer, seals
Deadfall	Forest	Bear, small mammals
Fire	Forest	Bear (smoked out of den)
Club	Riparian zone	Beaver, seal, deer
Sharpened stakes behind brush barrier	Forest	Deer stampeded into brush barriers
Pole nets	Ocean	Ducks
Multi-pronged spear	Ocean	Ducks
Underwater stationary nets	Ocean	Ducks
Harpoon	Ocean	Seal, sea lion

Table 19. Central Coast Salish Fishing Technology (Barnett 1955; Mathews 1955:217; Suttles 1990:457; Tsleil-Waututh 2000:55)

Tool	Location	Use
Reef Net Apparatus	Ocean	Salmon
Trawl Net	Fraser River	Salmon
Dip Net	Fraser River	Salmon
Bag net	Ocean or river	small fish
Harpoons	Rivers	Sturgeon, salmon
Leister	Shoreline, rivers	Salmon
Gaff hook	Shoreline, rivers	Salmon
Basket traps	Rivers	Salmon
Intertidal fish trap	Shoreline	Fish
Fish weirs	Rivers	Salmon
Rectangular fish trap	Rivers	Salmon
Lure and spear	Ocean	Cod
Trolling fish hook	Ocean	Salmon, cod
Set line fish hooks	Ocean	Salmon, cod
Herring roe collector	Ocean	Herring Roe
Herring rake	Ocean	Herring
Sturgeon rod	Ocean, Fraser River	Sturgeon

Table 20. Other Central Coast Salish Food-Getting Technology (Barnett 1955)

Tool	Location	Use
Digging stick	Shoreline	Clams
Sap scraper	Forest	Collect cambium
Eagle hook trap	Shoreline	Eagle

4.4 Canoes

489. The primary means of travel and transport for Tsleil-Waututh in pre-contact and early historic times was via canoe and on foot. Suttles (1990:462) describes five types of canoes for the Coast Salish, all dugout type canoes carved from red cedar. The most typical canoe was the Coast Salish canoe, a family canoe, which was typically used for fishing and hunting (Lincoln 1991; Suttles 1990:462). These could vary from small two-person to about 10-person crafts (~12 m long). The West Coast canoe is described as “the most seaworthy type” and could hold 20–30 people; these were imported from the west coast of Vancouver Island (Suttles 1990:462). This type of canoe was primarily used for long distance travel and transport rather than daily subsistence. The war canoe was similar to the West Coast canoe “but with a high vertical flaring bow blade” (Suttles 1990:463). These large canoes could transport several tons of cargo (Lincoln 1991). The

other types of Coast Salish canoes—shovelnose and reef-net—were used in specific contexts, such as upriver poling and reef-net fishing (Suttles 1990:462). For the purposes of this study, we are primarily concerned with canoes used for typical daily subsistence activities, that is the Coast Salish style canoes capable of holding about 2–10 people. Every nuclear family owned one or more canoes of this size. Water was not a barrier to Tsleil-Waututh travel, it was a medium for transportation and travel.

490. At the K'omoks (Northern Coast Salish) village at Cape Mudge on Quadra Island, George Vancouver described about 70 canoes hauled up on the beach in front of a village of about 350 people (Lamb 1984:618). Vancouver's estimate is then about one canoe for every five people, or about one canoe per nuclear family. That is to say, canoes were very common and very numerous. They were a critical part of Coast Salish travel, transport, and food-getting technologies.
491. The speed and bulk transport abilities of canoe travel had a profound impact on structuring Tsleil-Waututh settlement patterns and resource use (see Ames 2002; Blake 2010). And of course, the use of sea-worthy canoes allowed Tsleil-Waututh people to access marine located resources well-offshore. In the past, Tsleil-Waututh used a range of canoes for saltwater travel ranging from small 1–2 person canoes (~5 m long), to large 'war' or 'freight' canoes up to 12–18 m in length manned by crews of 20–30 (Ames 2002:27). It is probable that Tsleil-Waututh would have used different (i.e., shallow and narrow) canoes for travel up small rivers such as Indian River (Lincoln 1991).
492. While the largest canoes could literally haul tons of goods and dozens of people from place to place, most people and goods were probably moved in much smaller 'family' canoes. These smaller canoes, carrying perhaps 4–6 people, would be used on a near-daily basis for fishing, travelling to and from different resource harvesting locales and villages, and bringing large volumes of resources back to home villages. As discussed in detail below, I derived a conservative average value (6.5 km/h) from Ames' (2002:30) reported historic canoe travel under fair weather, and my own experimental dugout style canoe travel in Indian Arm (Morin and Hunt 2014). This value (6.5 km/h) is Ames (2002:30) "faster" time (in good weather conditions) calculated for two historically documented canoe trips (1876 and 1878) with four paddlers in Puget Sound. Other reported or modeled canoe rates vary, e.g., 2.7 km/h to 6.5 km/h (Blake 2010); 4.4 km/h slower average speed and 6.5 km/h in favorable conditions (Ames 2002); 2.7 km/h in bad weather and 4.5 km/h in good weather (Croes and Hackenberger 1988). One recent study in the Prince Rupert area (Supernant and Cookson 2014) used a value of 4.5 km/h for canoe travel time (citing Ames 2002:31) as an appropriate value for short canoe trips.
493. Based on my experimental canoe in Indian Arm, rates of about 7.1 km/h against the tide and 8.4 km/h with the tide were achieved over several hours in a large canoe paddled by 9 people from Whey-ah-wichen to Inlailawatash (Morin and Hunt 2014). Most of these paddlers had limited experience, and traditional Coast Salish paddlers would have greatly surpassed this crew. Based on these results, I think a value of 6.5 km/h is conservative.

494. Additionally, people would have taken advantage of the strong tidal currents in Burrard Inlet. Because of the long linear nature of Burrard Inlet and the notable constrictions at First and Second Narrows, the currents through this area can be very strong indeed. For example, the winter currents at Second Narrows are up to 6.5 knots (~12 km/h) (Canadian Hydrographic Service 2014). This suggests, that, if people timed their travel and resource harvesting forays with the tides, they could achieve travel rates of up to 12 km/h in certain segments of Burrard Inlet without even paddling. Even in more typical areas with weaker currents, speeds of about 1–2 km/h could be achieved by travelling with the current without even paddling. *Ancestral Tsleil-Waututh people who spent their lives in canoes in Burrard Inlet would have had centuries or millennia of accumulated cultural experience (traditional ecological knowledge or TEK) observing these tides and currents. They would have been able to read the tides and currents and use them or avoid them at their discretion. Daily resource harvesting activities were structured by the tide and the current in Burrard Inlet.* For this reason, I think that the rate of canoe travel in Burrard Inlet of 6.5 km/h is conservative.

4.5 Trails

495. Besides canoes, Tsleil-Waututh travelled along a series of trails that ran between various village sites, and between village sites and inland resource sites and spiritual/ceremonial sites. In a very general sense, most Tsleil-Waututh trails followed watercourses, e.g., the Seymour or Indian Rivers, Burnaby and Buntzen Lakes. Well-used aboriginal trails greatly facilitated travel through thick coastal rainforests here. A one-day hike to the north from most of the coastal Tsleil-Waututh villages would bring one into a forest and subalpine environment with completely different and valuable resources from those on the coast. Berries harvested early from mountain environments were major food resources, and mountain goat wool and horns were extremely valuable raw materials for making woven blankets and large spoons. To the south of the Tsleil-Waututh village sites (and across the inlet in most cases), in a less than a half-day (~2–4 hours) one could hike to the major Down-River Halkomelem-speaking village sites on the Lower Fraser River—around Musqueam, New Westminster, and the mouth of the Coquitlam River—and the core territories of the Musqueam, Kwantlen, Qiqayt, and Kwikwetlem peoples. Save for a few examples, the vast majority of traditional Tsleil-Waututh trails were destroyed by modern development before they were recorded in any form.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

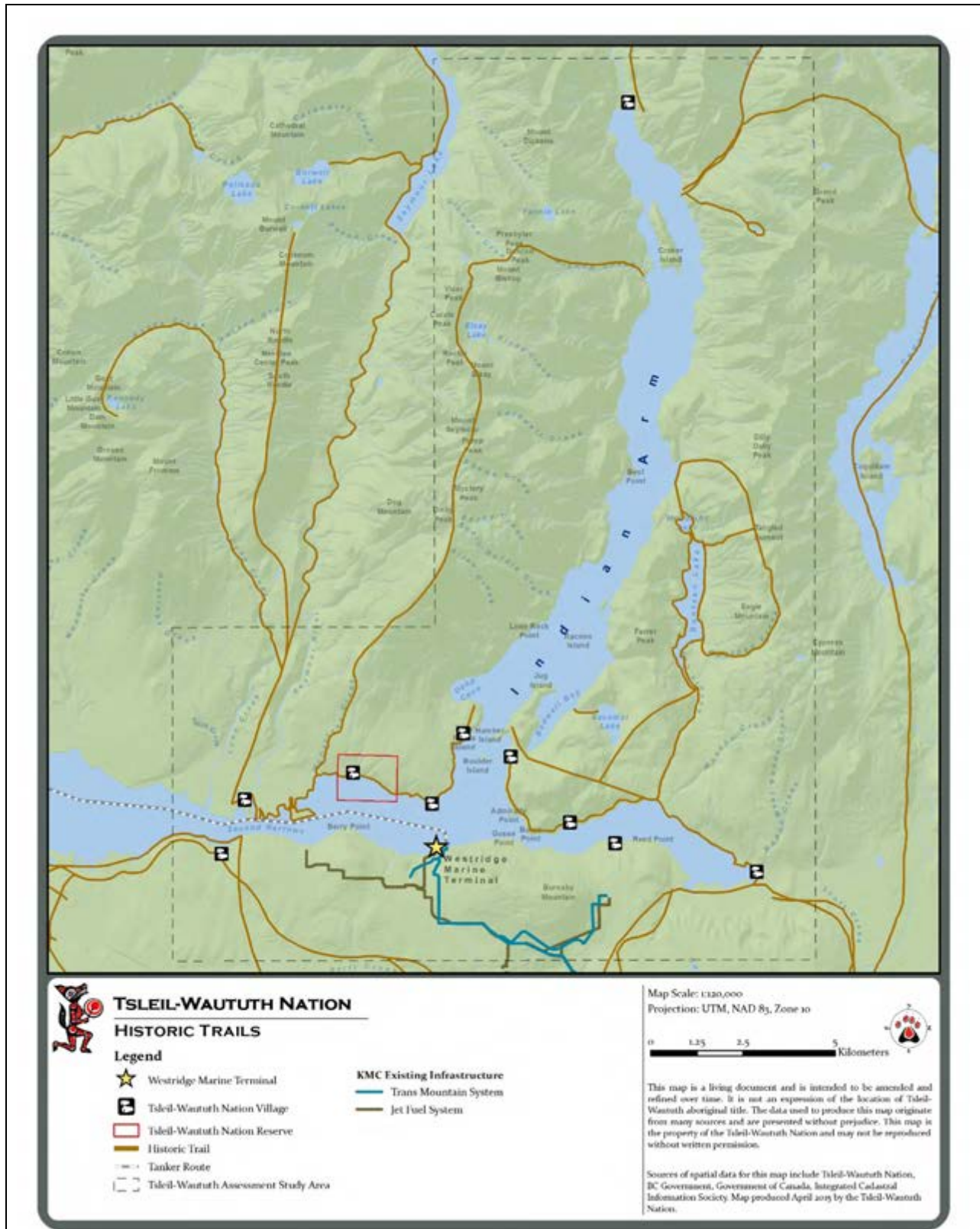


Figure 39. Indigenous trails within the Study Area

496. The two best examples of traditional trails in the Study Area that were recorded in the early historic era linked Burrard Inlet and False Creek to the Fraser River (see Hayes 2005:31; Kennedy and Bouchard 1987:37). Several of the other early roads in the Lower Mainland, such as the old Hastings Road and the Douglas Road, also followed these indigenous trails. Numerous historic trails around Indian Arm and Burrard Inlet, many of which were used prior to contact, are indicated in the Tsleil-Waututh *Eco-Cultural Resource Guide* (Tsleil-Waututh 2000:175). The first of these major trails linking Tsleil-Waututh villages in Burrard Inlet to the Fraser River ran from the south shore of what would become Port Moody to the north bank of the Fraser River in what would become Sapperton/New Westminster (**Figure 40**; Hayes 2005:31).

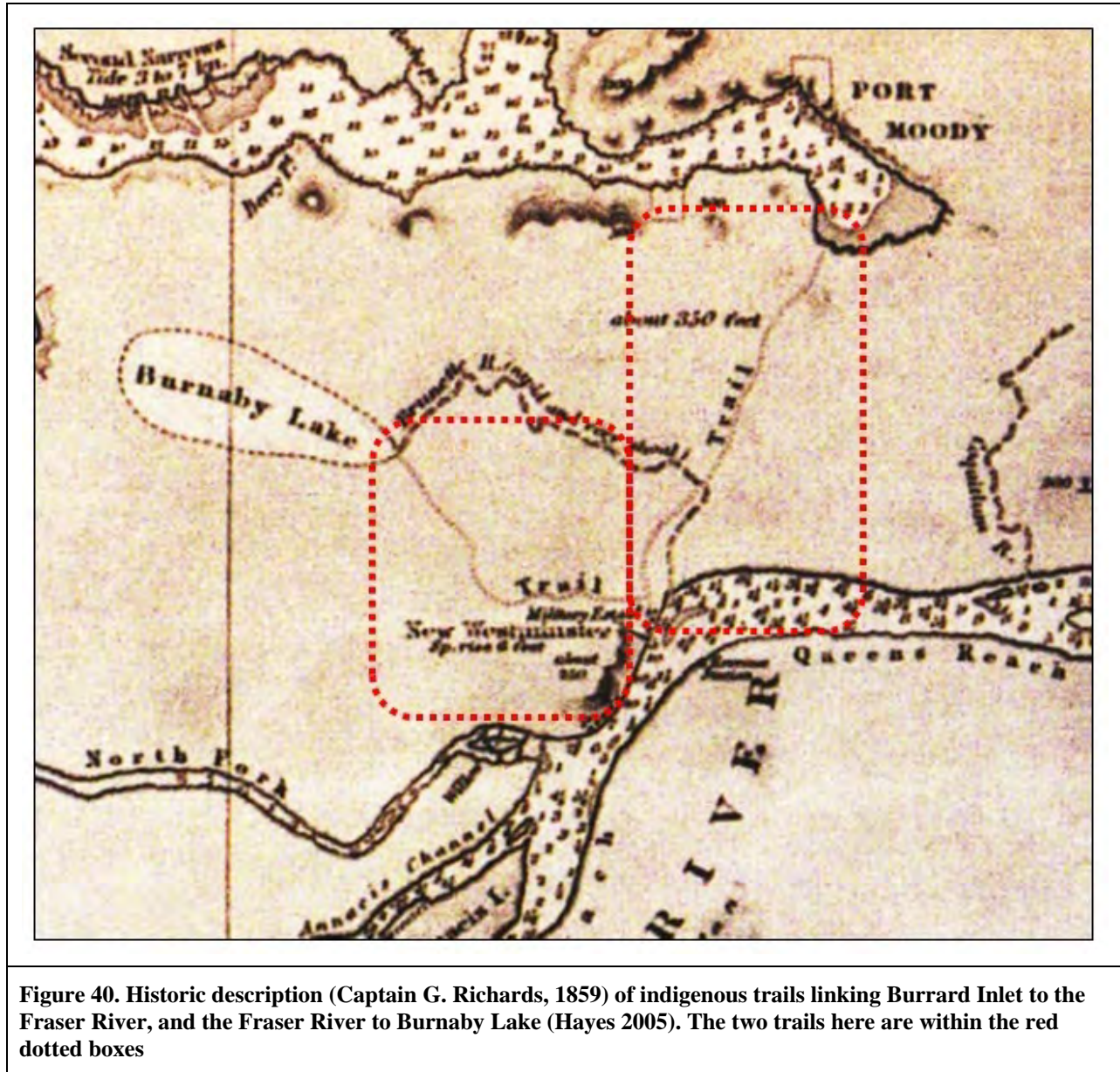


Figure 40. Historic description (Captain G. Richards, 1859) of indigenous trails linking Burrard Inlet to the Fraser River, and the Fraser River to Burnaby Lake (Hayes 2005). The two trails here are within the red dotted boxes

497. In pre-contact times, this trail probably led to the site of Qiqa:yt/Kikayt (DhRr 74), on the south shore of the Fraser River near the present location of the Patullo Bridge, a known village site (Kikayt) and major sockeye fishing location used by many Coast Salish groups. The length of this trail was about 10 km, for the most part covered rather level ground, and could have been traversed in about 2–4 hours. This route was later followed by the Royal Engineers in building the 'North Road' (1859-1861) that linked the new capital of New Westminster to Burrard Inlet (Akrigg and Akrigg 1977). "Evidence of a trail between New Westminster and Port Moody is provided in a letter by Captain Richards, who wrote in August 1859 that he had dropped off a group of Royal Engineers' Sappers to return to their camp by way of the overland trail (Richards 1859), which is shown on Richards' (1859–1860) earliest Admiralty chart" (Kennedy and Bouchard 1987:37).
498. The second major trail linking Burrard Inlet to the Fraser River ran from the head of False Creek, between Burnaby and Deer lakes, to what would become Sapperton/New Westminster (**Figure 40**; Hayes 2005:31, 35; Kennedy and Bouchard 1987). This trail was surveyed in 1860 (Turner 1860–1861). As in the case above, this trail likely led to Kikayt. Later this trail would become the route of 'Kingsway', linking the towns of New Westminster/Sapperton and Vancouver.
499. A lesser known trail connected the township of Maxie's/Hastings (near New Brighton Park and the PNE) with New Westminster/Sapperton. Much of this trail's route was followed during the construction of Douglas Road in 1865 (Drew 2012), and later became much of Canada Way. Use of this trail is mentioned by August Jack Khahsahlano:

Query: "Did the Indians go by trail to New Westminster over to Fraser way?"

August Jack Khahsahlano: They go canoe; winter or summer; not always winter. Westminster not only place they want to visit; if just Westminster they go trail; they got trail from Maxie's (Hastings) before the whiteman's came. They got trail from Port Moody to Fraser. But in canoe, maybe two, maybe four men, everybody in canoe paddle, it go around quick; visit lots of places, not just Westminster (Matthews 1955:37).

And,

Chief George's Indian name Tho-lah-kun (spelt as nearly as is possible to do in English); the old man then, (about 1890 or earlier), may be 90 or more. He and his wife drowned out of canoe in Seymour Creek; their bodies found next day, about 1891. Him great big man; his feet about that wide (showing how wide, about six inches with hands apart). In winter he go over to Maxie's (Hastings, B.C.). Go Westminster. He put on mocassins, go about 100 yards (along Douglas Road)" (Matthews 1955:37–39).

500. In addition to these trails, there were many other less well-documented trails linking settlements and crisscrossing the landscape surrounding Burrard Inlet. For example, prior to the construction of Dollarton Highway, access to and from IR No.3 was either via water, or a trail that ran parallel to the north shore of Burrard Inlet. There are many references to this trail in the Tsleil-Waututh 2011 TUS (Tsleil-Waututh 2011). Other trails ran roughly parallel to the major rivers and streams on the north shore, such as Seymour Creek. Indeed this trail was proposed as a route to Lillooet in the 1860's. Similarly, a well-worn trail ran parallel to the Indian River and linked to the Mamquam River to the north in the Squamish Valley. The 1863 Crease Map indicates a trail starting around Deep Cove that was annotated "Indians Get from here to Squamish in few hours." This appears to be neither an accurate statement nor a plausible route for a trail; so it is possible that Crease was actually referring to the aforementioned trail along Indian River, rather than a overland route from Deep Cove to Squamish.
501. In summary, while only a limited number of trails were historically documented in the Study Area, there were probably many more such trails that linked all inland locations to major village sites.

4.6 The Historical Context of AD 1846

502. Before delving into Tsleil-Waututh's season round and settlement patterns, it is necessary to contextualize it in the specific historic circumstances in which this system was situated. While Tsleil-Waututh had a very long historical affiliation with Burrard Inlet, in AD 1846 Coast Salish societies were undergoing a period of profound changes. Populations had been devastated by smallpox and other introduced diseases (Boyd 1990, 1999; Harris 1994). Non-local First Nations had been regularly raiding Coast Salish territories for decades (Angelbeck and McLay 2011; Arnett 1999; Curtis 1915; Galois 1994). In response, Coast Salish people employed a number of strategies to maintain their security and economy. Most notably, counter-raiding and living in fortified settlements. But recall that, Coast Salish populations in AD 1846 were but a fraction of their pre-smallpox levels (Harris 1994).
503. Despite this depopulation and reorganization of settlements, Tsleil-Waututh continued to use and occupy the Study Area. Gabriel George (2014) described how Tsleil-Waututh society had passed through several population bottlenecks (e.g., plagues, floods, etc), and how Tsleil-Waututh recovered and maintained their relationship to their whole territory. Carlson (2010) describes how Coast Salish people had survived through comparable times of great hardship in the distant past. Such cycles of population density and great death are a common theme in Coast Salish oral histories (Jenness 1955).
504. Relying on the date of AD 1846 to describe a 'traditional' historical situation of Tsleil-Waututh is akin to using AD 1946 as baseline for ethnic and political relationships typical of Central and Eastern Europe. As in 1946 Central and Eastern Europe, many people had been killed and displaced, political and ethnic boundaries redrawn, and economies in tatters. *AD 1946 in Europe, just like AD 1846 in the Salish Sea, was a specific historic*

circumstance in which people were reeling from an exceedingly violent and disruptive recent past. Tsleil-Waututh's culture weathered the storm of these violent times. They continued to live in several villages within the Study Area, and to harvest resources of the Study Area. But this moment in time cannot be considered typical of Tsleil-Waututh's ancient history of affiliation with the Study Area.

505. If one instead wants to understand Tsleil-Waututh's traditional land use and occupancy from an anthropological perspective, one must look to the centuries leading up to about AD 1780 to approximate baseline conditions. An AD 1846 baseline instead focuses on a tumultuous period of depopulation and reorganization of Coast Salish peoples. Over-emphasis on AD 1846 diminishes the profound importance of Tsleil-Waututh's ancient affiliation with the Study Area, and Tsleil-Waututh's resiliency and ability to recover.
506. The Lekwiltok raids (~AD 1780–1850) were triggered by the heavy depopulation of the Coast Salish region from the first smallpox epidemic of about AD 1780 that seemed to have spared the Kwakwaka'wakw/Lekwiltok (Harris 1994). This caused a severe population imbalance between the two peoples, and the greatly reduced Coast Salish populations struggled to defend themselves (Galois 1995:46–63). Until the establishment of Fort Langley in AD 1827, via the maritime fur trade, the Kwakwaka'wakw/Lekwiltok had much more access to muskets than did the Coast Salish (Arnett 1999:24). The Spanish expedition in AD 1792 did not observe any muskets in Salish territory, but noted them almost immediately upon entering Lekwiltok territory (Lamb 1984:612; Wagner 1933:286). This imbalance in military technology further tipped the balance of power towards the Lekwiltok. The Fort Langley Journals (MacLachlan 1998) describe the state of continuous apprehension that gripped Coast Salish of the Lower Fraser from the threat of Lekwiltok raids around AD 1828–30. The Lekwiltok (“the unkillable things”) (Curtis 1915:308) were raiding Coast Salish villages primarily for slaves, whom they largely sold onwards to coastal groups farther north of Vancouver Island (Angelbeck 2009; Donald 1997; Galois 1995). It should also be emphasized that there were numerous Salish counter-raids into Lekwiltok territory, and this raiding was halted by a decisive Salish coalition victory at Maple Bay (Anglebeck and McLay 2011).
507. These Lekwiltok raids had a profound impact on Coast Salish peoples. In a single Lekwiltok raid on the village of Musqueam in July 11 and 12 AD 1828, between 13–14% of the Musqueam population was killed or enslaved (Galois 1995:53). Any community suffering a series of such raids would be decimated. At the northern fringe of the Coast Salish world these raids culminated in the territorial conquest or merger of northern Lekwiltok with northernmost Coast Salish groups (Comox and Pentlatch) (see Galois 1994; Keeley 1996:110; Kennedy and Bouchard 1990). Because defense was such an immediate concern during this period, villages relocated to more defensible locations (Angelbeck 2009), and stockades or forts were built around houses in some villages (Suttles 1951:21–30).
508. This Lekwiltok depredation was not halted until the Battle of Maple Bay around ~AD 1835–1850 (date uncertain) (Angelbeck and McLay 2011; Arnett 1999:26; Galois 1994).

After Lekwiltok power was checked by coordinated Coast Salish military forces, and Fort Victoria had been established, Haida peoples from even further afield began to seasonally visit the Salish Sea for the purposes of trading and raiding (Arnett 1999:54). This continued until about AD 1862, when the Haida encamped at Fort Victoria who had been raiding Coast Salish settlements became infected with smallpox and were forcibly escorted out of the Salish Sea by the British Navy (Boyd 1999:172–183).

509. All that to say, the period of intense predatory warfare experienced by Coast Salish people around AD 1846 did not end until AD 1862, and in the case of Tsleil-Waututh, only seven years later, they were permanently assigned to the location they were presently living on (i.e., Tsleil-Waututh). Tsleil-Waututh has many oral histories regarding a series of battles with both Lekwiltok and Haida (e.g., MacDonald et al. 1998; Menzies 1934; Gabriel George 2014) (these are discussed in detail below under *Exclusivity of Occupation*). Around AD 1846, Tsleil-Waututh village populations may very well have shifted from one location to another for the purposes of defense, and the seasonal round may have been drastically altered for identical reasons (i.e., it was simply too dangerous to venture far from well-defended villages in small task groups). All that being said, it is important to bear in mind that the specific historic context of AD 1846 almost certainly altered Tsleil-Waututh's long term settlement pattern and seasonal round.

4.7 Areas of Intensive and Regular Use Around Tsleil-Waututh Village Sites

510. While the population of the Tsleil-Waututh village sites varied markedly with the seasons, when people were living there, they intensively relied on the resources surrounding them (see Lepofsky et al. 2007). During the spring, summer, and fall, when the majority of the population was probably at other resource harvesting sites, a relatively smaller population (perhaps mainly the elderly and some children) would harvest local resources and be provided/supported by relatives with resources from other locales, such as sockeye from the Fraser River. During the winter months, the population of villages like Tum-tumay-whueton would likely swell dramatically. And while during winter subsistence was predicated on preserved foods collected elsewhere earlier in the year, some local fishing/hunting/gathering occurred. Aquatic and intertidal resources are available year-round throughout Burrard Inlet. Some people hunted, fished or clammed simply to break the monotony of living wholly off of dried foods like smoked salmon and dried berries. Additionally, during the winter some people would hunt or gather large amounts of resources to supplement feasts and potlatches where hundreds of guests would have to be fed (Suttles 1951:80).
511. Typical resource harvesting around primary Tsleil-Waututh village sites such as Tum-tumay-whueton was probably in two major forms. First, people would travel some distance, probably not much more than 2 hours distant, to harvest resources for the day, and return to Tum-tumay-whueton at the end of the day (see Lepofsky et al. 2007). The record of animal, fish and bird bones from excavations at Tum-tumay-whueton indicates that a very wide array of local resources were utilized (**Table 5**, Pierson 2011). *It is worth*

noting that the array of fauna excavated and analyzed from the midden at Tum-tumay-whueton does differ in some aspects from the other major Tsleil-Waututh village sites, perhaps indicating each village had its own owned local resource patches (Lepofsky et al 2007:215). Much of the resource harvesting activities in and around Tum-tumay-whueton would probably be in the form of a daily foraging radius as described above.

512. Second, sometimes people would establish short-term camps some distance from Tum-tumay-whueton and harvest resources there for a time. As discussed in detail above, at AD 1846, the choice between daily harvesting trips from a village versus multi-day camps at small harvesting sites would have been strongly influenced by Tsleil-Waututh peoples' perception of threat from raiders. If raids were anticipated around AD 1846, it is probable that daily foraging based from a fortified village would have been preferred over small dispersed task-camps.
513. Based on comparison to other hunter-gatherers, when Tsleil-Waututh people would leave their villages to collect or forage for resources (logistical forays), they would be comfortable traveling for two hours one-way (a four hour round trip) (Ames 2002; Kelly 1983:281, 1995:133; Lepofsky et al. 2007). Longer distances would be possible if necessary. Most data on hunter-gatherer daily foraging is focused on fully terrestrial people, but indicates a 20–30 km round trip (~4–6 hours) is about the maximum people will walk in a food-collecting trip (e.g., Kelly 1983:281, 1995:133; Lee 1968). This relationship between daily foraging distances and net energetic gain is well-established (e.g., the central place foraging model, Kelly 1990, 1991).
514. For a heavily canoe-reliant culture such as Tsleil-Waututh's (and all Coast Salish groups), many, if not most fishing and gathering activities would involve canoe travel (Barnett 1955; Miller 1999; Suttles 1951). Dugout canoes were very effective at moving people and their things (food, gear), around the landscape, and for harvesting species offshore. The speed of canoe travel varies depending on the style of canoe and the direction of the current or tide (Ames 2002). In Burrard Inlet and surrounding environs, such as the Fraser River, indigenous people would have timed their canoe travel to take advantage of the tides. This is probably a major factor in canoe travel in Burrard Inlet, as the narrow morphology of the inlet creates very swift tides (e.g., 5–6 knots at Second Narrows).
515. As discussed above (in the *Canoes* section, above), based on all the available historical and ethnographic evidence (see Ames 2002:30), experimental canoeing with and against the tide in Indian Arm, and knowledge of local tides and currents in Burrard Inlet, it is my opinion that a value of about 6.5 km/h for traveling with the tides in Burrard Inlet in a medium-sized dugout canoe is a conservative estimate. Faster rates of travel would simply increase the catchment areas described below, while slower rates of travel would conversely contract them.
516. A two-hour canoe travel radius around Tsleil-Waututh villages and resource harvesting sites is then about 13 km (a 26 km round trip). Faster speeds are possible, but most travel

and resource harvesting was probably undertaken at typical, rather than racing speeds. Canoe travel has a major advantage over walking in that much larger volumes can be transported by canoe. Freight canoes on the lower Columbia River had reported capacities of 4–6 tons (Ames 2002:29); this is probably comparable to large Coast Salish canoes. Typical walking speed for most people is about 4 km/h, and this varies with slope, terrain etc. (Surface-Evans and White 2012; Tobler 1993). A two-hour walking radius is then about 8 km (8 km away from the village and 8 km back). Again, faster speeds are possible, and occasionally much longer distances could be undertaken.

4.7.1 Defining Daily Foraging Radii—Calculating Least Cost Catchments

517. To delineate the area likely used on a regular intensive basis by the inhabitants of several Tsleil-Waututh village sites and resource harvesting camps, I created a GIS (Geographic Information Systems) model of the Lower Mainland area (a digital elevation model), and calculated 'least cost catchments' from these village sites (Morin and Hunt 2014). 'Least cost catchments' are calculations based on 'least cost pathways' that is calculating the fastest route between two locations that integrates slope, water and other terrain features (Sakaguchi et al. 2010; Surface-Evans and White 2012). Least cost catchments employ the same principle but calculate a catchment area surrounding a point of origin by calculating least cost paths in all directions radiating from a starting point.
518. These models are predicated on an algorithm like Tobler's Hiker Function that calculate the cost of travel (time or energy) based on certain inputs like slope, load carried etc. (Cooper 2010; Livingood 2012; Sakaguchi et al. 2010; Surface-Evans and White 2012; Tobler 1993). These models are widely used in archaeology to calculate 'site catchment areas' (Cooper 2010; Livingood 2012; Surface-Evans 2012), and to model the territorial extent of certain communities or polities (Blake 2010; Hare 2004; Livingood 2012).
519. Site catchment areas were originally defined as "the study of the relationships between technology and those natural resources lying within economic range of individual sites" (Vita-Finzi and Higgs 1970:5). Site catchment areas refer to the areas around a given site from which the resources recovered at that site were obtained (Bernick 1983; Lepofsky et al. 2007; Roper 1979). This sort of analysis considers both the intensity and extensity of use of the landscape by a local population. Site catchment analysis assumes that energy expenditure is minimized, so that more proximate resources (shorter foraging trips) are preferred over more distant ones (longer foraging trips) (see also Kelly 1983). A major benefit of site catchment analysis is that it can be used to model the acquisition of all resources recovered, or otherwise assumed to have been present at a given site.
520. Using a site catchment area framework, Lepofsky et al. (2007:215) for several archaeological sites in Burrard Inlet concluded that, "[m]any of the food resources recovered were likely harvested from resource sites in immediate proximity to each settlement. If proximity can be used as a measure of ownership, then it is likely that these resource sites were owned by kin within those settlements." Following Lepofsky et al. (2007), the two hour site catchments developed here identify an approximate area of

ownership of resource rights by individual lineages within each village, and/or all the inhabitants of a given village.

521. The GIS 'least cost catchment' (LCC) model I created relies on a 13 km canoe travel radius, a ~8 km foot travel radius (varies markedly with slope), and combinations of canoe then foot travel from several Tsleil-Waututh village sites (Morin and Hunt 2014). Because canoe travel is faster than walking (let alone more efficient for transporting goods), this GIS 'least cost catchment' model predicts that canoe travel is preferred to walking (canoeing is both faster and more energetically efficient). This is in accordance to ethnographic descriptions of Coast Salish travel and resources use (see Ames 2002; Barnett 1955; Blake 2010; Miller 1999; Suttles 1951). The results of this LCC analysis are presented visually for the five Tsleil-Waututh village sites probably occupied at AD 1846 (Tum-tumay-whueton, Sleil-Waututh, Whey-ah-wichen, Inlailawatash, and Reed Point), and a sample of archaeological sites interpreted to be temporary resource harvesting camps (**Table 21, Figure 41**) below (**Figure 46**). As will be described in detail below, these five villages (Tum-tumay-whueton, Sleil-Waututh, Whey-ah-wichen, Inlailawatash, and Reed Point) were occupied prior to and as of AD 1846.
522. There a large number of relatively small archaeological sites in eastern Burrard Inlet, most of which were probably short-term camps of some type used as part of the Tsleil-Waututh seasonal round (**Table 21, Figure 41**). Given the amount of development in the area, this number of sites is remarkable. The vast majority of these have only been minimally reported, and therefore interpreting their function or date is very difficult. A few, however, have been relatively well-investigated and are worth commenting on to provide the reader with an understanding of the variation in these types of sites.

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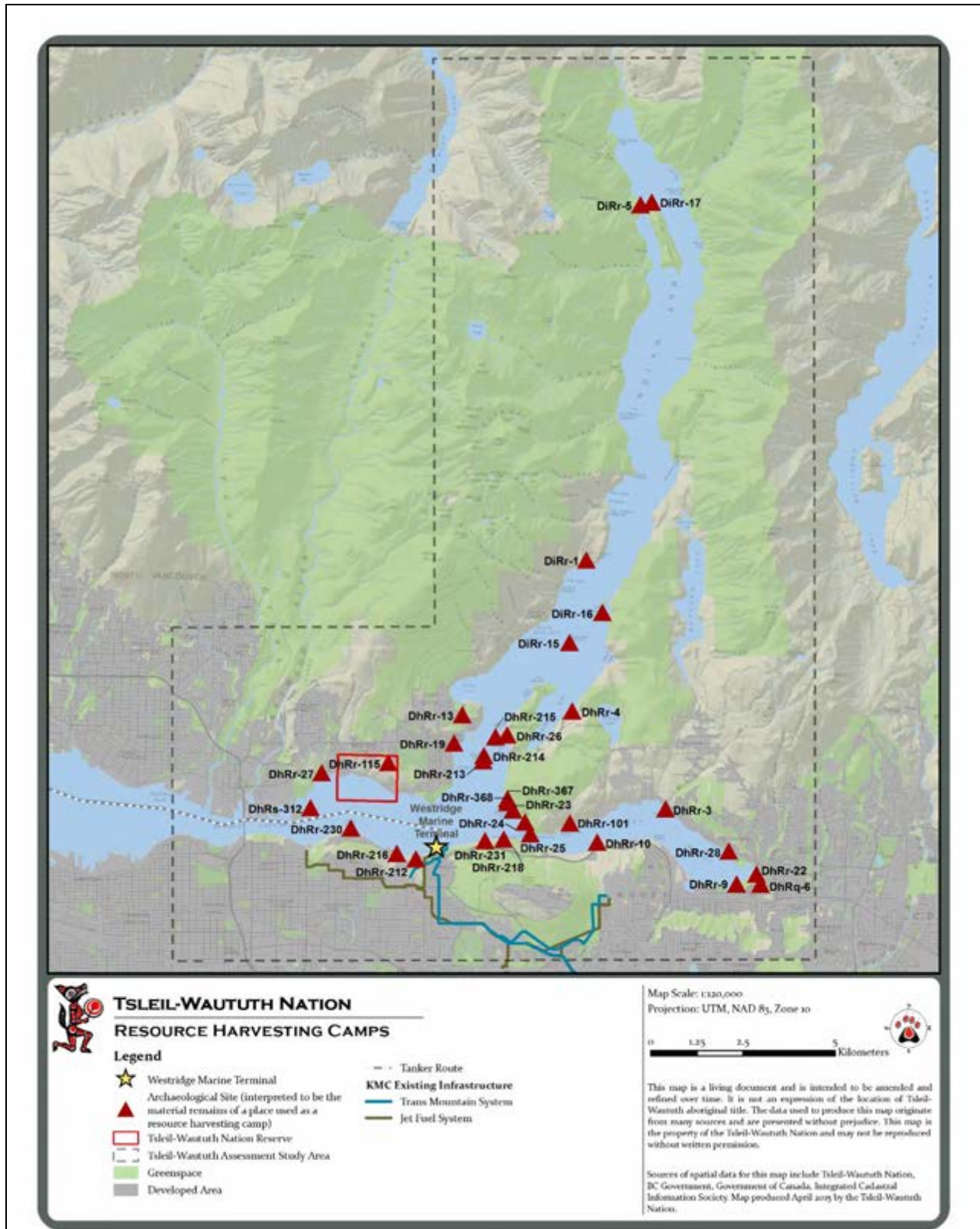


Figure 41. Archaeological sites in the Study Area interpreted as resource harvesting camps

523. The Maplewoods fish weir site (DhRs 312) is a small fish weir located on Maplewoods mud flats just southeast of Sleil-Waututh (Arcas n.d., DhRs 312 Site Form). It would have been owned and would have been used to passively harvest fish (possibly herring). A wooden stake from this feature has been radiocarbon dated to about AD 569-809 (1350 +/-60 BP) (Arcas n.d.). While this feature does not date to AD 1846, it is an example of a type of owned feature that was probably once numerous around Burrard Inlet. Given the amount of development and industrial impact to the area, it is miraculous that sites like the Maplewoods fish weir have survived at all.

Table 21. Small archaeological sites in eastern Burrard Inlet interpreted as short term camps and resource harvesting areas

Borden #	Type	Resources	Reference
DhRq-6	Shell Midden	shellfish, fish	Yip and Gose 1978
DhRr-10	Lithic Scatter	mammals	Yip and Gose 1978
DhRr-101	Shell Midden	shellfish, fish, mammals, birds	Spafford et al. 1999
DhRr-115	CMT, possible burial mounds	firewood, cemetary	Lepofsky and Karpiak 2001
DhRr-13	Shell Midden, burial	shellfish, fish, cemetary	Yip and Gose 1978
DhRr-19	Lithic Scatter	mammals, cedar	Yip and Gose 1978
DhRr-212	Lithic Scatter	mammals	Arcas 2009
DhRr-213	Lithics, burial	shellfish, fish, mammals, cemetary	Yip and Gose 1978, Site Form
DhRr-214	Lithics, burial	shellfish, fish, mammals, cemetary	Yip and Gose 1978, Site Form
DhRr-215	Shell Midden, lithics	shellfish, fish, mammals, birds	Yip and Gose 1978
DhRr-216	Lithic Scatter	mammals	Arcas 2009
DhRr-218	Lithic Scatter	mammals	Arcas 2009
DhRr-22	Shell Midden, burial	shellfish, fish, cemetary	Yip and Gose 1978
DhRr-23	Shell Midden, lithics	shellfish, fish, mammals, birds	Yip and Gose 1978, Scott and von Krogh 1977
DhRr-230	Lithic Scatter	mammals	Arcas 2009
DhRr-231	Lithic Scatter	mammals	Arcas 2009
DhRr-24	Shell Midden	shellfish, fish, mammals, birds	Yip and Gose 1978, Scott and von Krogh 1977; Morin and Muir 2012
DhRr-25	Shell Midden	shellfish, fish, mammals, birds	Yip and Gose 1978; Scott and von Krogh 1977; Morin and Muir 2012
DhRr-26	Shell Midden, fish trap	shellfish, fish, mammals, birds	Yip and Gose 1978, Scott and von Krogh 1977; Merchant 2009
DhRr-27	Shell Midden	shellfish, fish, mammals, birds	Yip and Gose 1978
DhRr-28	Shell Midden	shellfish, fish, mammals, birds	Yip and Gose 1978
DhRr-29	Lithic Scatter	mammals	Site Form

Table 21. Small archaeological sites in eastern Burrard Inlet interpreted as short term camps and resource harvesting areas

Borden #	Type	Resources	Reference
DhRr-3	Shell Midden	shellfish, fish, mammals, birds	Yip and Gose 1978
DhRr-38	Lithic Scatter	cranberries, mammals, birds?	Wilson 1987; Kennedy and Bouchard 1987
DhRr-39	Lithic Scatter	cranberries, mammals, birds?	Wilson and Kennedy 1987
DhRr-4	Shell Midden	shellfish, fish, mammals, birds	Yip and Gose 1978
DhRr-66	CMT	wood	Ham and Yip 1992
DhRr-67	Berry processing	berries	Ham and Yip 1992
DhRr-68	CMT	wood	Ham and Yip 1992
DhRr-69	Berry processing	berries	Ham and Yip 1992
DhRr-7	Lithic Scatter	cranberries, mammals, birds	Kenny 1975
DhRr-9	Shell Midden, burial	shellfish, fish, mammals, cemetery	McMillan 1971; Sources 2011
DhRs-312	Fish Weir	fish	Arcas 1996
DiRr-15	Lithic Scatter	fish, mammals	Yip and Gose 1978
DiRr-16	shell midden	fish, mammals	Pierson 2011
DhRr-367	Lithic Scatter	mammals	Morin and Muir 2012
DhRr-368	Lithic Scatter	mammals	Morin and Muir 2012
DiRr-1	Lithic Scatter	mammals	Yip and Gose 1978
DiRr-5	Lithic Scatter	mammals	Yip and Gose 1978
DiRr-17	Lithic Scatter	mammals	Yip and Gose 1978

524. The Twin Islands site (DiRr 16) is another excellent example of a prior and circa AD 1846 temporary camp that falls within the 13 km catchment area of Tum-tumay-whueton and other Tsleil-Waututh villages (Pierson 2011). It was used on a regular intensive basis for camping and harvesting local resources by the nearby Tsleil-Waututh inhabitants of Tum-tumay-whueton and other villages. Little Twin Island (the southern most of the two) is a small rocky island located in Indian Arm with few trees and some bushes. Thin shell midden occurs over much of its surface, that is, the island is blanketed in shell midden.
525. Pierson (2011:29) sampled this midden and found it to contain very few fish remains compared to Tum-tumay-whueton (DhRr 6) and Say-mah-mit/Noon’s Creek (DhRq 1). The Twin Island site was found to contain a notable amount of mussel and clam shell (Pierson 2011:29). It was interpreted as a small temporary camp specialized towards shellfish harvesting. A radiocarbon date submitted from Pierson’s (2011) sampling dated to 182 +/-25 BP (D-AMS 4680). Calibrating this date to calendrical years (two sigma) yields a probability range of AD 1658–1811. As this sample was obtained from 16–23 cm below surface, it is highly likely that this dates the recent, but not the most recent occupation and use of the site. The Twin Islands site is another example of a specialized resource use and habitation area used by sovereignty era Tsleil-Waututh people within Tum-tumay-whueton and other villages’ catchment zones.

526. The Pigeon Creek site (DhRr 9) is another example of a specialized resource use and camp area within Tum-tumay-whueton's catchment area. This site is located on the south shore of Port Moody and consists of many thin patches of shell midden paralleling the beach often clustered around small creeks. A portion of this site was excavated by McMillan (1971, 1982), and was interpreted as a limited activity area where shellfish processing and woodworking occurred. A burial was also excavated here (McMillan 1971, 1982). I submitted three samples (deer bone) from McMillan's excavations here for radiocarbon dating. These yielded dates that calibrate to AD 1401–1443, AD 1668–1883, while a third sample was rejected as “modern” (i.e., too close to AD 1950 to measure a datable sample). This indicates that this portion of the site was, in all probability, used as a temporary camp and resource gathering area by Tsleil-Waututh families from Tum-Tumay-whueton or other nearby village around AD 1846.
527. These three sites, Maplewoods fish wier (DhRs 312), Twin Islands (DiRr 16), and Pigeon Cove (DhRr 9) all represent unique suites of activities that were undertaken on a very recurrent basis at locations within the catchment area of Tum-tumay-whueton and other Tsleil-Waututh villages. Two of these appear to have been used prior to and around AD 1846. These three small sites, considered in conjunction to the large site of Tum-tumay-whueton, provide an example of the sort of settlement pattern one would expect in eastern Burrard Inlet. This pattern consisted of:
- Large residential sites (winter villages) from which people harvested local resources, and from which people periodically relocated to other locations as part of a seasonal round;
 - Small camps or large village aggregates to which people seasonally harvested locally abundant resources to harvest resources; and
 - Resource patches and facilities that were not, generally speaking, inhabited, but were regularly visited and tended to harvest the resources produced or captured there.
528. What is clear is that although many activities were undertaken within large villages, small temporary camps and resource harvesting locations abound in the vicinity of these large villages. *The large villages and these proximate camps and facilities must be considered together as a system, rather than in isolation from one another when interpreting areas of occupation and regular intensive use.*
529. In the sections below (see s. 4.8.1, 4.8.2, 4.8.3, 4.8.4, 4.8.5, and 4.8.6), I present the results of GIS modelling undertaken to extrapolate past Tsleil-Waututh landscape/seascape use patterns based on traditional means of travel—foot and canoe (Morin et al. 2015; Morin and Hunt 2014). These analyses model such use from both village sites and resource harvesting camps. These results are also compared to 20th century Tsleil-Waututh TUS data. The very strong correspondence between the modelled least cost catchment areas, and the observed TUS data indicates that the modelled

catchment areas accurately represent Tsleil-Waututh landscape/ seascape use patterns prior to and as of AD 1846.

4.8 Tsleil-Waututh Landscape/Seascape Use Within the Study Area: The Scope of Regularly Intensively Used Areas

530. The historical record relevant to the Tsleil-Waututh settlements in eastern Burrard Inlet in AD 1846 is practically non-existent. The accounts of first contact in AD 1792 were discussed above (e.g., Bartroli 1997; Wagner 1933), but these occurred nearly 60 years earlier, and are of very little use in identifying which villages were occupied at AD 1846. The Fort Langley Journals provide one account of referring to the “Whooms” (interpreted by Suttles as Squamish) returning to “Burrard’s Canal” for the winter in AD 1828 (MacLachlan 1998:75). The significance of the AD 1863 Crease Map has been discussed; it provides evidence of two Tsleil-Waututh villages in AD 1863. But this map was created 17 years after sovereignty, and after perhaps two additional smallpox epidemics (Boyd 1999:22). And finally, Launder (1869b) indicated that the Tsleil-Waututh inhabitants of Sleil-Waututh/IR No.3 had moved here from the Portage of Lillooet around AD 1830–1840. I have dissected this statement in detail above and found it to be inaccurate and incompatible with several other lines of data.
531. By way of contrast, the archaeological record of eastern Burrard Inlet is rich and well-documented. As discussed above, many Tsleil-Waututh villages contain archaeological evidence of millennia of continuous use and occupation (e.g., Tum-tumay-whueton, Say-umiton, Sleil-Waututh, Whey-ah-wichen, Reed Point, Say-mah-pit). The long term (i.e., traditional) pattern of indigenous occupation here is inhabitation of multiple contemporaneously occupied villages supported by intensive use of the surrounding environment and naturally abundant resources. Using only archaeological remains to date these sites to precisely AD 1846 is difficult because: 1) the uppermost (and hence most recent) portions of these sites are often destroyed by modern landscaping, and 2) the radiocarbon method decreases in precision in the 19th century (Stuvier and Pearson 1986).
532. This archaeological evidence of continuity of ancestral Coast Salish use and occupancy is profound, and corresponds very well to Tsleil-Waututh oral histories regarding these village sites. In my opinion, in light of the overwhelming evidence of millennia of continuous occupation of these village sites, the most parsimonious explanation is that, in the absence of substantial evidence demonstrating that they were not used at AD 1846, these villages continued to be used (i.e., inhabited) as either villages or more temporary camps at AD 1846, as they had been for centuries. When the Study Area is considered in entirety, there is no evidence for abandonment or lack of occupation any time after 400 BC (Morin 2014).
533. *It is important to note here that whether Tsleil-Waututh inhabited 5 villages at AD 1846 within the Study Area, one village, or 10 villages, the scope of Tsleil-Waututh use of the landscape would remain largely the same, albeit varying in intensity of use. As will be*

described in detail below, using canoes, Tsleil-Waututh people living almost anywhere near the center of their territory could have accessed all portions of the territory within one day's travel. This highlights the significance of the concept of “abandonment.” While “abandonment” of individual archaeological sites is often inferred by archaeologists based on a cessation of evidence of occupation within a site, that does not mean the people who used to live there stopped using the region (Nelson and Hegmon 2001). Indeed, the people who “abandoned” a site may have relocated a few hundred meters or a few kilometers away, and may have still relied on the local resources as heavily as when they inhabited the now “abandoned” site.

534. This concept of continuity in site occupation versus continuity in regional population is highly pertinent to the Tsleil-Waututh case at hand. *Specifically, while there is some evidence for cessation of occupation (i.e., “abandonment”) of individual villages in the Study Area, there is no evidence for regional “abandonment” (or lack of occupation) since 400 BC at least* (Morin 2014). This is a complex issue and is presently being drafted into a publication (Morin et al. n.d.) based on the radiocarbon date evidence from Burrard Inlet (Morin 2014). With relevance to AD 1846, there is no evidence of regional “abandonment” and multiple lines of evidence suggesting simultaneous (or contemporaneous) or sequential (or seasonal) occupation of five villages in the Study Area.
535. As discussed in previous sections (i.e., *Archaeological Villages, More Recent Oral History and Tsleil-Waututh Place Names*) I described five village sites within the Study Area that have evidence for inhabitation/occupation by Tsleil-Waututh at AD 1846. These villages include:
- a) Tum-tumay-whueton;
 - b) Whey-ah-wichen;
 - c) Sleil-Waututh;
 - d) Inlailawatash; and
 - e) Reed Point (**Figure 42**).
536. Additionally, Say-umiton/DhRr 18, Say-mahpit/DhRr 17, and Say-mah-mit/DhRq 1 are all substantial archaeological sites that appear to be villages, and have Tsleil-Waututh oral histories associated with them. Given the centuries of occupation evident in the archaeological record of these sites, it is entirely possible that any or all of them continued to be used as a village in AD 1846. Beyond the present Study Area, there were other Tsleil-Waututh villages inhabited/occupied around AD 1846.

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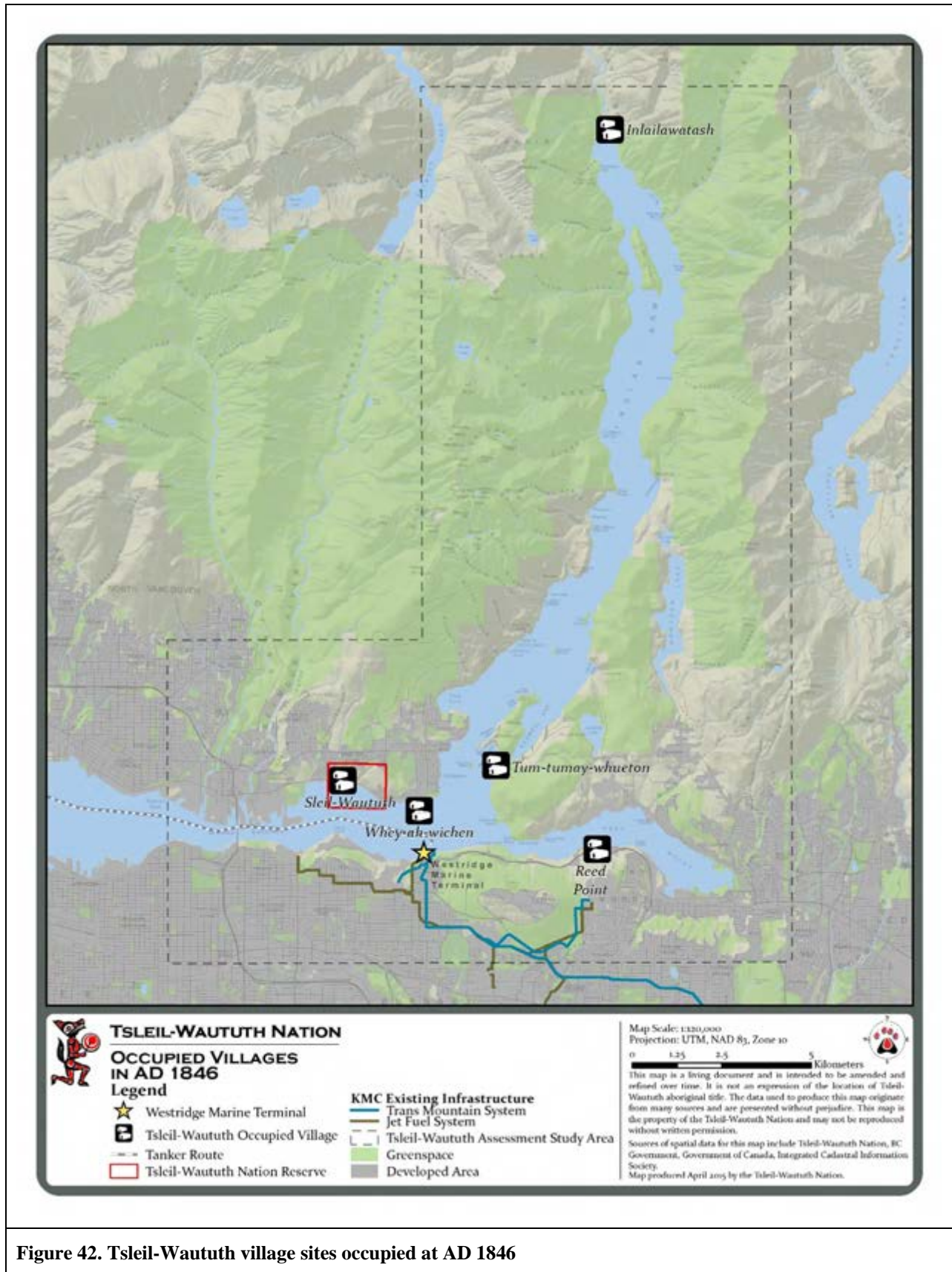


Figure 42. Tsleil-Waututh village sites occupied at AD 1846

537. Within the current Study Area, the best evidence for Tsleil-Waututh villages occupied at AD 1846 comes from Tum-tumay-whueton, Whey-ah-wichen, Sleil-Waututh, Reed Point, and Inlailawatash. As discussed above, while these sites were probably all winter villages in the centuries before contact (except Reed Point and Inlailawatash), by AD 1846 some of them may have been primarily occupied during the spring or summer. In the sections below, I briefly review this evidence (as much of it has already been presented), and then describe the evidence of landscape/seascape use associated with each of these villages.
538. Before reviewing the evidence for habitation or occupancy of each of these villages at AD 1846, a few comments regarding the nature of that occupancy are required. First, Coast Salish villages generally, and Tsleil-Waututh villages were not usually occupied year-round by all the inhabitants. Instead, individual or extended family groups would seasonally relocate, pursuing a seasonal round as described above (Barnett 1955). This is a typical Coast Salish pattern and does not in any way dissociate people from their villages.
539. Second, at a longer temporal scale, perhaps every 5–20 years, it is highly probable that villages would have undergone periodic episodes of disuse for a few years. In other words, families would relocate their house planks and material goods and over winter at another village for several years before relocating to their former village. The reasons for this are multifold but include: a build-up of waste, depletion of local food resources (especially shellfish), depletion of local firewood sources, stochastic or random population changes, and vulnerability to attack. For example, a certain village (say Say-umiton) may have developed an intolerable build-up of human and animal waste. The families residing thereon decide to relocate to Tum-tumay-whueton, a mere 15 minute paddle away, for two years while the waste degrades at Say-umiton. Then those families relocate back to Say-umiton for another generation. These sorts of episodic cessations of use would be typical of Coast Salish people, and would by no means dissociate people from their ancestral villages. Given the ambiguity in the data relevant to Tsleil-Waututh villages, a reasonable inference of occupancy, rather than an absolute inference is all that is currently possible. Recall, for all villages discussed here, the most significant temporal trend is for very long term occupation (Morin 2014).

4.8.1 Tum-tumay-whueton

540. All sources of information agree that before Tsleil-Waututh ceased over-wintering at Tum-tumay-whueton, it was Tsleil-Waututh's primary village site or headquarters and the primary home of Tsleil-Waututh's chief or leader (George 1990; George and Joe 1983; L. George 1997, Menzies 1934; Duff 1952a). Indeed, Tum-tumay-whueton literally translates to "lots of land" and is interpreted by the modern Tsleil-Waututh community to mean "the biggest place for all the people" (Menzies 1934). In previous sections, I summarized a range of oral histories that describe Tsleil-Waututh's use and occupancy of Tum-tumay-whueton, and presented archaeological data indicative of nearly continuous occupation of the site from 1270 BC to AD 1626 (**Table 6**). Due to damage to the upper

layers of the site (Borden 1972), the archaeology here does not accurately date the cessation of Tsleil-Waututh over-wintering here in a village. There is archaeological evidence of a historic-era occupation here, but the only dateable historic artifact was manufactured between AD 1888 and 1892 (Charlton 1980:43). The remainder of the assemblage of historic artifacts excavated here could date to anywhere in the nineteenth century.

541. I also critically reviewed Bouchard and Kennedy's (1986) undue emphasis on Launder's (1869b) statement indicating that only 2–3 old Tsleil-Waututh people remained at Sleil-Waututh, and they had moved here from Tum-tumay-whueton around AD 1830–40. Above, I demonstrated that other aspects of this statement are demonstrably inaccurate, and this casts doubt on the statement regarding the timing of the relocation. There is also additional information that sheds light on the timing of this relocation that does not agree with Launder's (1869b) statement. To identify when Tsleil-Waututh ceased over-wintering at Tum-tumay-whueton with as great as precision as possible, I summarize all the pertinent evidence below. Based on this evidence, Tsleil-Waututh people ceased over-wintering in large numbers here around AD 1853–61, but continued utilizing, with perhaps a few people living there, for several decades thereafter.
542. There is a dearth of traditional historical evidence and eye-witness accounts as to when this event occurred, especially around the period of AD 1846. Therefore, determining the timing of general cessation of village occupation of Tum-tumay-wheuton can only be approximated by correlating Tsleil-Waututh oral histories to other dated events—such as a smallpox epidemic, the tenure of James Douglas, or the construction of a fort elsewhere.
- AD 1775 or 1782: Smallpox causes a 90% mortality across the Coast Salish world (Harris 1994). Boyd (1990) dates this to AD 1775 and Harris to AD 1782. Whole nations disappear and many villages are temporarily abandoned (Carlson 2010). George Sla-holt indicated to Menzies (1934) that the people living at Belcarra were almost obliterated by smallpox. Other Tsleil-Waututh oral histories insist that the only after the second epidemic did Tsleil-Waututh cease over-wintering at Tum-tumay-whueton (L. George 1997:1506–7).
 - AD 1792, June: While neither the British nor Spanish expeditions into Burrard Inlet specifically note habitations or people in the vicinity of Tum-tumay-whueton (Bartoli 1997; Wagner 1933), the north shore of Burrard Inlet was described as “well inhabited” (Bartoli 1997:75; Lamb 1990:13). Other villages were also not seen, e.g., at Capilano River, and were interpreted to be hidden in the woods.
 - ~AD 1801: Potentially the second smallpox epidemic may have impacted Coast Salish territory (Boyd 1990:138); Harris (1994) indicates Boyd (1990) is mistaken and there was only one early smallpox epidemic in AD 1782. I agree with Harris (1994) on this issue. Tsleil-Waututh oral histories indicate that they ceased over-

wintering at Tum-tumay-whueton after the second smallpox epidemic killed almost everyone (L. George 1997:1506–7).

- ~AD 1800–1840: Waut-salk (II)'s primary residence is at Tum-tumay-whueton (George 1990:1).
- ~AD 1820–1901: James Sla-holt lives his early life at Tum-tumay-whueton, and lives “for a while” at the fort at Sleil-Waututh (George 1990:2).
- ~AD 1800–1830: Palisades or trench embankments are constructed at Sleil-Waututh (George 1990:2), Whey-ah-wichen (Chief Dan George DhRr 8 Site Form), Reed Point (Ham and Yip 1992), and Inlailawatash almost certainly to defend Tsleil-Waututh villages against Lekwiltok raids. This fits a broader pattern of building fortifications across the Coast Salish world at this time (Angelbeck 2009). No fortifications have been reported for Tum-tumay-whueton, but there are several highly defensible bluff top locations in the vicinity. Bouchard and Kennedy (1986; Bouchard 1996a; Kennedy 2000) argue that the Tsleil-Waututh people relocated from Tum-tumay-whueton to Sleil-Waututh during this period for safety. As described above, I think that Sleil-Waututh was one village that was likely seasonally occupied as part of Tsleil-Waututh's seasonal round at AD 1846.
- ~AD 1830-40: Launder's (1869b, 1869a) surveys IR No.3 (Sleil-Waututh) and notes that “This Village is called Lillooet and was established by Indians from the portage of that name perhaps 30 or 40 years ago....” As described in detail above, other aspects of Launder's (1869b) statements are demonstrably inaccurate, and this aspect of his statement (i.e., the timing) is also inaccurate.
- AD 1840: Tsleil-Waututh's chief Waut-salk (II) dies in battle against Lekwiltok raiders at Inlailawatash (Indian River) and is interred on Boulder Island, just offshore from Tum-tumay-whueton. This was the traditional burial place for the Tsleil-Waututh chiefs (George 1990:5). If Tsleil-Waututh's primary village was at Sleil-Waututh at this time (AD 1840), then Waut-salk (II) would have certainly been buried at Sleil-Waututh. This also suggests that the Battle of Maple Bay occurred after AD 1840 (recall this battle ended the Lekwiltok raids).
- ~AD late 1840s–1862: Tsleil-Waututh warriors defeat a large party of Haida raiders at the Second Narrows (MacDonald 1998:13; Menzies 1934). Following that battle a large celebration was held at Tum-tumay-whueton.
- AD 1849: Map by Kellet of the HMS Herald (surveyed in 1847) indicates Burrard Inlet as “inhabited” (**Figure 43**) (Hayes 2005:18). My archival research indicates that the HMS Herald did not actually enter Burrard Inlet, so it is unclear how Kellet obtained information regarding the inhabitants of the area.



Figure 43. 1849 map of the Lower Mainland (surveyed in 1847 by Henry Kellet in HMS Herald); note Burrard Inlet indicated as "inhabited" (Hayes 2005:18)

- ~AD 1853: Potentially the second smallpox epidemic sweeps Tsleil-Waututh. Boyd (1990:141–143) indicates that this epidemic bypassed Halkomelem peoples due to inoculation efforts. I am dubious of Boyd's (1990:141–143) conclusion. Tsleil-Waututh oral histories indicates that they ceased over-wintering at Tum-tumay-whueton *after the second smallpox epidemic killed almost everyone* (L. George 1997:1506–1509). This is probably the same epidemic that wiped out the Snokomish and the Birch Bay people (Suttles 1951:29–31). Tsleil-Waututh was helped by Musqueam to bury all their dead at Tum-tumay-whueton and gifted a large carved rock to Musqueam in thanks (George 1990:5; Roy 2010:1–4). Musqueam oral histories corroborate this event (Point 1996b:57–58).
- ~AD 1853: A mass burial of 15 individuals in a “European wooden box” recovered from Tum-tumay-whueton interpreted to have been smallpox victims (Warner and Carlson 1976:3). It is unclear when “European wooden boxes” would have been available to or copied by Coast Salish people in this area, but this must have post-dated the establishment of Fort Langley (1827), and is more likely to have been after about 1858, with the local establishment of Queensbough (to become New Westminster). This mass burial represents the Tsleil-Waututh victims of the AD 1853 smallpox epidemic (Boyd 1990:141–43).
- AD 1849–1864: Tsleil-Waututh hereditary chief John L. George indicated to Shelly Lugg that Tsleil-Waututh moved from Tum-tumay-whueton to Sleil-Waututh during the tenure of James Douglas (Head of the HBC on Vancouver Island 1849–1858, Governor of British Columbia 1858–1864) (Lugg 1985).
- AD 1862, January 6: Oblate missionaries (OMI) baptize 16 people at Sleil-Waututh/Burrardview and identified them as “Slelouet” (January 6, 1862 OMI Baptismal Records). It is unclear if these baptisms occurred at Sleil-Waututh or elsewhere. *It appears that by this time, Sleil-Waututh had become the largest aboriginal settlement in eastern Burrard Inlet.*
- AD 1862, April: Father Fouquet (OMI) vaccinated a number of individuals at a village called “Lilloetoul” (1 rancherie) (in the New Westminster District) (June 7th, 1862, The British Columbian). This almost certainly refers to Sleil-Waututh.
- AD 1863: November. OMI missionaries baptize two more adults at Sleil-Waututh and indicated they were “Slelouet” (November 20, 1863 OMI Baptismal Records).
- AD 1863: The Crease Map (1863) does not identify aboriginal occupancy of the Belcarra area; however, the name “Tum-tumay-whueton” (or close variant) is indicated at Roche Point. It is unclear whether Crease was indicating that the people of Tum-tumay-whueton had moved to Roche Point, or he was told about the village of Tum-tumay-whueton and mis-located it at Roche Point.

- AD 1864: Steven Decker arrives in Burrard Inlet. Half a century later, he retrospectively describes “[t]hey had a big camp near Belcarra near where this house is now, and there were other camps at different parts of the Inlet.” (The Province, May 14, 1910). This may be the only firsthand account of Tum-tumay-whueton ever recorded. Alternatively, Decker’s statement could be a retrospective summary of information he gathered in his early years in Burrard Inlet, i.e., that he didn’t actually witness the village there, but he heard or inferred it was once there.
- AD 1869: Launder’s (1869a 1869b) reserve survey of Burrard Inlet. Tum-tumay-whueton/Belcarra is not indicated in any records, so presumably, no aboriginal people were living there at the time. I use the word “presumably” above, because the absence of evidence is not strong evidence of absence.
- ~AD 1869: An undated map by Launder’s of the Belcarra area indicates “potato patches” at the precise location of the archaeological site associated with Tum-tumay-whueton (Launder’s n.d.) (**Figure 44**). This map appears to pre-date John Hall’s preemption, and probably dates to about AD 1869 (the same year Launder’s was surveying the Burrard Inlet reserves). These potato patches were likely the gardens of Tsleil-Waututh people who may have been living at Tum-tumay-whueton or elsewhere.
- AD 1870: John Hall files notice of his preemption claim of 160 acres (Lot 229) at Tum-tumay-whueton (MacDonald et al. 1998:23). Hall’s wife is reported as being Tsleil-Waututh from Tum-tumay-whueton (George 1990:1) or Sleil-Waututh (Cotton 1998:12; Crease 1882 BCARS: MS-0054). Hall’s claim specifically includes the location of the potato patch from the undated Launder’s map (**Figure 44, Figure 45**).

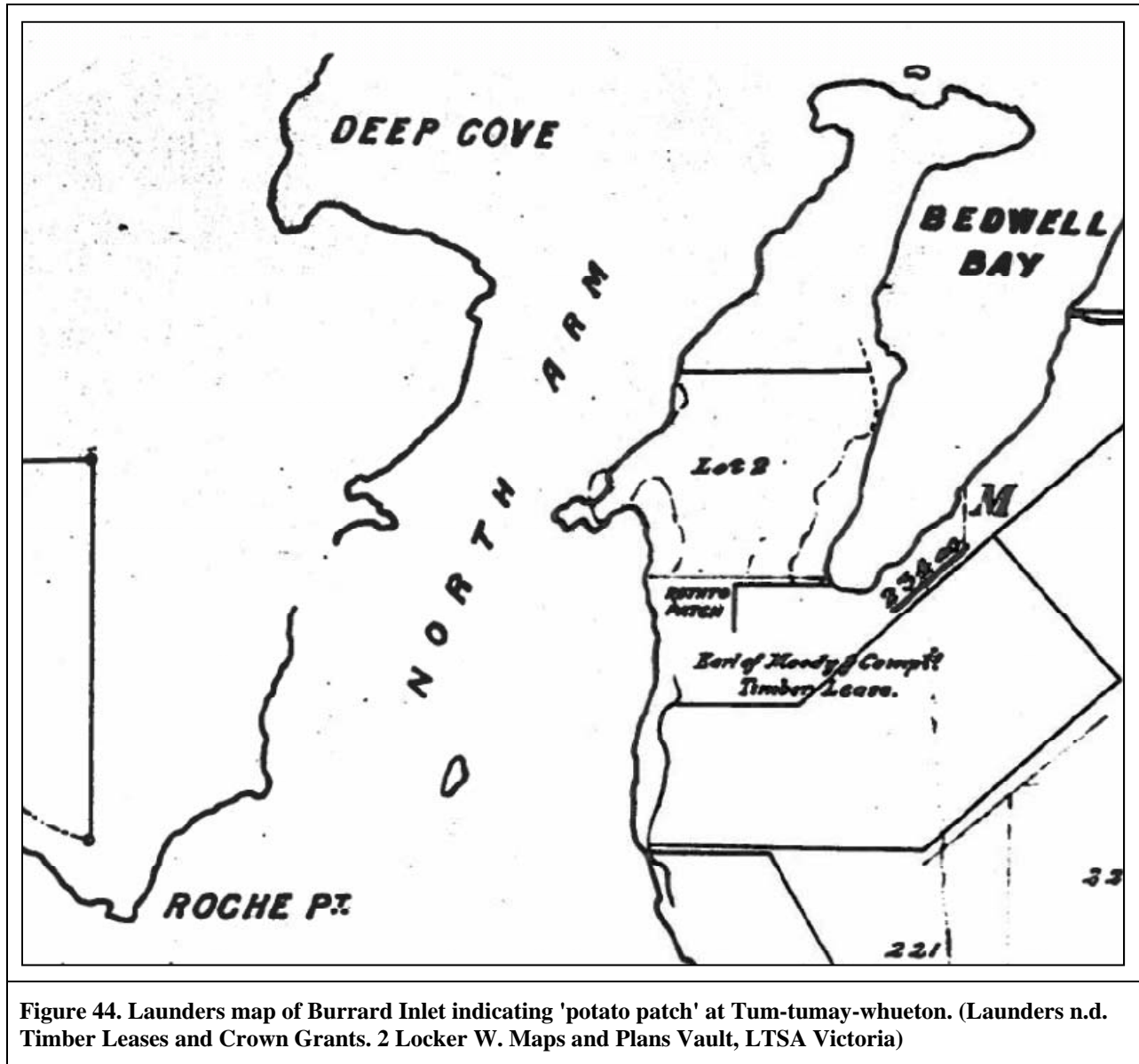


Figure 44. Launder's map of Burrard Inlet indicating 'potato patch' at Tum-tumay-whueton. (Launder's n.d. Timber Leases and Crown Grants. 2 Locker W. Maps and Plans Vault, LTSA Victoria)

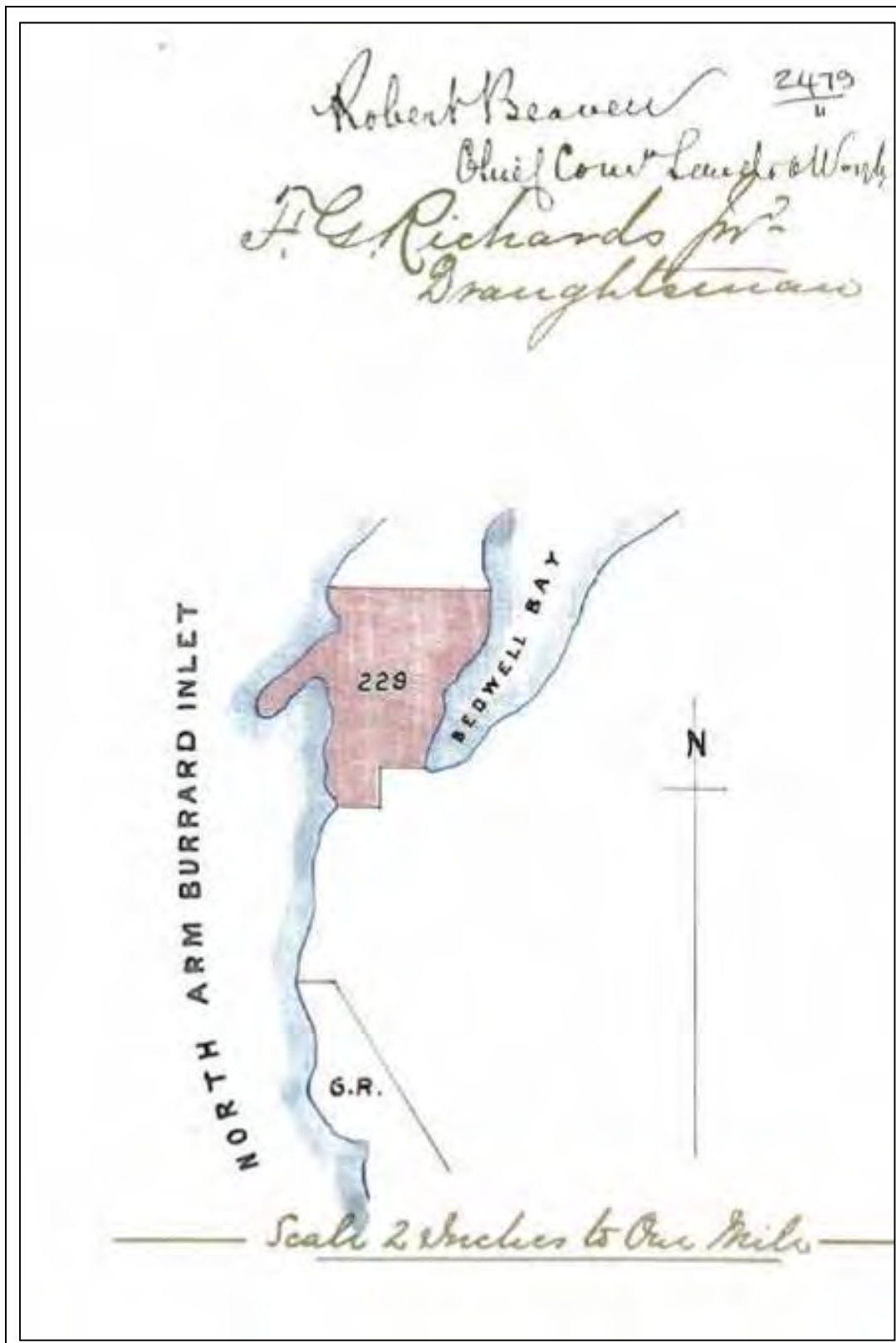


Figure 45. John Hall's preemption of D.L 229 at Tum-tumay-whueton

- ~AD 1870: One account by a Tsleil-Waututh person indicates that two Tsleil-Waututh women were living at Tum-tumay-whueton and John Hall came and married one of them (George 1990:1). It is possible that Hall married a Tsleil-Waututh woman living at Tum-tumay-whueton who owned the potato patch from the ~AD 1869 Lauanders map.
 - ~AD 1870: One account by a Tsleil-Waututh person indicates that the last remaining Tsleil-Waututh person here sold the land for a gun (George and Joe 1983:1).
 - AD 1874: Tsleil-Waututh oral history indicates that Joe Thomas (9 years old at the time) was at Sleil-Waututh for the reburial of Waut-salk's remains (relocated from Boulder Island) (Tsleil-Waututh 1998). Joe Thomas was born in AD 1865, and therefore this reburial event occurred around AD 1874. Tsleil-Waututh oral histories indicate that the clergy insisted that Tsleil-Waututh should re-bury Waut-salk's remains (Tsleil-Waututh 2000).
 - AD 1874: The surveyor's notes for John Hall's land claim (Pender 1874, **Figure 45**) do not describe any cultivated plots or remains of indigenous houses on the land preemption, but they do describe second growth of *Balsamete* (grand fir) within the claim.
 - AD 1876: The JIRC (1876/77) re-surveys the Burrard Inlet Indian Reserves. Tum-tumay-whueton/Belcarra is not indicated in any records, so presumably, no indigenous people were living there at the time.
 - AD 1882: Following John Hall's acquiring of the deed to Lot 229 in 1882, he was convicted of murdering his mother in law named Mary Dish or Imtah/Mn-Shaat/Mn-Maat (see MacDonald et al. 1998; Sparks and Border 1989:25; The Assizes 1882). It must be emphasized here that John Hall's wife (name uncertain) was a Tsleil-Waututh person; her mother, Mary Dish or Mn-Maat, was described as being from "Sla-quilt Ranch" (i.e., Sla-holt's community, Sleil-Waututh) (Cotton 1998:12; Crease 1882 BCARS: MS-0054). When Mn-Maat was murdered at Tum-tumay-whueton, she was visiting her daughter and grandchildren there.
 - ~AD 1900: The archaeological site form for DhRr-6 (the Belcarra Park site at Tum-tumay-whueton) indicates that the last house here collapsed around the turn of the last century (DhRr-6 Archaeological Site Form); it appears that Chief Dan George was the source of this information. This comment is also echoed by Lugg (1985). This comment presumably refers to Coast Salish plank houses. If this account is accurate, it is unclear why such structural remains were not noted earlier in the historical record.
543. Overall, it is clear that there is enough historic and ethnohistoric evidence to suggest probability of Tum-tumay-whueton being occupied as of AD 1846. Based on the

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archaeological data presented below, there is overwhelming evidence for long term occupation of Tum-tumay-whueton up to about the early 17th century. Considered together, It is highly probable that Tum-tumay-whueton was occupied at sovereignty, and must be considered in any discussion of traditional seasonal landscape/seascape use. Below, I present the results of the LCC modelling (see *Defining Daily Foraging Radii/Calculating Least Cost Catchments* above) based on inhabitation of Tum-tumay-whueton and use of the surrounding area via foot and canoe (**Figure 46**).

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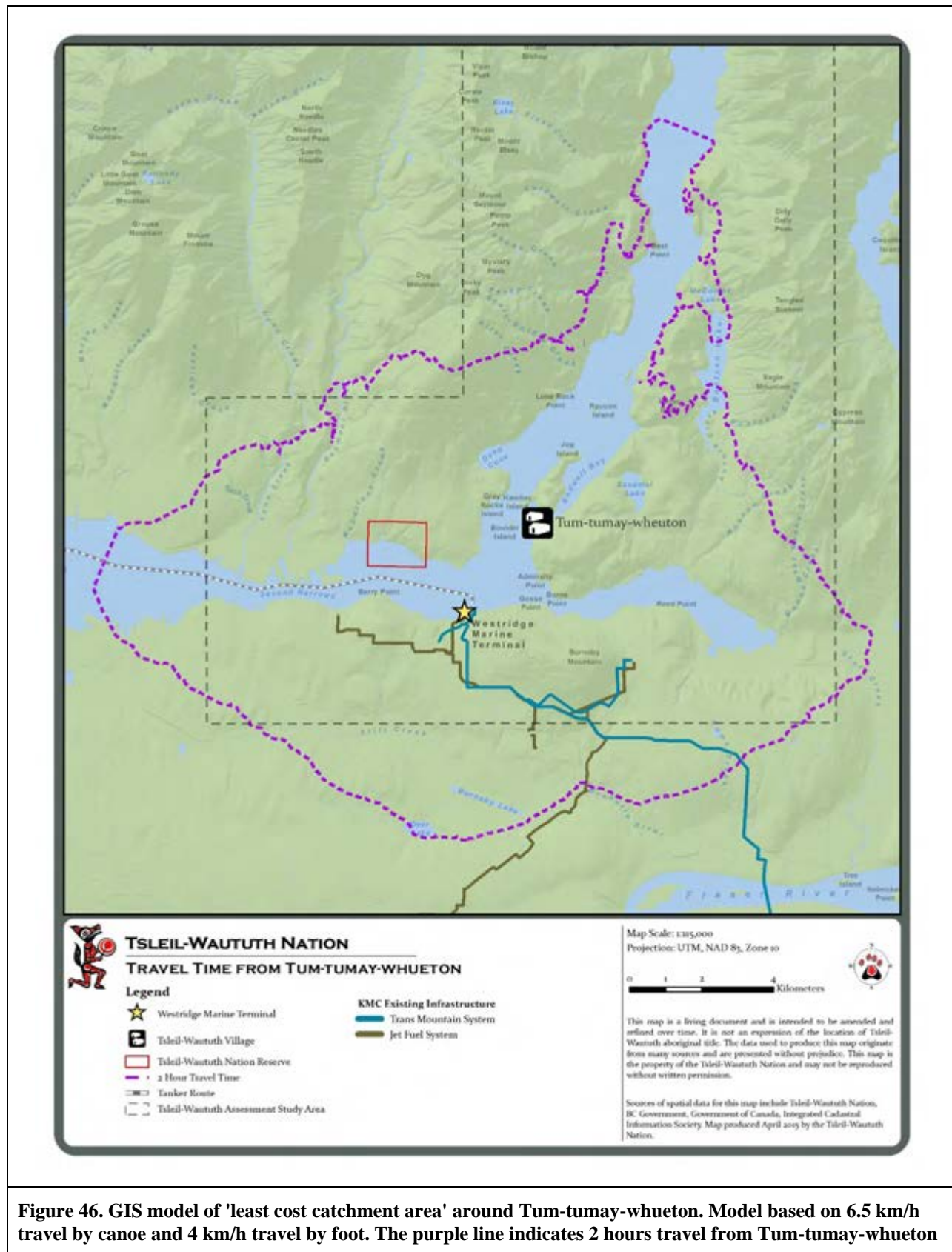


Figure 46. GIS model of 'least cost catchment area' around Tum-tumay-whueton. Model based on 6.5 km/h travel by canoe and 4 km/h travel by foot. The purple line indicates 2 hours travel from Tum-tumay-whueton

544. *Perhaps the most notable feature of the two-hour LCC calculated for Tum-tumay-whueton is that it includes all of eastern Burrard Inlet from west of Second Narrows to Port Moody and half way up Indian Arm. Tum-tumay-whueton is centrally located in the Burrard Inlet system. Inland, this foraging radius includes all of the Belcarra Peninsula, much of the Deep Cove area, and most of north Burnaby and Coquitlam (Figure 46). This indicates that, the inhabitants of Tum-tumay-whueton had the technological capacity to use all of the lands and waters within the 2-hour LCC on a daily basis.*
545. **Figure 47** is a heuristic map displaying where the resources recovered from the shell midden at DhRr 6 (Tum-tumay-whueton) (i.e., those resources listed in **Table 5**) would have likely been harvested from in the local environment. This map was created in accordance with known species distribution (e.g., mountain goats at high elevations, beavers around lakes and low-gradient streams, shellfish at known shellfish beds), and species harvesting locations reported in Tsleil-Waututh TUS data (e.g., urchins at Second Narrows, deer around Buntzen Lake). Most species represented here were mobile, and could have been harvested at a number of locations. **Figure 47** is not meant to indicate precisely where species were harvested, but rather to identify examples of where they were likely harvested to illustrate the concept of a daily foraging radius. Some of the arrows used in **Figure 47**, such as those indicated where seal were harvested in the Inlet or bears harvested on land, could be reoriented to many other likely harvesting locations. More complex modelling involving hundreds of iterations of mapping such potential harvesting would perhaps better model actual past behaviours.
546. Cultural rules regulating access to resource patches also structured resource use by the inhabitants of each village, but we do not know what those rules were. **Figure 47** describes a pattern of landscape/seascape utilization that was not structured by cultural rules, but rather describes a situation of unfettered resource access based on a simple 2 hour foraging radius.
547. It should also be noted that some of the resources recovered from the midden at DhRr 6 (or the other sites) could have been from beyond the daily foraging radius of this village. For example, dried herring could have been brought back to Tum-tumay-whueton from spring villages in outer Burrard Inlet. The data simply do not provide greater resolution than this. But, based on the economizing principle of least effort (Kelly 1995; Vita-Finzi 1970), if these resources were available closer to the village, they were probably harvested closer to that village.
548. Compared with the geographic distribution of the faunal resources recovered from the shell midden at Tum-tumay-whueton (**Figure 47**, Lepofsky et al. 2007), and Tsleil-Waututh's TUS data, *it is highly probable that prior to and at AD 1846, the Tsleil-Waututh inhabitants of this village site regularly and intensively used all the area within the 2 hour LCC, varying with local resource abundance and relationships with the inhabitants of adjacent Tsleil-Waututh villages.*

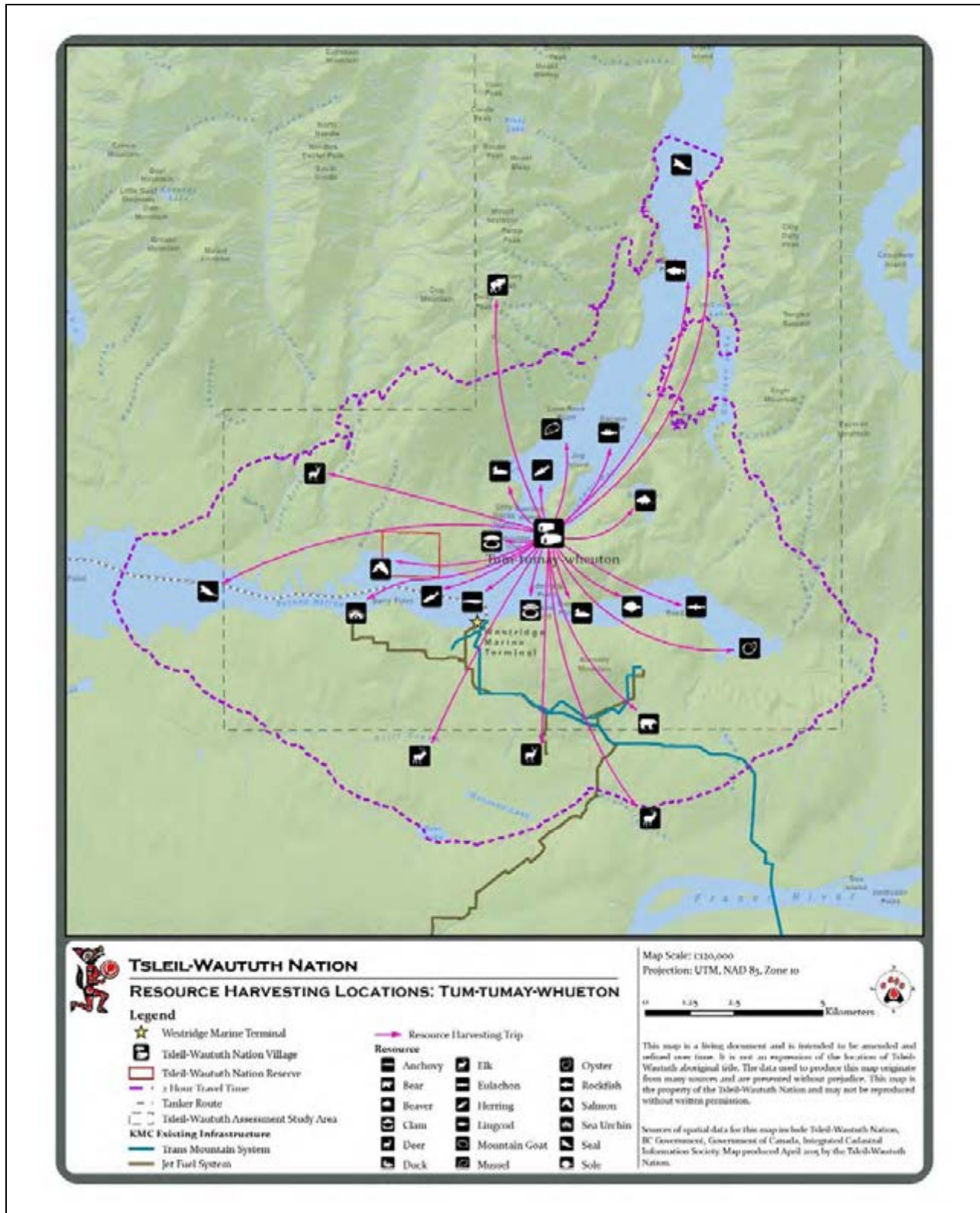


Figure 47. Heuristic map of resource procurement for the village of Tum-tumay-whueton based on resources excavated from the shell midden there (DhRr 6) (see Table 5). Probable resource harvesting locations for some of these species are indicated

549. The richer resource patches within this area would have been used regularly and intensively, i.e., daily by many people during their seasons of productivity (e.g., clam beds, berry patches, fish traps). Many of these richer resource areas would have been owned by specific Tsleil-Waututh lineages. Indeed, it is perhaps most accurate to consider most of this two hour catchment area as likely owned by the sum of all lineages of Tum-tumay-whueton. The overlaps between the catchment area for Tum-tumay-whueton and that of other nearby Tsleil-Waututh villages were socially managed by complex protocols of access and transmission of ownership.
550. In addition to inhabitation of Tum-tumay-whueton, and resource use of the landscape/seascape around it, the area was also used as a cemetery. More specifically, there were at least two cemeteries in and around Tum-tumay-whueton that were used by Tsleil-Waututh around AD 1846. The high-ranking Tsleil-Waututh people (including Waut-salk) were interned on Boulder Island, just offshore from Tum-tumay-whueton (Tsleil-Waututh 1998). Waut-salk (II) was interred here around AD 1840. Other Tsleil-Waututh people were buried in the midden deposits of Tum-tumay-whueton in both ancient times (Charlton 1980:18-20), and in the historic era (Warner and Carlson 1976). In all probability, there are very many burials throughout the midden deposits at DhRr 6, the shell midden that makes up part of Tum-tumay-whueton. Contact-era/early historic mass burials are also reported here (Warner and Carlson 1976). In all probability, there were additional cemeteries, interment areas or areas with tree-burials around the village of Tum-tumay-whueton throughout its 3000 year history of occupation, but there seems to be two cemeteries here around AD 1846.

4.8.2 Sleil-Waututh

551. As introduced above, Sleil-Waututh or IR No.3 has a long history of occupation as a village site. The radiocarbon dates described above indicate nearly continuous occupation of this site (considering both DhRr 15 and 20) from about AD 1000 through to AD 1634, in addition to a much earlier range of dates reaching back to about 2100-2400 BC. Tsleil-Waututh oral histories describe events involving people who lived at Sleil-Waututh prior to contact, including ancestral names (Indian names) that are still held in the Tsleil-Waututh community (e.g., George 1930). When interviewed, Tsleil-Waututh people have indicated that Sleil-Waututh was “always a village site” (George and Joe 1983:26).
552. The range of historic era artifacts recovered from DhRr 15, especially the gun flints, pipes and trade beads (see *Archaeological Villages* section above) (**Figure 33, Figure 34, Figure 35**), provides strong evidence of indigenous occupation here around AD 1792–1860. This evidence corresponds well to oral histories involving the construction of a fort or palisade here (George 1990; Thornton 1966:168). Elsewhere in the Coast Salish world, palisades were generally built around AD 1820–30 in response to Lekwiltok raids (Suttles 1951:33), but were also observed at contact in 1791–92 (Angelbeck 2009:261; Gunther 1972:63). Tsleil-Waututh oral histories also indicate that the Belcarra Tsleil-Waututh moved to Sleil-Waututh here following the second smallpox epidemic (John L. George cited in Lugg 1985; L. George 1997). The earliest known documentary evidence

of the village of Sleil-Waututh dates to AD 1862, when the OMI missionaries baptized a number of people at the village of "Slelouet" (January 6, 1862 OMI Baptismal Records). Later that year Father Fouquet (OMI) vaccinated a number of individuals at a village called "Lilloetoul" (1 rancherie) (in the New Westminster District) (June 7th, 1862, The British Columbian). This almost certainly refers to Sleil-Waututh. By AD 1863, this settlement ("Slilloet") is indicated on the Crease Map (Crease 1863), and six years later in AD 1869 Launderers (1869a and 1869b) surveyed IR No.3 here. Launderers (1869a) indicated that the chief of this village was "Slack-whelt" (James Sla-holt, son of Wautsalk (II)). The name/title Sla-holt is still held by Tsleil-Waututh's hereditary chief Ernest I. George. This historical association of the modern Tsleil-Waututh Nation to the inhabitants of the village of Sleil-Waututh who occupied it in AD 1846 is beyond dispute.

553. The archaeological record at Sleil-Waututh is indicative of its long-term use (meaning over many centuries) as a village site, and the seasonally available resources from DhRr 20 indicates late winter, spring, and summer use. As these results are based on only a few liters of sampled midden, they must be considered very preliminary rather than definitive. Given that the trend in village sites in Burrard Inlet has been that greater analysis indicates year-round occupation, in the absence of information suggesting otherwise, one could assume that DhRr 20 was occupied essentially year-round (as DhRr 18, Lepofsky et al. 2007). At AD 1846, smallpox had decimated populations and villages had consolidated and relocated. And, in the early 19th century, the threat of Lekwiltok and later Haida raids would have had a major impact on Tsleil-Waututh settlement patterns and resource harvesting practices.
554. Around AD 1846, Tum-tumay-whueton was still the primary Tsleil-Waututh winter village site (most often described as the winter residence of the chief), but that the inhabitants of that village relocated to other defensible locations more proximate to resource patches for much of the rest of the year. A major draw to Sleil-Waututh would be the rich shellfish beds at Maplewoods mud flats. With a fort or palisade nearby, Tsleil-Waututh people could access these resources and have a relatively safe place to retreat to if raiders appeared. The location of Sleil-Waututh also provided immediate access to the watersheds of the North Shore Mountains, and, importantly, the seasonal and altitudinal variation in resource abundance there. And of course, Sleil-Waututh's beach provided canoe access to all marine and intertidal resources along the length of Burrard Inlet. This also includes canoe travel to other locations of the inlet, and inland travel from those landing points.
555. Least cost catchment ("LCC") analysis from Sleil-Waututh is an illustrative model of this area of proximate resource use (**Figure 48**). This model relies on the same parameters as that described above for Tum-tumay-whueton, but the village of Sleil-Waututh is the defined point of origin (see s. 4.7.1, *Defining Daily Foraging Radii/Calculating Least Cost Catchments*). At a glance, it is apparent that there is considerable overlap between the LCC areas of Sleil-Waututh with Tum-tumay-whueton (**Figure 46, Figure 48**). This is because the two villages are only 5.5 km apart and their marine catchment areas are each 26 km wide. Indeed, about 70% of Tum-tumay-whueton's catchment area is

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overlapped by Sleil-Waututh's catchment area. As will be seen below, this pattern of overlapping catchment areas is notable feature of this model. *Sleil-Waututh's catchment area within Burrard Inlet includes all of Port Moody Arm to the east, to First Narrows to the west. Inland, Sleil-Waututh's catchment area includes much of the North Shore Mountains, and much of north Burnaby, about as far south as Deer and Burnaby lakes (Figure 48).*

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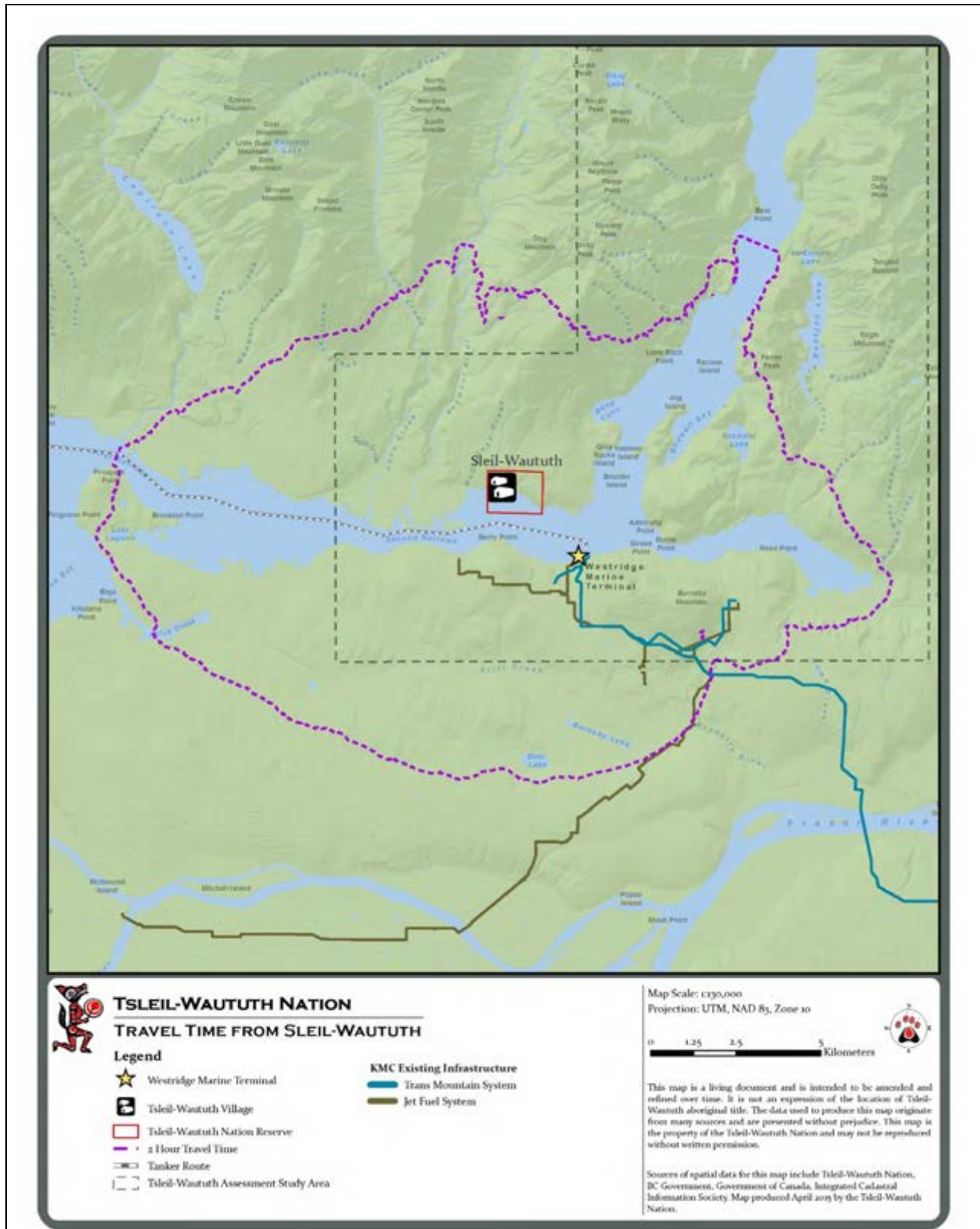


Figure 48. Least Cost Catchment area for Sleil-Waututh

556. *Sleil-Waututh's LCC area represents an approximation of that villages' maximum daily use area (e.g., a daily foraging radius). This includes lands and waters that were seasonally used on a daily basis by many people (e.g., clam beds, salmon streams, fish weirs, known/named fishing places, trolling areas, set net locations, stands of forest for firewood, cedar bark, cedar wood, animal and bird trapping areas, hunting areas, berry patches, medicinal plant areas, technological plant resources, and features and facilities built to process such resources, ritual bathing places, special seclusion places, look-outs, strongholds, fortifications, cemeteries). This would include open access resource areas, and rich resource patches that belonged to specific families. Given the very large percentage of overlap between Sleil-Waututh and Tum-tumay-whueton's respective catchment areas, these overlapped areas cannot have been wholly exclusive to a specific village. That is to say, these modeled catchment areas may theoretically correspond to the village-owned tracts and resource patches described by Kew (1970:4, 9) and Suttles (1951:58, 1955:26), but there must have been specific social mechanisms to govern access between communities and/or families. There would have been specific protocols of resource access based on kinship connections across villages that would have governed patterns of resource use that this model can in no way account for (see Snyder 1964).*
557. A heuristic map of the resources harvested by the inhabitants of Sleil-Waututh was not created because DhRr 20 has been only minimally investigated and very few species have been identified in those investigations.
558. This catchment area for Sleil-Waututh corresponds broadly to the patterning of more modern Tsleil-Waututh resource use. Tsleil-Waututh's traditional use study (TUS) data describes modern (i.e., ~1930 to 2010) Tsleil-Waututh resource use based from the community at Sleil-Waututh/IR No.3 (Tsleil-Waututh 2000, 2011). As described above, Tsleil-Waututh's TUS data (as elicited in map-based interviews) was recorded as a number of points, lines, and polygons in a database. The density based TUS maps below describe varying densities of reported resource harvesting sites for particular classes of resources (e.g., fish, shellfish, mammals, and birds).
559. A visual representation of the density of these TUS harvesting locations is very similar to the LCC area calculated for Sleil-Waututh. This TUS data is summarized in a series of maps below for a variety of resource categories such as shellfish, fish, birds, and mammals (**Figure 49, Figure 50, Figure 51**). That is, how many reported resource harvesting sites per square kilometer. A series of maps were created for Sleil-Waututh with a two-hour LCC area indicated and a density analysis of various food resource harvesting sites based on Tsleil-Waututh TUS data (Tsleil-Waututh 2000, 2010) (**Figure 49, Figure 50, Figure 51, Figure 52**). Sleil-Waututh/IR No.3 was the starting point for both the LCC modelling and the actual point of origin for almost most of the harvesting described in Tsleil-Waututh TUS data (Tsleil-Waututh 2000, 2011).
560. When these TUS density maps are compared to the two-hour LCC area modelled for Tsleil-Waututh, there is very close correspondence between the two, especially regarding fishing and shellfish harvesting (**Figure 49, Figure 50**). Part of this correspondence is

clearly related to the geography of the Study Area—movement on the Inlet and access to the resources in and immediately around it are constrained east-west in Burrard Inlet and north-south in Indian Arm. Part of this correspondence relates to the economizing principle (least effort); the closest resources will be harvested most intensively and more distant resources only after the close ones are unavailable. This principle generally remains valid whether considering travel in dugout canoes, foot travel or gas boats.

561. This correspondence between modeled resource use and recorded resource use indicates that this LCC model accurately predicts the actual patterns of Tsleil-Waututh fish harvesting from the modern village of Sleil-Waututh. The least cost model cannot be directly compared to past resource harvesting patterns, because such past patterns are not well documented (e.g., no one recorded the exact resource harvesting sites in or before AD 1846).
562. Above, it was described that the LCC model was found to correspond well to the recorded resource harvesting use from the modern village of Sleil-Waututh, especially fish and shellfish harvesting. We know that fish and shellfish were the primary staples of the pre-contact inhabitants of Sleil-Waututh. Despite the obvious habitat loss of the 20th century in Burrard Inlet, modern Tsleil-Waututh people (e.g., those who actively harvested foods, primarily from the 1940s–1970s) were harvesting resources at a remaining portion of the previously available pre-contact resource patches that their ancestors had harvested from for centuries. Shellfish beaches and fishing locations are finite in the Study Area. We know that past people, just like modern people, animals, systems etc, in general adhered to the principle of least effort. And thus the past people who lived in villages like Sleil-Waututh would have used the same lands, waters, and beaches as their ancestors, preferring proximate to distant resources. The LCC model then has the ability to predict both modern, ancient (pre-contact), and sovereignty-era daily foraging radii.
563. *With knowledge of pre-contact and sovereignty-era villages locations (e.g., archaeological village sites dated to those times) the LCC model can then estimate the extent of the regular, intensive use area (daily foraging radius) surrounding such villages.*
564. Comparable TUS data for the inhabitants of the other Tsleil-Waututh villages is, of course, not available because since the late 1860s most Tsleil-Waututh people have lived at Sleil-Waututh IR No.3.

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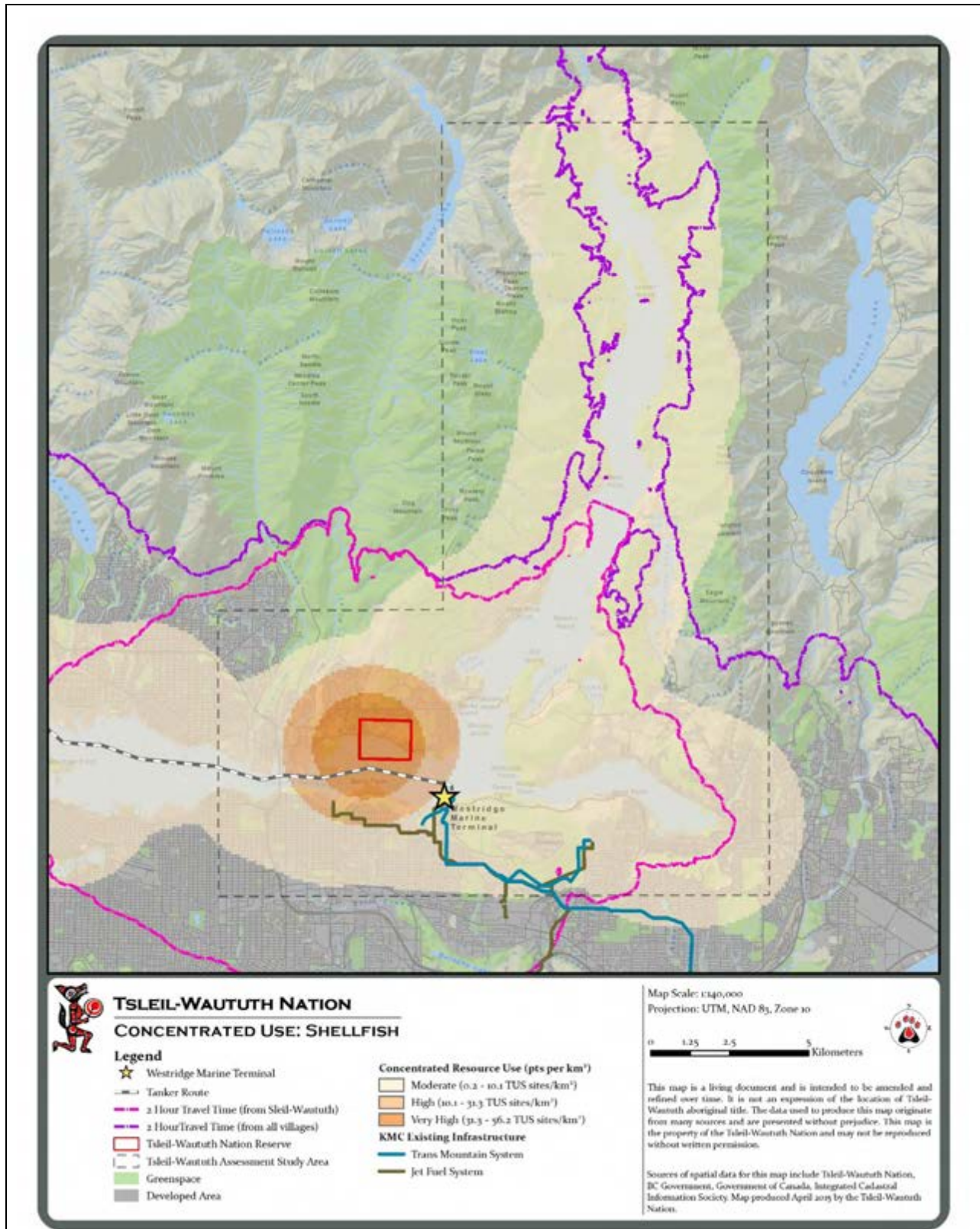


Figure 49. Concentrated use area map of shellfish collecting sites based on Tsleil-Waututh TUS data

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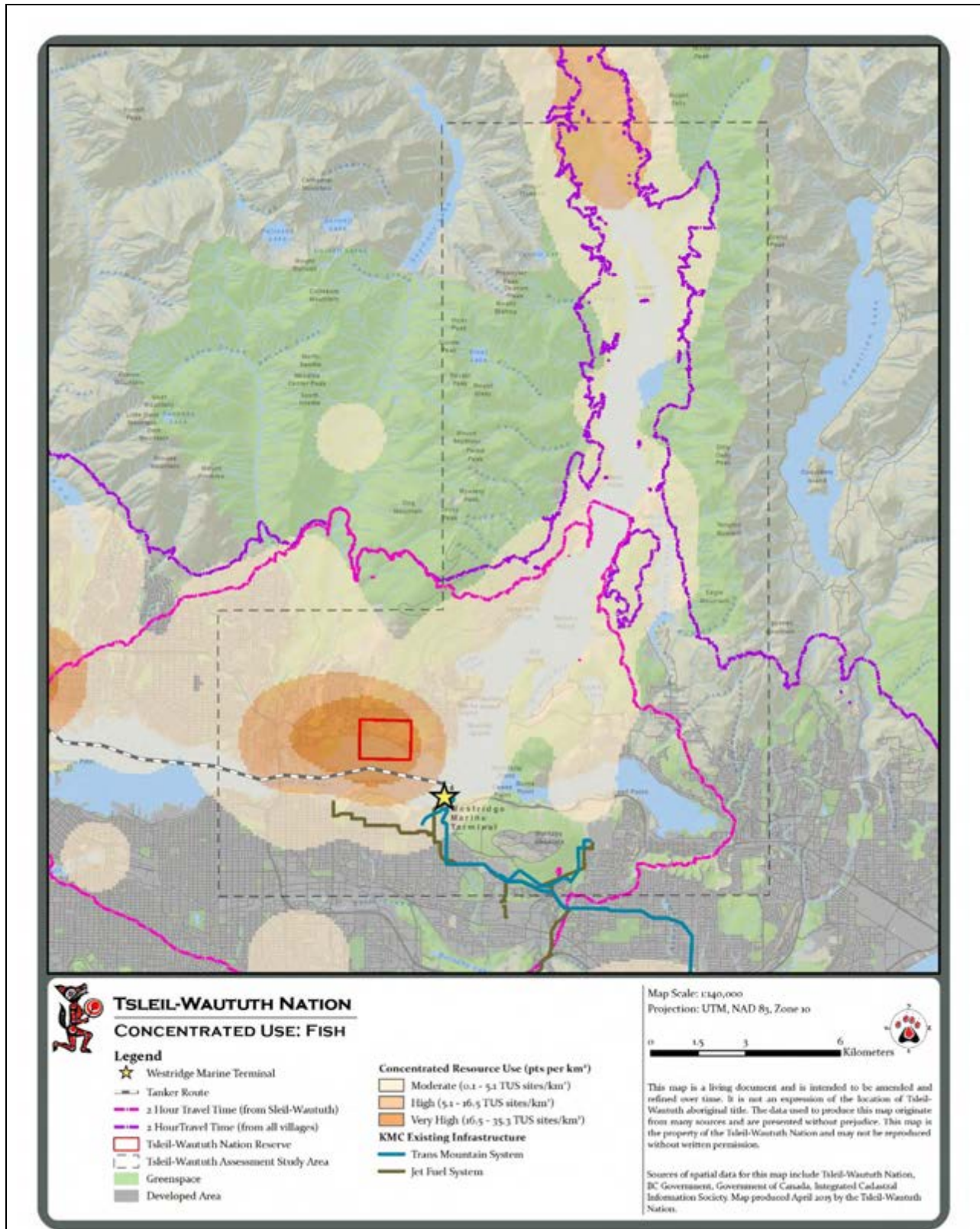


Figure 50. Concentrated use area of fishing sites based on Tsleil-Waututh TUS data

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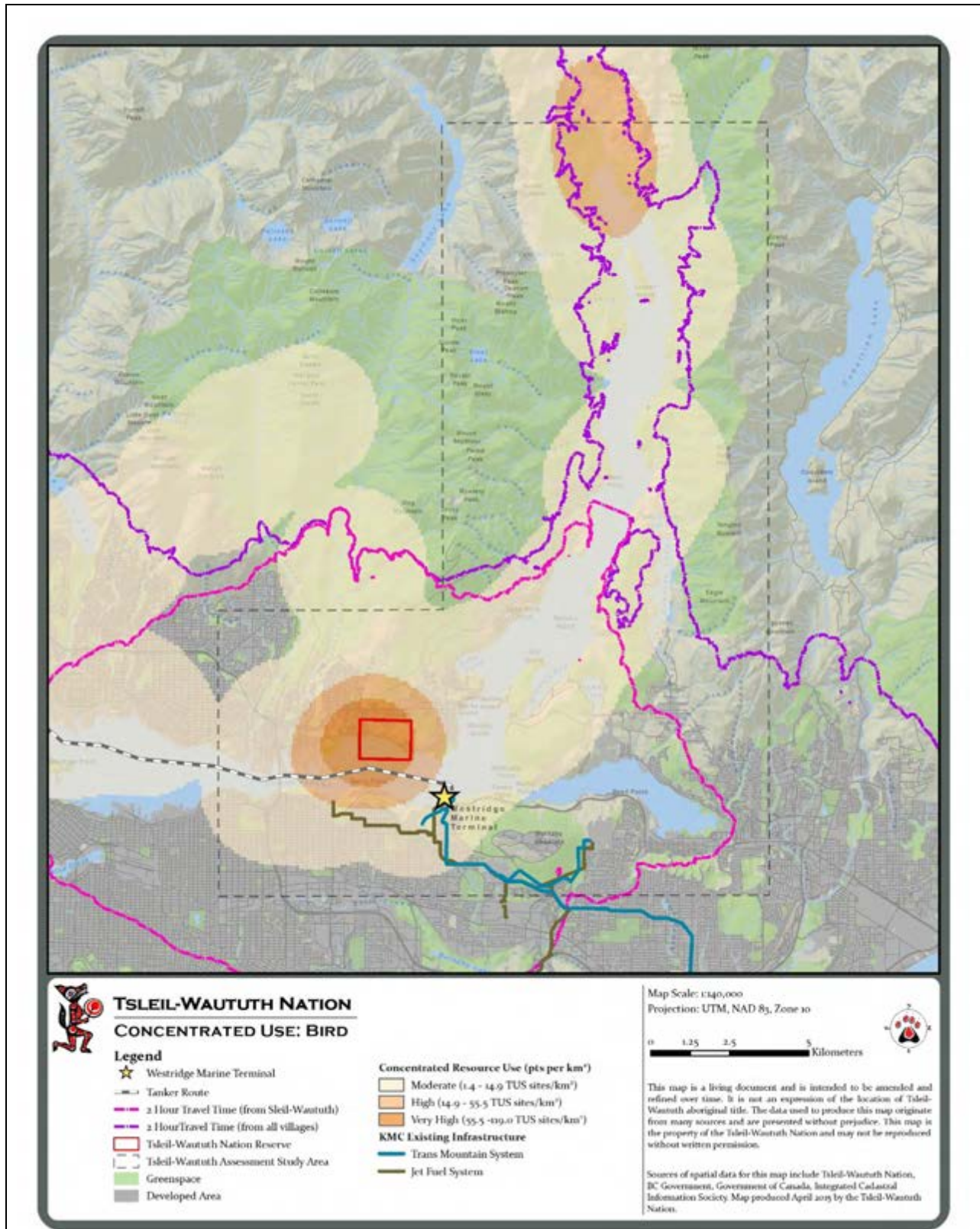


Figure 51. Concentrated use area of bird hunting sites based on Tsleil-Waututh TUS data

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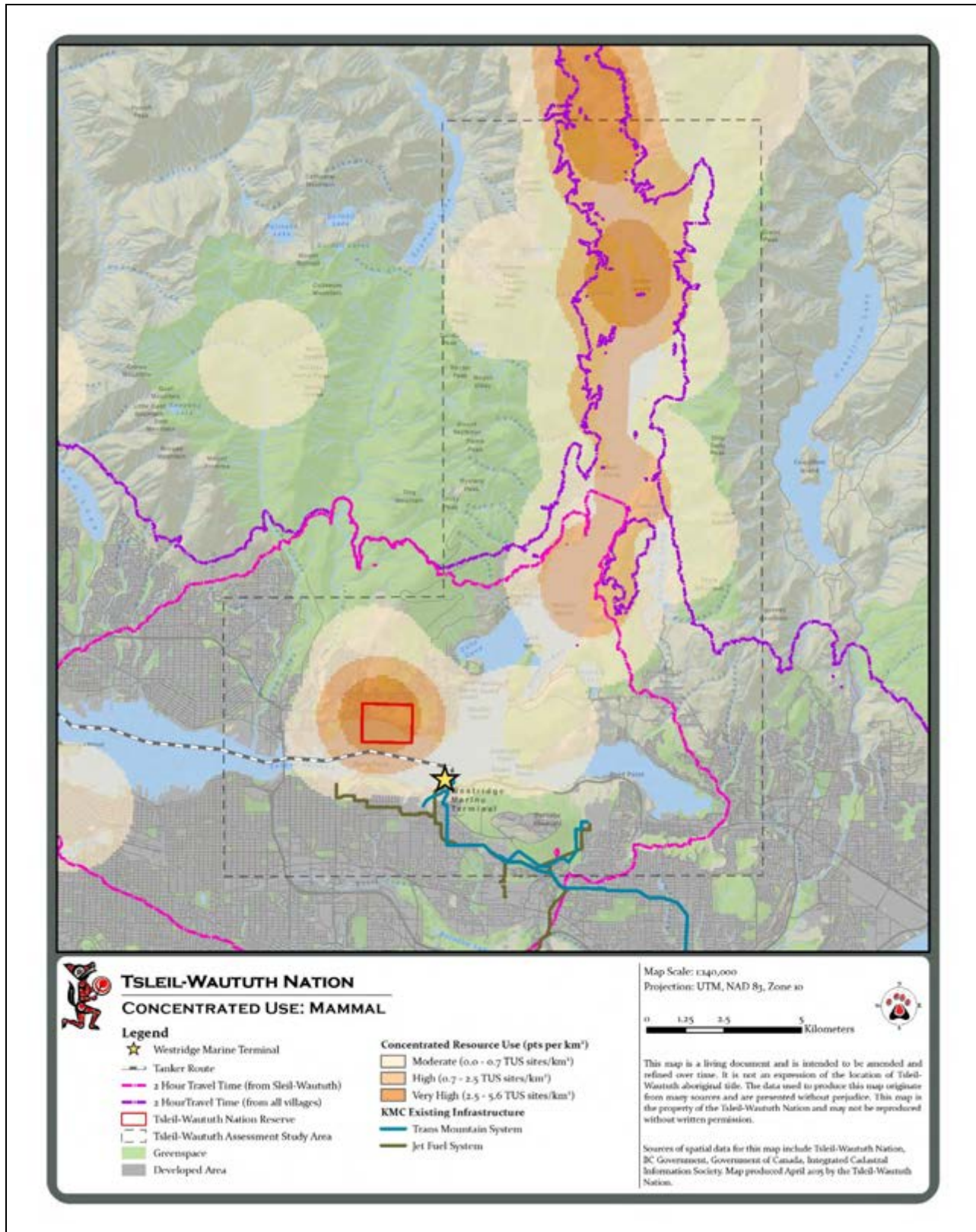


Figure 52. Concentrated use areas of Tsleil-Waututh mammal hunting activities as elicited in TUS studies compared to modelled least cost catchment

565. The majority of the archaeological sites likely corresponding to resource harvesting locations discussed above also fall within Sleil-Waututh's least cost catchment area (DhRr 9 Pigeon Cove is an exception). Based on the proximity of the Maplewoods fish weir (DhRs 312) to Sleil-Waututh, it is highly probable that a local family owned that specific fish weir. Many of the other small archaeological sites along the southern shore of Burrard Inlet are primary lithic scatters (small collections of stone artifacts or stone tool production debris) (e.g., DhRr 216, 212). Such sites occur at practically every location where one can land a canoe on Burrard Inlet. In my opinion, all of these types of small sites represent canoe landing places, where certain resource harvesting activities were undertaken and people may have camped. In many cases these are locations where canoes were landed and people would have traveled inland, from Westridge (DhRr 216, 212) to Burnaby Lake, for example. These small lithic sites cannot be dated with any accuracy (unless intact cultural deposits are identified nearby), so it cannot be known if they were specifically used at AD 1846, but in all probability they, and many other locations that were not preserved as archaeological sites were used regularly and intensively by the nearby inhabitants of Sleil-Waututh and other Tsleil-Waututh villages at and around AD 1846.
566. The earliest known map of Sleil-Waututh describes potato patches there (Launders 1869a) (**Figure 44**). As potatoes had been cultivated by Coast Salish peoples since at least the establishment of Fort Langley (AD 1827) (MacLauchlan 1998; Suttles 1987), in all probability these or other potato patches were cultivated at Sleil-Waututh in AD 1846.
567. No cemetery is indicated on the earliest map of IR No.3 (Launders 1869a). The present cemetery, dating at least to about AD 1900, and probably to centuries before then, would be located on the bottom left corner of the reserve adjacent to the stream (**Figure 28**). That being said, burial mounds and mass burials (likely smallpox victims) are reported on the archaeological site forms for the two large midden sites on IR No.3 (DhRr 15 and 20) (Archaeological Site form DhRr 15, DhRr 20). While undemonstrated, these two middens likely also contain burials, as is typical across the Coast Salish world. Tsleil-Waututh oral histories also specifically describe a mass burial of northern raiders killed at Sleil-Waututh, probably dating from about AD 1790–1840 (Tsleil-Waututh 2000a). There was undoubtedly one, in if not several cemeteries associated with the Tsleil-Waututh community that inhabited Sleil-Waututh at AD 1846.
568. In summary, there is a range of archaeological and oral history evidence to support the conclusion that Tsleil-Waututh ancestors had inhabited Sleil-Waututh as a village site for centuries prior to sovereignty, and at AD 1846. Tsleil-Waututh oral histories describe the actions of their ancestors here well before contact, and in the early historic period. The earliest post AD 1846 relevant historical documents (AD 1862–63) describe a village here ("Slilloet"), and a reserve was allocated here in AD 1869. The Tsleil-Waututh genealogy describes continuity in the descendants who lived at Tsleil-Waututh in the early 19th century, especially James Sla-holt and Catherine Unsakaloate, down to the current Tsleil-Waututh population at Sleil-Waututh. There is a direct historical

relationship between the AD 1846 Tsleil-Waututh community at Sleil-Waututh and the current Tsleil-Waututh community at Sleil-Waututh.

569. *The village of Sleil-Waututh was centrally located in the Burrard Inlet system, and this gave its inhabitants access to a wide array of environments across Burrard Inlet, into the North Shore Mountains, and into the Burnaby/Vancouver area. These areas were exploited seasonally on a near daily basis for the subsistence needs of people living at Sleil-Waututh.* The Tsleil-Waututh TUS data describes very intensive resource harvesting use, especially fishing and shellfishing in the Study Area, especially between Second Narrows and Indian Arm.

4.8.3 Whey-ah-wichen

570. As described above, the village of Whey-ah-wichen also has a deep history and has considerable evidence for occupation as a Tsleil-Waututh village site at AD 1846. There is a large shell midden here, likely indicative of a village (Charlton 1974; Lepofsky et al. 2007), and Tsleil-Waututh oral histories describe the location as a fortified village (Chief Dan George cited in the DhRr 8 site form). In 1972 Chief Dan George recounted that this site was said to be the primary village of the Tsleil-Waututh before Tum-tumay-whueton (Belcarra) (BC Archaeological Site Inventory Form for DhRr 8). Chief Dan George noted that battles had taken place at Whey-ah-wichen, a fortified palisade and tower were built at or near the site, and that there was a wooden cannon that accidentally blew up during use (BC Archaeological Site Inventory Form for DhRr 8). It is worth noting that fortified villages and beacons (watchtowers?) are reported in Captain George Vancouver's journals (1792) describing his explorations of the Salish Sea (Harris 1994:602; Lamb 1984:603). Given the oral histories of towers, palisades and cannons at this village, it was occupied from about AD 1790–1850, during the most intense periods of Lekwiltok raids into Coast Salish territory (Angelbeck and McLay 2012). Numerous Tsleil-Waututh participants in TUS studies described Whey-ah-wichen as a village site (Tsleil-Waututh 2000).
571. The range of radiocarbon dates here obtained from excavations at the large shell midden span in age from AD 405–1875 (Morin 2014, described in detail above), and there are numerous early historic-era artifacts from here as well (Charlton 1974). These most recent dates and historic artifacts provide strong evidence for occupation of Whey-ah-wichen as a village in AD 1846. The earliest historical documentation of Whey-ah-wichen as a village site comes from the 1863 Crease Map (Crease 1863) (**Figure 26**). In the Crease Map, the Tsleil-Waututh settlement at Roche Point is described as 'Tom-tumay-eoton' and 'Slillooet Indians', referring to Tum-tumay-whueton (**Table 3**). It is unclear why this name was relocated, he could have been confused, or it could be associated with the people from Tum-tumay-whueton who recently moved into the Roche Point area. In any case, Tsleil-Waututh occupation of Whey-ah-wichen as a village appears to have ceased by AD 1869, as no reserve was allocated there.

572. As described above, the long-term occupation of Whey-ah-wichen appears to be a winter village (contra Charlton 1974), but because of the unique historical circumstances at AD 1846 (i.e., post-smallpox and intensive Lekwiltok raids), it may have primarily become a spring/summer village at that time. That is to say, it probably still had a resident population through the winter, but that more people lived here in the spring and summer months. The palisade and look-out tower there would have provided greater security to the inhabitants of Whey-ah-wichen harvesting resources in the vicinity. Along these lines, at AD 1846, greater emphasis may have been placed on daily harvesting from a fortified village site (that is, Whey-ah-wichen) than on small temporary camps in the vicinity.
573. An LCC area was calculated for Whey-ah-wichen along the same parameters as described above for Tum-tumay-whueton and Sleil-Waututh (**Figure 53**). *Whey-ah-wichen is centrally located in the Burrard Inlet system and its LCC area includes almost all of Burrard Inlet, from Port Moody to just east of First Narrows (Figure 53). This indicates that almost all of Burrard Inlet, North Vancouver, north Burnaby, north Coquitlam, Port Moody, Deep Cove, and Belcarra would have been within the Tsleil-Waututh inhabitants of Whey-ah-wichen's regular intensive use area (daily foraging radius) at AD 1792 and AD 1846.* Because Whey-ah-wichen is less than 3 km east of Sleil-Waututh, the LCC areas for the two sites are very similar. About 23 km of the 26 km (linear) of marine catchment area of these two villages overlaps. About 82% of Whey-ah-wichen's catchment area overlaps with that of Sleil-Waututh. All of the attributes of Sleil-Waututh's catchment area described above generally hold for Whey-ah-wichen's catchment area as well. Similarly, visual representations of Tsleil-Waututh's TUS resource harvesting data are very similar to this modeled catchment area (**Figure 53, Figure 48**). Where Sleil-Waututh has immediate access to the rich clam beds at Maplewoods, Whey-ah-wichen has immediate access to the rich clam beds at Dollarton. As with the previously discussed villages, many archaeological sites likely represent temporary resource harvesting camps fall within Whey-ah-wichen's catchment area.

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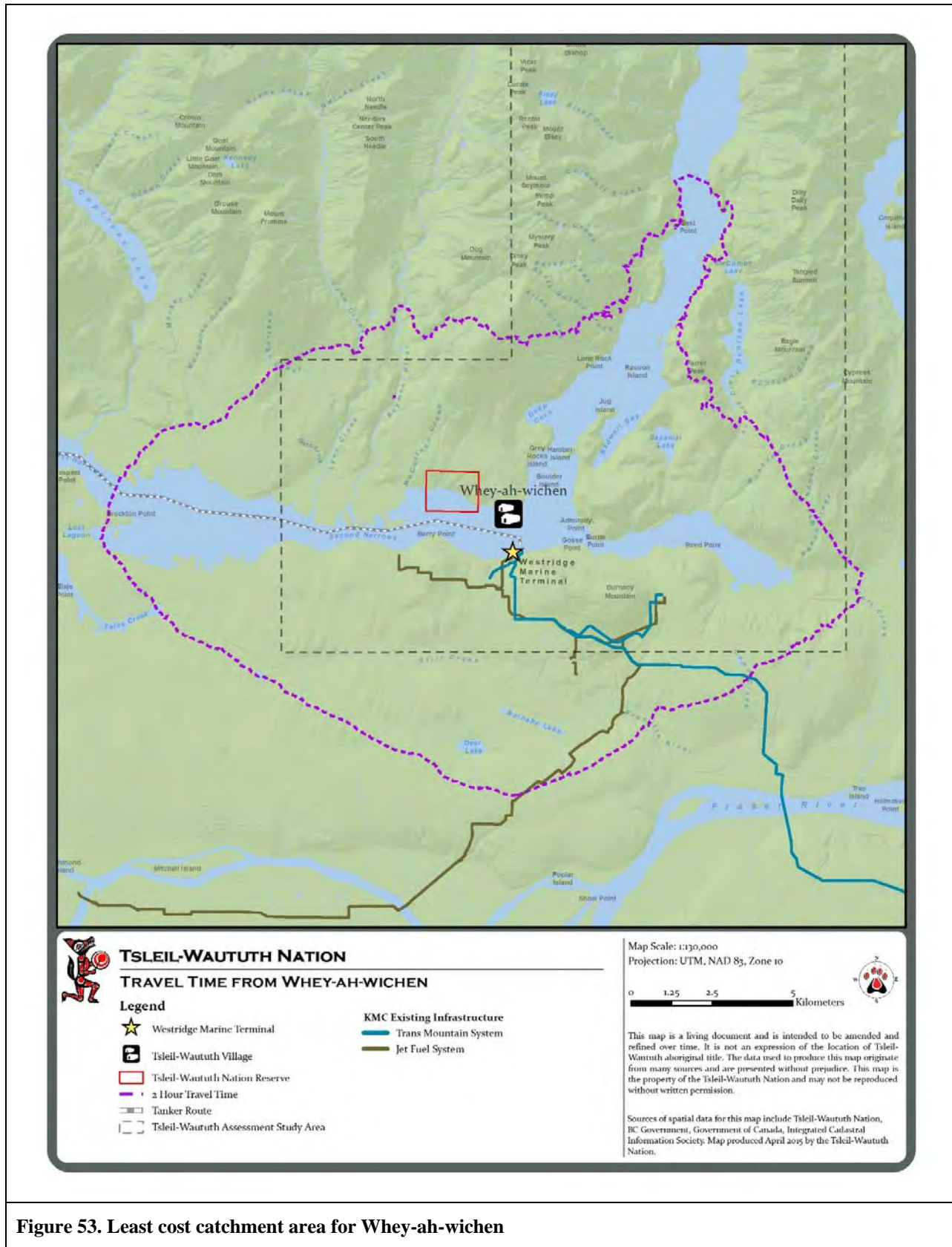


Figure 53. Least cost catchment area for Whey-ah-wichen

574. *The most important point of this model is that it describes an area that was likely seasonally utilized on a near-daily basis for resource harvesting by the inhabitants of Whey-ah-wichen. To reiterate, this would include shellfish harvesting along almost the entire length of Burrard Inlet, fishing across almost all of Burrard Inlet and the lower half of Indian Arm, berry harvesting, hunting and trapping across the lower reaches of the North Shore Mountains, and much of the Burnaby/Vancouver/Coquitlam area.*
575. As with Tum-tumay-whueton, a rich assemblage of faunal remains have been recovered in archaeological investigations of the Whey-ah-wichen midden (Charlton 1974) (**Table 9**). Most of these resources were probably harvested within the 2 hour LCC described here for Whey-ah-wichen, and brought back to Whey-ah-wichen for processing and consumption, although it is possible that some were brought from beyond it. A heuristic description of these harvesting activities is presented in **Figure 54**.

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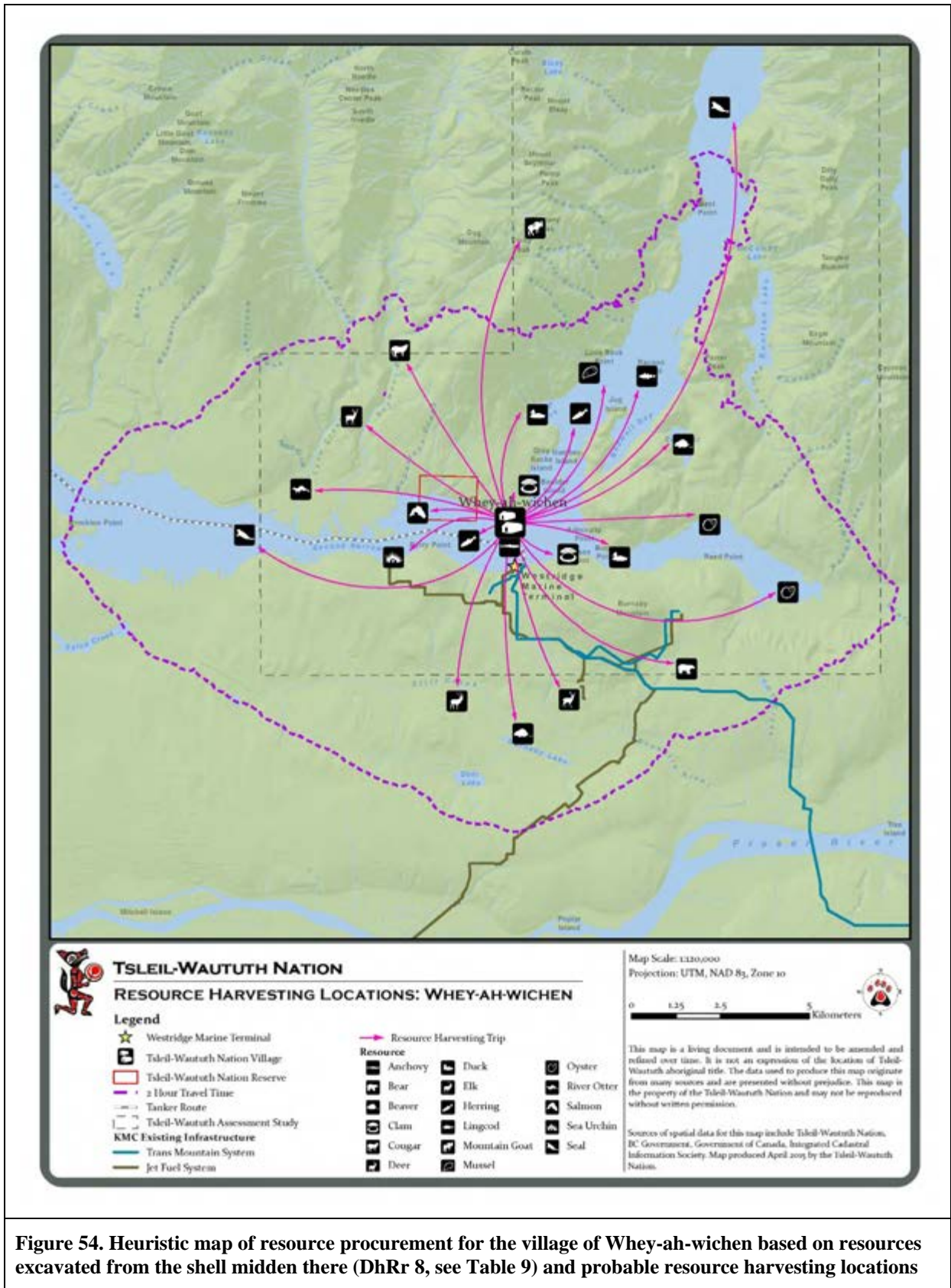


Figure 54. Heuristic map of resource procurement for the village of Whey-ah-wichen based on resources excavated from the shell midden there (DhRr 8, see Table 9) and probable resource harvesting locations

576. While no gardens or potato patches are described for Whey-ah-wichen, they very likely existed in association of the circa AD 1846 village there. As is typical for large middens in Coast Salish territory, several burials have been reported from DhRr 8, the midden that corresponds to the Whey-ah-wichen village. In 1961, earth moving activities carried out by the District of North Vancouver exposed a burial of two individuals associated with approximately 50,000 stone beads (DhRr 8 site form, Tsleil-Waututh 2001:216–217); at least one of these individuals was very wealthy. Oliver (1998) describes an early-historic era burial uncovered here, and in late 2012, human remains eroded from the shell midden on to the beach here (Morin 2013). Whey-ah-wichen, like all other Tsleil-Waututh midden sites should be considered a cemetery and a village site.
577. *In summary, there are multiple lines of evidence that support Tsleil-Waututh's occupation of Whey-ah-wichen as a village site around AD 1846. There is overwhelming evidence for long term indigenous occupation of Whey-ah-wichen since about AD 500. Because this village is so close to Sleil-Waututh, the area of regular intensive use around Whey-ah-wichen is practically identical to that of Sleil-Waututh. This area includes practically all of eastern Burrard Inlet and much of the land draining therein.*

4.8.4 Reed Point

578. The village site at Reed Point differs from those previously described in that the vast majority of the evidence regarding its use and occupation comes from archaeological data alone. The circa AD 1846 village at Reed Point is similar to Whey-ah-wichen and Sleil-Waututh in that it was fortified and it may have been primarily occupied in the summer, rather than winter. Several Tsleil-Waututh individuals described this location as a settlement site in Tsleil-Waututh's traditional use studies (2000, 2011).
579. The range of archaeological features or separate sites at Reed Point was described in detail above. Briefly, these consist of several shell middens (DhRr 16, DhRr 373, DhRr 372), an intensive elderberry processing area (DhRr 373), culturally modified trees (DhRr 370), a canoe shoot (DhRr 370), many mound and pit features (DhRr 371), and several trench embankment features (DhRr 369) (Ham and Yip 1992). This trench embankment site is particularly relevant evidence of Tsleil-Waututh exclusive use here, because it demonstrates the active defense of their homeland against outsiders, and there is a reasonable probability that use of the site spans pre-contact, contact, and sovereignty (AD 1846). Recent reinvestigation (personal observation) of this site complex indicates that the cultural materials here are even more widespread than as described by Ham and Yip (1992) (Ham and Yip worked within a limited area of planned development there). Additional testing and excavation of these sites is scheduled for this summer (2015).
580. As described in detail above (**Table 16**), a range of radiocarbon dates obtained by Ham and Yip (1992) from the trench embankment feature (DhRr 369) and elderberry processing feature (DhRr 373) calibrate to AD 1286–1956. This evidence suggests near continuous use and occupation of this area during that period. As described in detail above, fortified village sites were especially common among the Coast Salish in the early

19th century in response to Lekwiltok raids. There is then, a very high probability that the Reed Point site complex was occupied as a village site, perhaps primarily a summer village, around AD 1846. Almost all of the seasonal indicators available from this site suggest it was occupied between June and November (Ham and Yip 1992).

581. LCC areas were also calculated for Reed Point (see *Defining Daily Foraging Radii/Calculating Least Cost Catchments*). As Reed Point is the easternmost Tsleil-Waututh settlement that was probably occupied around AD 1846, its catchment area is shifted notably to the east compared to the previously mentioned sites (**Figure 55**). Like all the other villages, the catchment area for Reed Point is focused on eastern Burrard Inlet (up to about the Second Narrows). No heuristic map of possible resource harvesting sites was created for Reed Point because only a very few faunal species have been identified in excavations there (as with Sleil-Waututh and Inlailawatash).
582. Reed Point is located only a short distance to the rich shellfish beds at the head of Port Moody. Dissimilar to the other villages, *Reed Point has a very large catchment area in the Port Moody, Burnaby, and Coquitlam areas, and extends to the Fraser River near New Westminster. This should be considered the regular intensive use area for the inhabitants of Reed Point.* The well-known trail from Port Moody to the Fraser River that became “North Road,” was a major route of access to the Fraser River from eastern Burrard Inlet (see Hayes 2005:31; Kennedy and Bouchard 1987:37).
583. *While Reed Point is dissimilar to typical winter village sites, the range of archaeological features or sites there provide rich evidence for intensive use and occupation of the area in the summer by large numbers of people—that is, a summer village. It is unique among Tsleil-Waututh villages occupied around AD 1846 in that it had relatively direct access to the Fraser River.* It is also unique in that almost all the evidence regarding Tsleil-Waututh use and occupancy here is derived from archaeological data. That being said, it is highly probable that Tsleil-Waututh people inhabited this place as a summer village around AD 1846.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
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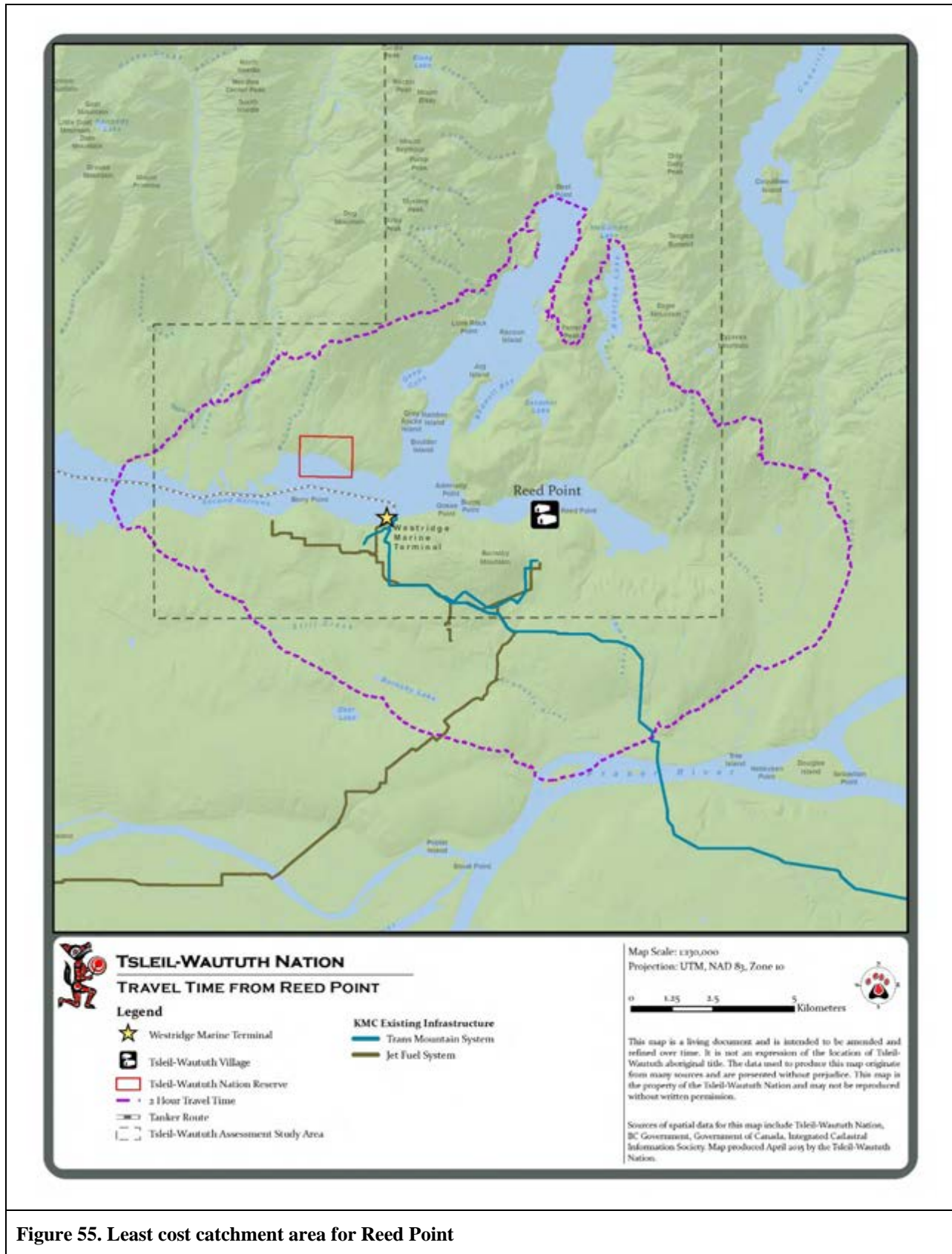


Figure 55. Least cost catchment area for Reed Point

4.8.5 Inlailawatash

584. The village of Inlailawatash was a major part of the Tsleil-Waututh seasonal round and was almost certainly occupied at AD 1846. Inlailawatash is located about 1 km upstream of the Indian River at the head of Indian Arm. The village site there corresponds to the archaeological site DiRr 18, but currently (as of June 27, 2014) recorded site boundaries drastically under represent the size of this village (see DiRr 18 site form); the house features apparent on the surface of Inlailawatash extend for about 300 m along the west bank of the river and 200 m along the east bank of the river. This site consists of multiple house platforms on both banks of the Indian River (**Figure 38**). Historic era artifacts are copious across the surface of the site. The western portion of this site appears to have been fortified with a significant trench embankment feature. Several Tsleil-Waututh participants in TUS projects described this location as a village site (Tsleil-Waututh 1999, 2000, 2011), and most often described it as a fall fishing village. A recorded Tsleil-Waututh oral history indicates that Waut-salk (II) died in battle here with raiders from Alert Bay (Menziés 1934). This is said to have occurred around AD 1840. The construction of this trench embankment feature likely dates to this period of intensive raids as well.
585. Unlike the other village sites described up to this point, the Spanish explorers described their First Contact experience with the indigenous people they encountered here on June 23, 1792 (Wagner 1933:265–266); these people were almost certainly Tsleil-Waututh. In AD 1876, the JIRC allocated a small reserve there (IR No.4) as a fishing station, and later established a second reserve (IR No. 4a) on the opposite bank of the Indian River.
586. An LCC analysis was also undertaken for Inlailawatash (**Figure 56**). Inlailawatash's least cost catchment is markedly different from the previous four, in that it is constrained by the steep mountains of the immediate steep valley/fjord environment. Also, the LCC area for Inlailawatash is nearly exclusive of the LCC areas calculated for the other village sites. *In this case, the 2-hour LCC includes most of Indian Arm, the lower ~8 km of the Indian River Valley, and the lower reaches of some of the major creeks in the vicinity (Figure 56). That is to say, areas used for resource harvesting here were primarily: 1) the marine waters of Indian Arm, 2) the lower reaches in the Indian River, and 3) the valley bottom of the Indian River. These should be considered the regular intensive use areas (daily foraging radius) for the Tsleil-Waututh inhabitants of Inlailawatash at AD 1792 and AD 1846.* A heuristic map of probable resource harvesting sites was not developed for Inlailawatash, because samples have not been excavated or analyzed from there.
587. The LCC area calculated for Inlailawatash (**Figure 56**) is also very similar to the TUS density maps for fishing (**Figure 50**), bird (**Figure 51**), and mammal hunting (**Figure 52**) data. Again, this predictive ability of the LCC modelling is related to: 1) the steep topography of the area, and 2) the spatial distribution of resources in the study area. As these two attributes have, relatively speaking, remained constant in the past, the LCC modelling can predict past landscape/seascape use.

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588. In short, there is very robust evidence for continuous use and occupation of Inlailawatash by Tsleil-Waututh prior to contact, at contact and through sovereignty. Circa AD 1846 occupation of Inlailawatash fits the pattern of other Tsleil-Waututh village sites in Burrard Inlet in that it was fortified and has a markedly seasonal occupation. Inlailawatash's regular, intensive use area includes the northern half of Indian Arm and the lower about 8 km of the Indian River Valley.

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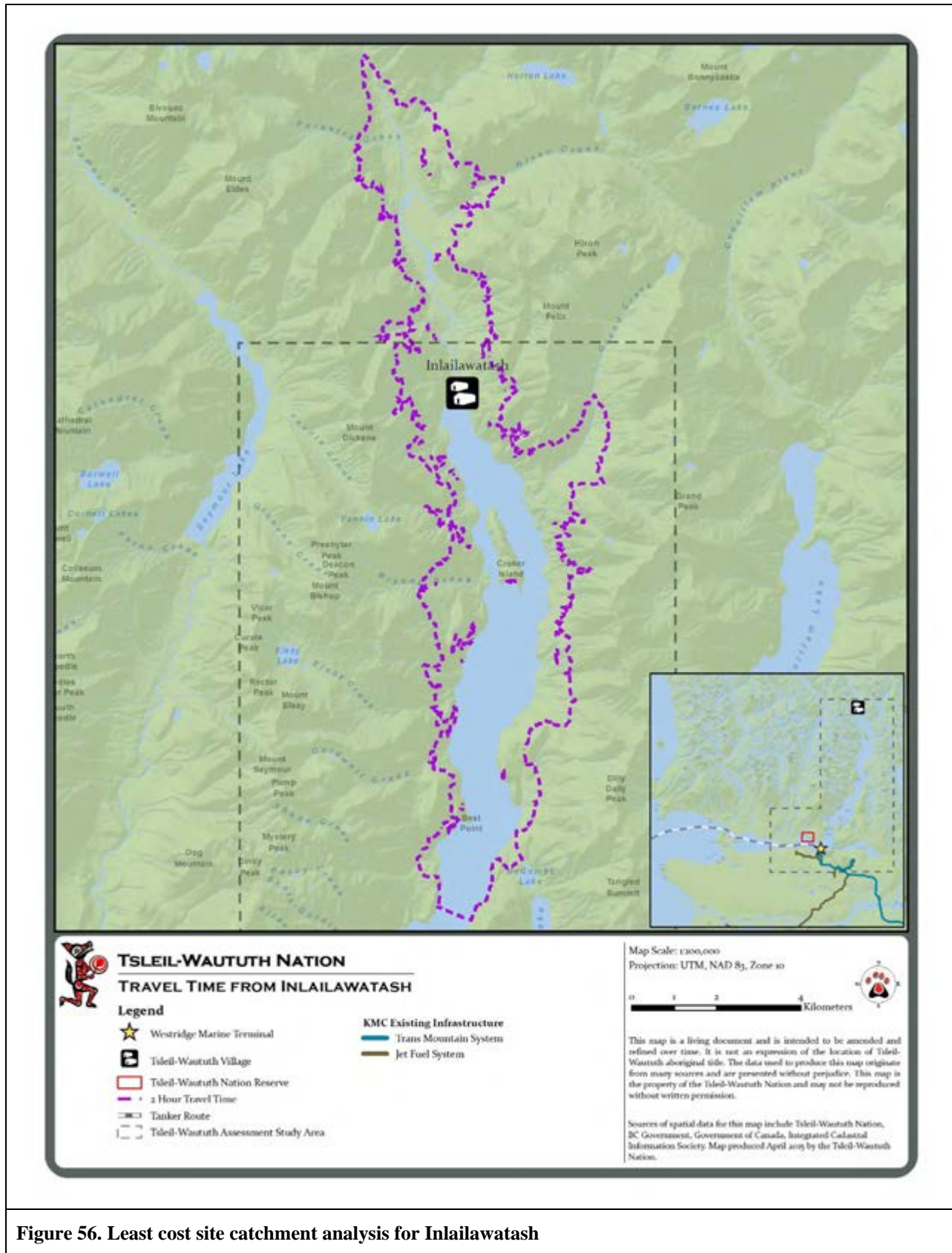


Figure 56. Least cost site catchment analysis for Inlailawatash

4.8.6 Other Tsleil-Waututh Villages Possibly Occupied at AD 1846

589. The discussion of village sites up to this point has only included those villages which I think have very strong evidence of occupation at around AD 1846. Several other villages, including Say-mah-mit (DhRq 1), Say-umiton (DhRr 18), and Say-mah-pit (DhRr 17) have a reasonable probability of also having been inhabited/occupied at AD 1846. Alternatively, due to depopulation and warfare, these villages may have transformed into resource harvesting camps or areas around the time of sovereignty. All three of these villages are large shell middens that have been excavated.
590. Barton's (1990) excavations at Say-mah-mit were primarily in archaeological deposits dating to about 86 BC to AD 560. However, Barton's (1990) excavations focused on one small area of a relatively large site. Other portions of this large site may very well date to the early historic era. Recall that in terms of area, this is the largest site in Burrard Inlet. As described above (*Archaeological Villages DhRq 1*), contact-era artifacts are reported from excavations (Stantec 2010:40), and museum collections (Hutchingson Collection, Port Moody Museum) to provide evidence of early historic era Tsleil-Waututh occupation here. Additionally, the triangular side-notched projectile points suggest Gulf of Georgia-aged (AD 800–1792) occupation here. An LCC area was also calculated for Say-mah-mit (**Figure 57**).

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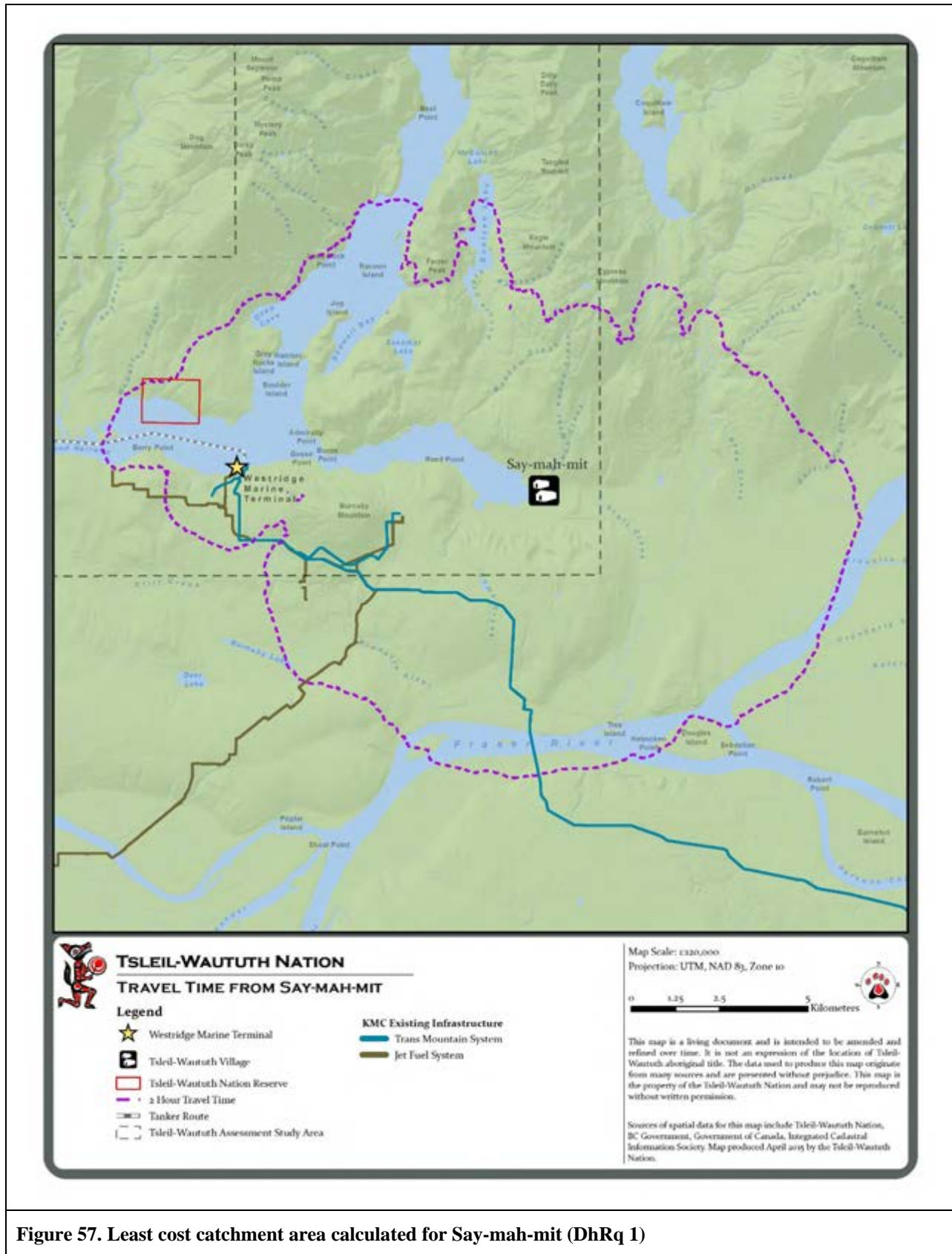


Figure 57. Least cost catchment area calculated for Say-mah-mit (DhRq 1)

591. The LCC area calculated for Say-mah-mit (DhRq 1) differs markedly from the others so far described. The reason for this is because Say-mah-mit is located at the eastern end of Burrard Inlet in Port Moody (**Figure 57**). *Say-mah-mit's LCC area includes Burrard Inlet to Second Narrows and the Port Moody area to the Pitt River. Notably, this LCC area also includes the Fraser River around Coquitlam. This suggests that the inhabitants of Say-mah-mit could have harvested resources on the Fraser River (e.g., fish) and brought those resources back to Say-mah-mit on a daily basis. This should be considered the Tsleil-Waututh's regular intensive use area (daily foraging radius) inhabitants of the Say-mah-mit's inhabitants.*
592. It differs from other Tsleil-Waututh village LCC areas because it includes much less water and shoreline than any of the other Tsleil-Waututh village sites (Morin and Hunt 2014), implying a more terrestrial subsistence focus. In order to further describe that nature of landscape/seascape use from Say-mah-mit, **Figure 58** describes the generalized locations where resources recovered from the Say-mah-mit midden (**Table 15**) could have been harvested.

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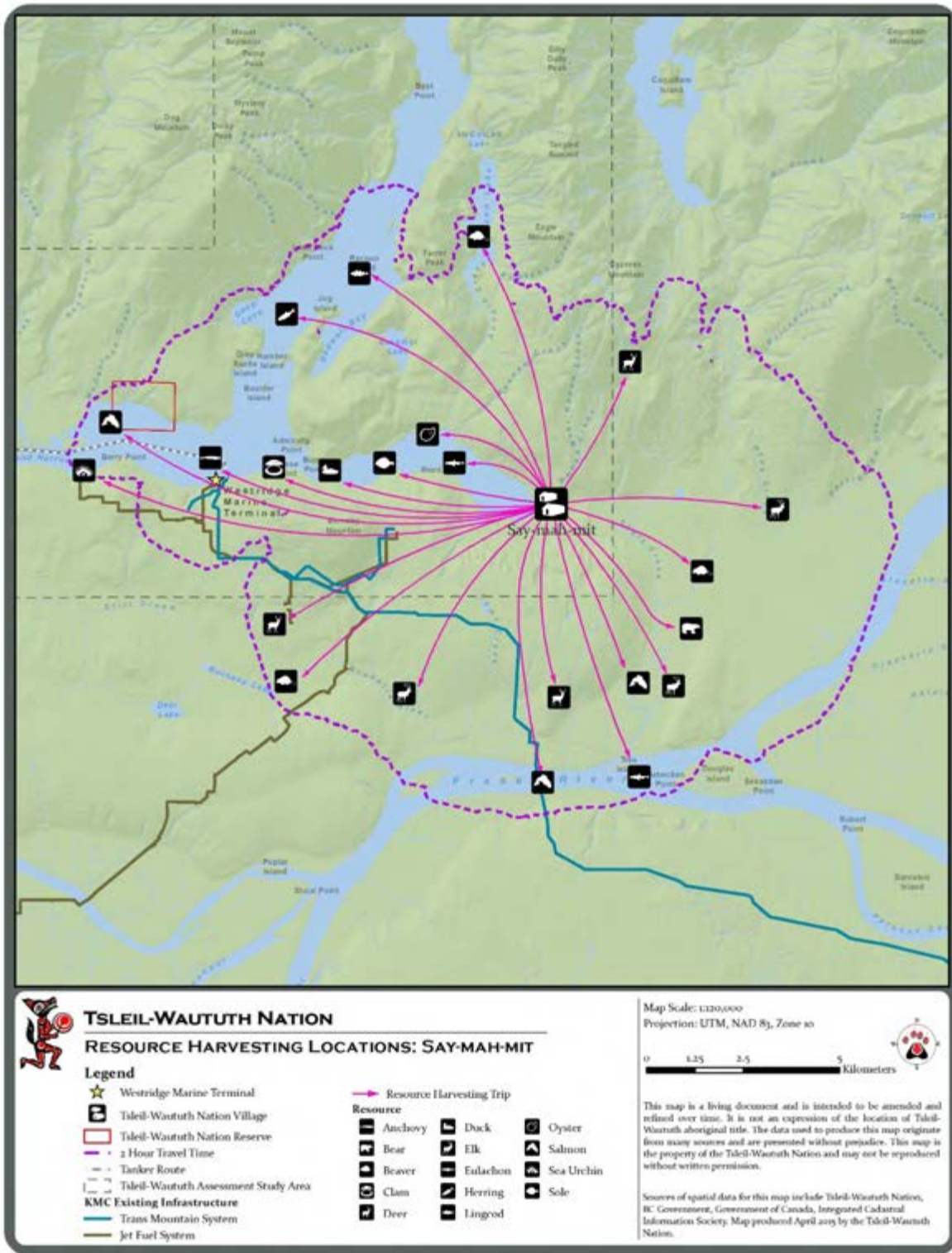


Figure 58. Heuristic map of resource procurement by the inhabitants of Say-mah-mit based on resources excavated from the shell midden there (DhRq 1, see Table 15) and probable resource locations

593. Tsleil-Waututh's past hereditary chief John L. George (Sla-holt) indicated that this part of Port Moody was occupied by Tsleil-Waututh as a village, perhaps as a low-class village (Tsleil-Waututh 1999:40). Paddy George (1990:2) also indicated that there used to be a village at "Imperial Oil" in Port Moody. He indicated that this was one of three Tsleil-Waututh villages that used to exist in Port Moody (the other two likely being Reed Point and Say-mah-pit). Similarly, Old Pierre described a *stacem* (low class) village located near Ioco in Port Moody (Jeness 1955:86). In short, there is limited evidence that Tsleil-Waututh occupied Say-mah-pit around the time of contact and sovereignty.
594. Although Say-mah-mit may not have been inhabited as of AD 1846, people from other Tsleil-Waututh village sites almost certain still harvested resources in this area. There were very extensive shellfish beds in Port Moody, and waterfowl are presently relatively numerous.
595. Say-umiton (DhRr 18) is also a large shell midden that has Tsleil-Waututh oral histories regarding its use as a village site (George 1990:6; Lepofsky et al. 2007). The limited excavations at this site primarily identified a habitation structure dating to about AD 1000-1170 (Lepofsky and Karpiak 2001; Lepofsky et al. 2007; Morin 2014), but also identified a feature dating to about AD 1452-1634 (Morin 2014). As with Say-mah-mit, excavation of other areas of this large site could very well identify early historic era occupation here. Paddy George (1990:6) indicated that all of the Tsleil-Waututh people who lived here died in the "Black Plague." It is unclear if this refers to the earliest AD 1782 smallpox epidemic, or the later circa AD 1853 epidemic. Again, while there is substantial evidence for Tsleil-Waututh occupation of Say-umiton as a village site in the centuries prior to AD 1846, direct evidence for indigenous inhabitation here at the time of sovereignty is presently fairly limited.
596. In order to describe the nature of landscape/seascape use from Say-umiton, an LCC area was created using Say-umiton as a starting point (**Figure 59**). *Because of the proximity of Say-umiton to its neighbors (Tum-tumay-whueton is 1.4 km to the east and Whey-ah-wichen is 2.2 km to the west), its LCC area extends from Port Moody to just east of First Narrows and includes all of north Burnaby, the lower half of Indian Arm, and the North Shore Mountains. This should be considered the Tsleil-Waututh inhabitants of Say-umiton regular intensive use area (daily foraging radius).*

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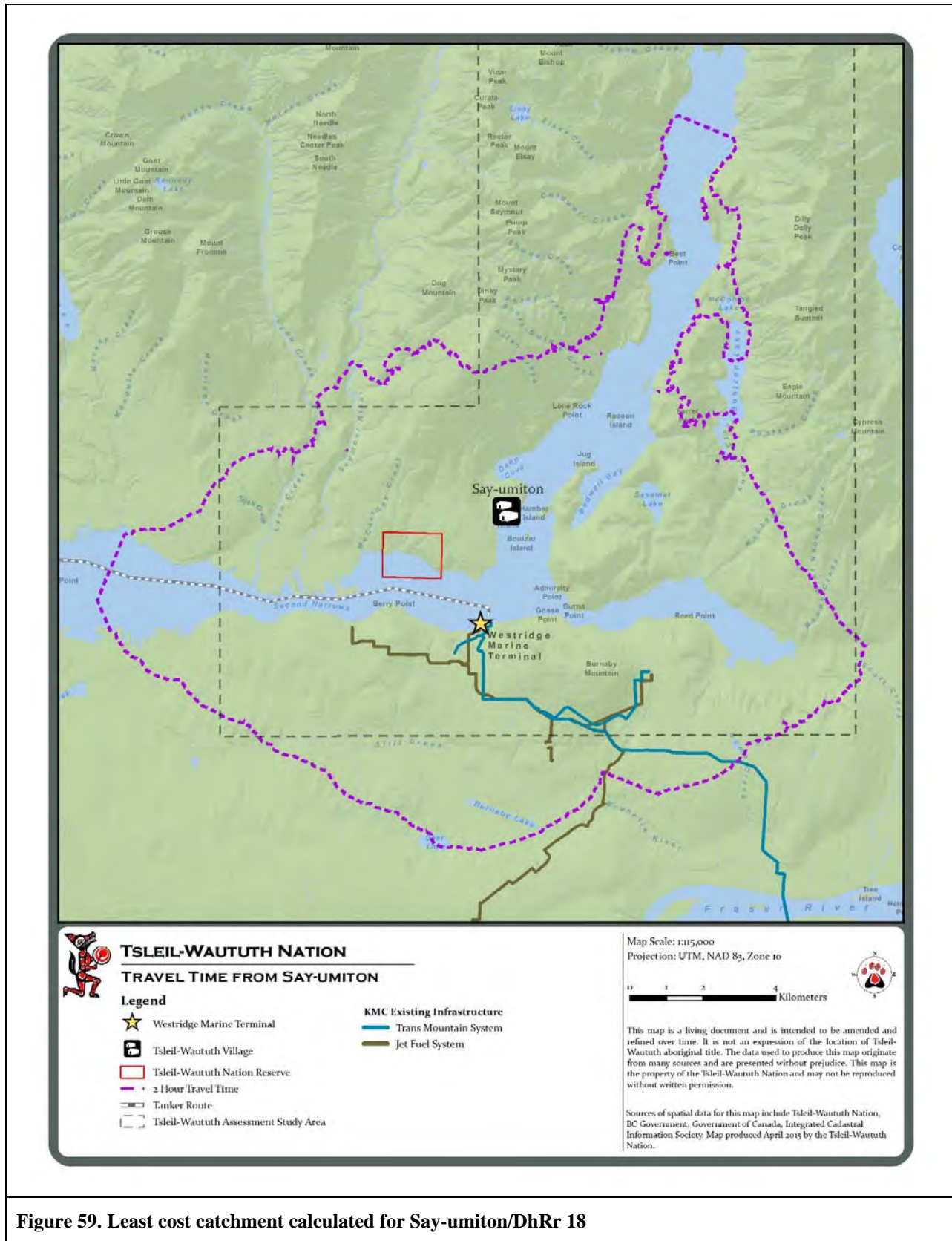


Figure 59. Least cost catchment calculated for Say-umiton/DhRr 18

597. To illustrate where specific resources recovered from the archaeological midden at Say-umiton/DhRr 18 could have originally been harvested, I created **Figure 60**. Again, this heuristic map describes where the resources identified in the shell midden at DhRr 18 (**Table 11**) were likely harvested given knowledge of local species habitat and documented preferred harvesting locations (**Figure 60**). Say-umiton is a centrally located village site that was well-positioned to take advantage of a range of environments.
598. Say-mah-pit (DhRr 17) is another village and large shell midden site that may have been occupied at AD 1846. This shell midden was excavated in 1973 (Struthers 1973), but the results were very poorly documented. The most recent radiocarbon date obtained from here calibrates to AD 1331–1654 (McMillan 1982). The earliest date from this site indicates occupation here began around 1000 BC. As with the two other sites described above, dates obtained from near-surface deposits elsewhere at the site could very well date to the early historic era. Similar to the previous two sites, there is substantial evidence for Tsleil-Waututh occupation of Say-umiton as a village site, the evidence of its occupation around AD 1846 is, however, presently limited. This site could be further investigated specifically targeting recent deposits that could identify sovereignty era occupation here.

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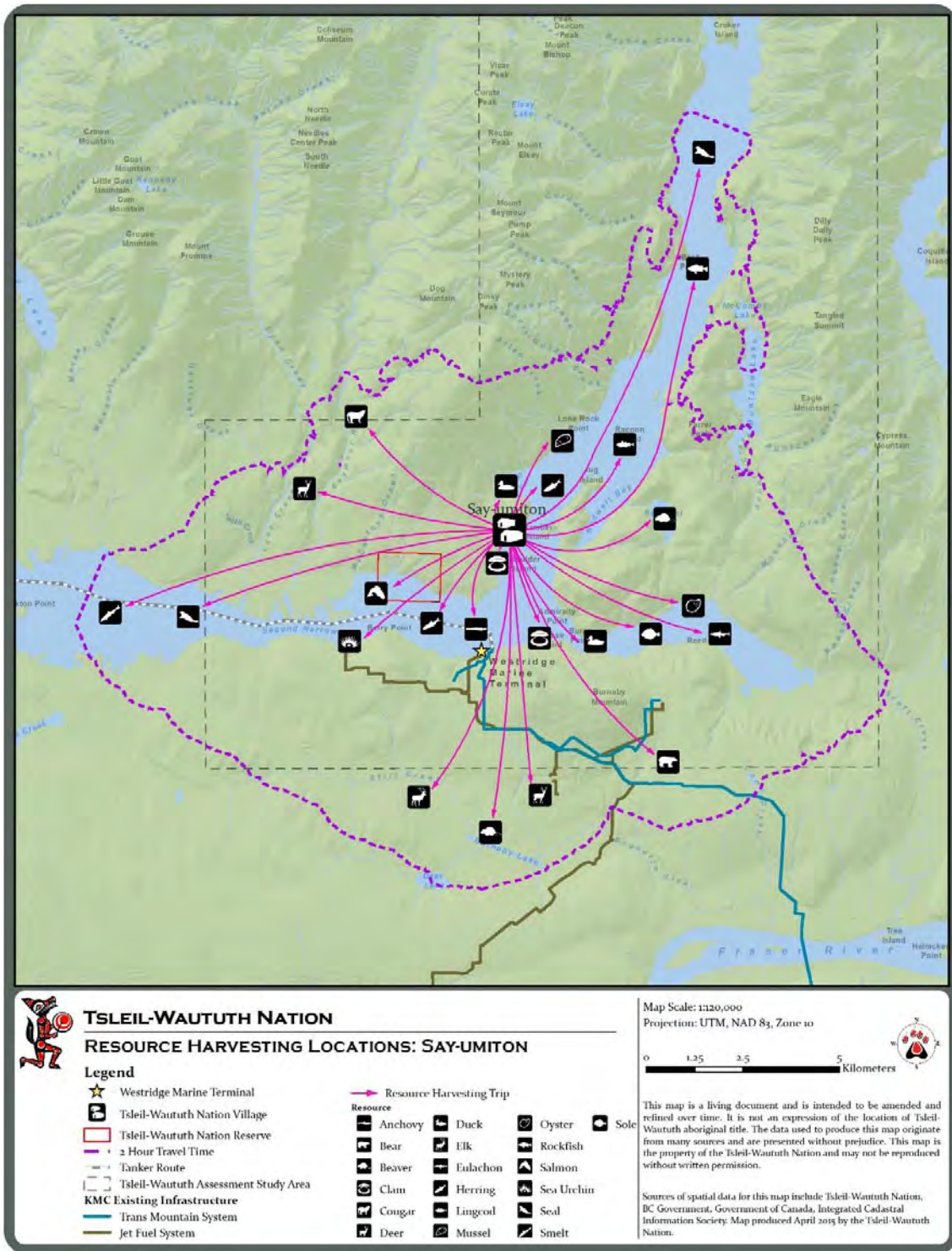


Figure 60. Heuristic map of resource procurement by the inhabitants of Say-umiton, based on the resources excavated from the shell midden there (DhRr 18, see Table 11) and probable resource harvesting locations

4.8.7 Village Summary

599. In the sections above, I described a number of villages in the Study Area that were:
- inhabited by ancestral Tsleil-Waututh people;
 - major places of residence; and
 - locations from which they harvested a wide range of resources from the local environment.
600. Five village sites (Tum-tumay-whueton, Sleil-Waututh, Whey-ah-wichen, Reed Point and Inlailawatash) have evidence of use and occupation for centuries prior to and as of AD 1846. Three other village sites were also described here (Say-mah-mit, Say-umiton, and Say-mah-pit) that also had evidence of use and occupation prior to AD 1846, but had limited evidence for inhabitation at the time of sovereignty. I contextualized these sites in terms of their seasonal use as part of Tsleil-Waututh's probable seasonal round at AD 1846. I described a GIS LCC model to describe a probable daily foraging radius from each settlement that should be taken as an approximation of areas of regular intensive use. In the case of Sleil-Waututh, comparison of the LCC area was found to correspond closely to the modern Tsleil-Waututh TUS data for resource harvesting. This correspondence indicates that the model accurately predicts recent Tsleil-Waututh harvesting practices, and suggest that it also accurately predicts historical Tsleil-Waututh harvesting practices.
601. A major feature of these catchment areas is that, no matter which Tsleil-Waututh village is used as an origin point, the catchment areas overlap considerably. *This means that the exact location of the villages occupied at AD 1846, whether it was Sleil-Waututh, Tum-tumay-whueton, Whey-wichen, or Reed Point, has relatively limited impact on the area of regular intensive use by the inhabitants of that village.* Coast Salish canoe technology (see Ames 2002; Blake 2010) allowed for regular intensive use of all the lands and waters of eastern Burrard Inlet by any of the villages described above. The only exception to this statement is Inlailawatash, which is located 2–3 hours north (by canoe) from these other villages.
602. This feature is described visually in **Figure 61**. In **Figure 61**, the 2-hour LCC area has been calculated for each Tsleil-Waututh villages described above that had a long history of use and occupation prior to and at AD 1846 (Tum-tumay-whueton, Sleil-Waututh, Whey-ah-wichen, Reed Point, and Inlailawatash) and also those villages that had a long history of use and occupation prior to AD 1846, but limited evidence for occupation at sovereignty (Say-mah-mit, Say-umiton, Say-mopit). This aggregated LCC area effectively describes the daily foraging radius of all of these villages within the Study Area simultaneously. These results indicate that all of the marine and shoreline portions of the Study Area, all of the southerly terrestrial portions of the Study Area, and about half (the lower elevations) of the northern half of the Study Area are within this aggregated LCC area. *That is, this represents the combined daily foraging radius of all*

villages occupied at AD 1846. The season of occupation is not relevant here. All five villages could have been occupied simultaneously or sequentially throughout the year, the results are the same. These areas were used on a regular intensive basis for resource harvesting by the Tsleil-Waututh inhabitants of several villages in eastern Burrard Inlet.

603. It is worth noting that these daily foraging areas extended beyond the Study Area in several cases. Specifically, they extend:

- West to about First Narrows;
- North about 8 km up the Indian River Valley;
- East into Port Moody and Port Coquitlam; and
- South through Burnaby and Coquitlam to the Fraser River.

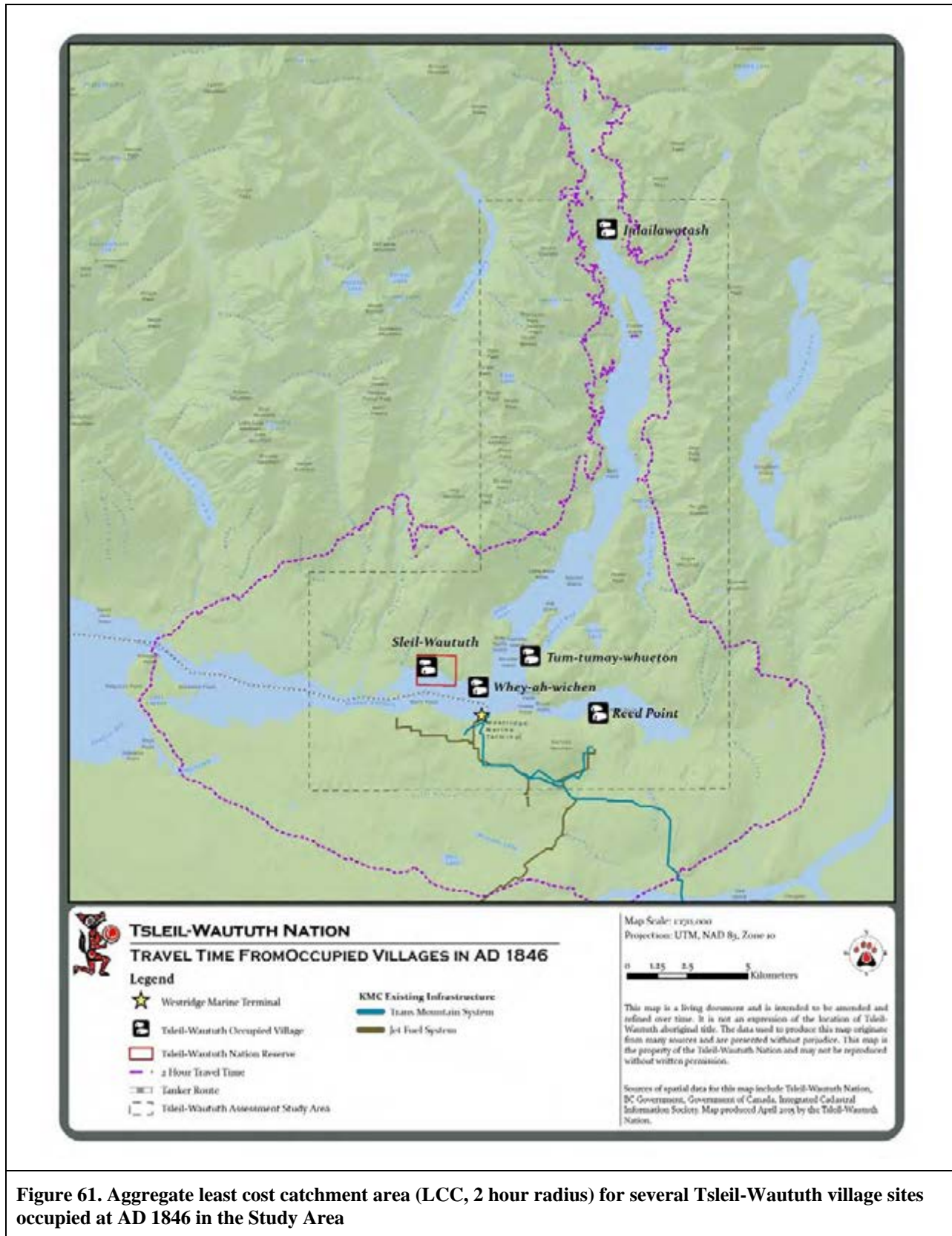


Figure 61. Aggregate least cost catchment area (LCC, 2 hour radius) for several Tsleil-Waututh village sites occupied at AD 1846 in the Study Area

4.8.8 Resource Harvesting Sites in the Study Area

604. Above, I described Tsleil-Waututh's traditional settlement pattern in terms of a seasonal round. Then I focused on the nature of Tsleil-Waututh landscape/seascape use from a number of village sites in eastern Burrard Inlet. In those sections above, I focused on village sites because they are prominent, well-investigated, and often have detailed oral histories associated with them. But we know that villages were only part of the Tsleil-Waututh settlement pattern, and that small resource harvesting camps were also used. In sections below (see s. 4.7.1), I present a number of archaeological sites that I interpret as resource harvesting camps in the Study Area, and from those camps I calculate LCCs for each (**Table 21**). These results are summarized in an aggregate LCC area for the resource harvesting camps.
605. **Figure 62**, illustrates the aggregate LCC area for all of the archaeological sites in the Study Area interpreted by me to be resource harvesting camps. Although only two of these (DiRr 18 and DhRr 9) are known to date prior to and at AD 1846, it is probable that all of the rest date prior to AD 1846 (i.e., they are prehistoric archaeological sites). Because resource harvesting camps are much smaller than village sites, they are much more difficult to identify archaeologically. It is anticipated that many more resource harvesting camps existed in the Study Area than have been identified here.

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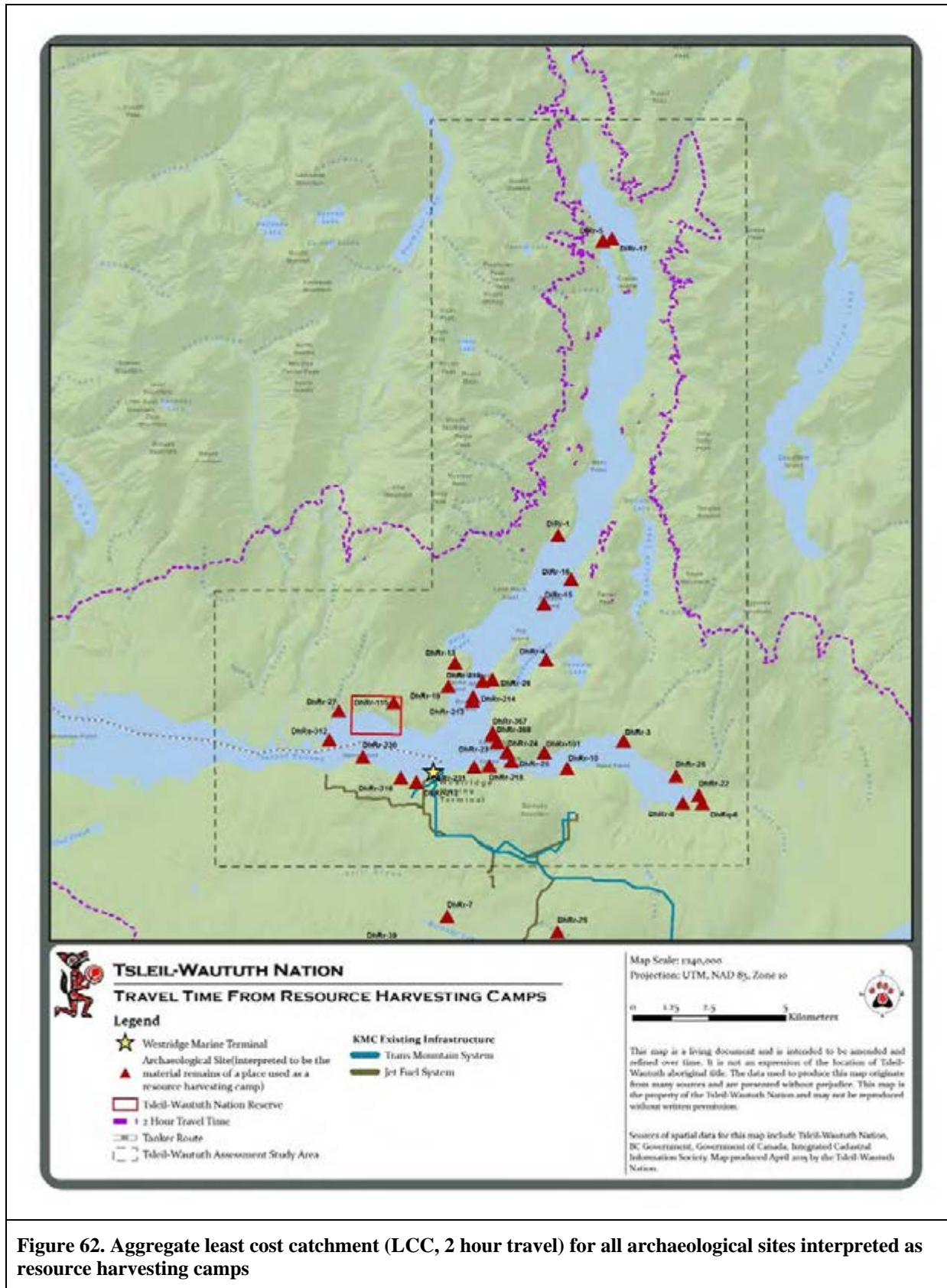


Figure 62. Aggregate least cost catchment (LCC, 2 hour travel) for all archaeological sites interpreted as resource harvesting camps

4.8.9 Spiritual Training Sites

606. In addition to a seasonal round, young Coast Salish men often went into the wilderness by themselves to train for power (Barnett 1955:143–150; Snyder 1964:211–220; Suttles 1951:327–331; Walkem 1914:67–69). Some of these people evidently spent years in the wilderness by themselves, and returned to their communities later with great power and skill. A major feature of this spirit questing is that people need to go to isolated locations where power beings are thought to reside (Snyder 1964). These locations would have been remote from the villages, because privacy and solitude are critical for this training (see Walkem 1914:67–69). A number of rock shelters (archaeological sites showing signs of habitation under the overhangs of large boulders) have recently been identified in the Indian River and Stawamus River watersheds (Ritchie and Sellers 2015), that, in my opinion, conform to such spirit questing locations. That is to say, completely independent of the larger seasonal round, some Tsleil-Waututh men were probably living in relatively remote mountainous territories and living off the land. This would have entailed hunting and trapping of small game and birds, and harvesting available plant foods such as berries and fern roots.

4.9 The Tsleil-Waututh Seasonal Round

607. As described in the introduction of this document, Tsleil-Waututh, like all Coast Salish people, practiced what is called a seasonal round whereby they relocated several times either as individual families or as much larger groups to locations where resources would be seasonally abundant (Deur and Turner 2005; Duffield and McHalsie 2001). These seasonal relocations are often called “residential moves” (Binford 1980) and archaeologists often speak of the total of such seasonal moves to sources of food as “settlement systems” (e.g., Fitzhugh 2002). Often, these residential moves would include moving beyond Tsleil-Waututh’s territory and into the territory of other groups. Such moves would have been predicated on kinship connections and Coast Salish protocols of access (Suttles 1987; Snyder 1964). Use of canoes would have allowed rapid transport of large numbers of people and goods between seasonal camps and winter villages (Ames 2002). During each of these residential moves, resources would have been harvested and processed for storage (dried, smoked, etc.). These stored resources would be relocated (via canoe) to caches at or near families’ respective winter villages and would have provided the staples of the winter diet when fresh foods would have been scarce, and also for supporting large potlatches and feasts.

608. In the sections below, I provide a description of Tsleil-Waututh’s traditional seasonal round. I highlight how this very ancient pattern may have been altered or adjusted to the specific historic circumstance of AD 1846. It is important to bear in mind here that Tsleil-Waututh’s pre-contact seasonal round has never been observed or described in any detail. My description of Tsleil-Waututh’s seasonal round is based on my review of the regional archaeological, ethnographic, historical, TUS data, and general models of Coast Salish seasonal rounds, in relation to the known structure of resource abundance in the Lower

Mainland area. In the sections below I cite the specific information that I am using to infer Tsleil-Waututh's seasonal round prior to and as of AD 1846.

4.9.1 Villages at AD 1846

609. Based on my review of all available archaeological, historical, ethnographic, oral history and TUS information, around the period of AD 1846, Tsleil-Waututh people inhabited at least five primary village sites—Tum-tumay-whueton, Whey-ah-wichen, Sleil-Waututh, Inlailawatash and Reed Point. *I do not suggest that this is exhaustive; there may have been more Tsleil-Waututh village sites than these at AD 1846, and none west of the Second Narrows are discussed here (beyond the Study Area).* Merchant (2012) provides similar independent interpretations for Sechelt (a Northern Coast Salish group) cultural responses to disease and warfare in this key early historic era. As discussed in detail above, inhabitation of these sites implies regular intensive use of a foraging radius of the areas surrounding each of these villages.

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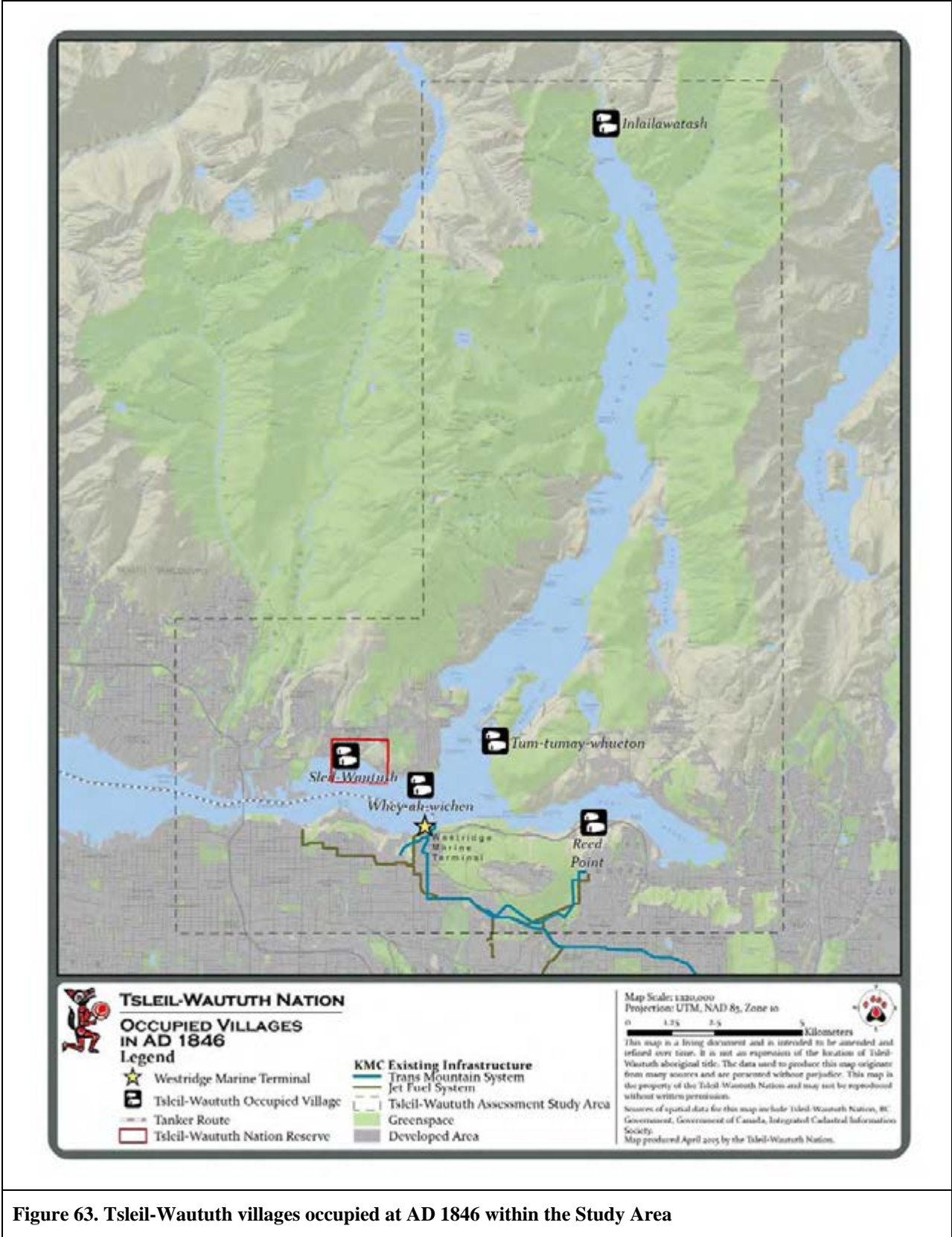


Figure 63. Tsleil-Waututh villages occupied at AD 1846 within the Study Area

610. As discussed above (see s. 4.2, *Archaeological Villages*), there is archaeological data of the season of occupation available for a number of village sites in eastern Burrard Inlet (**Table 17**) (Charlton 1974; Lepofsky 2007; Pierson 2011; Trost 2005). The general trend in this data is that the more analytical effort that is dedicated to identifying seasons of use (through the investigation of archaeologically recovered animal, fish and plant remains), the more seasons of use are identified. *Say-umiton, for example, has been very thoroughly investigated for seasonality, and has evidence of year-round occupation (Lepofsky and Karpiak 2001)*. Tum-tumay-whueton and Whey-ah-wichen primarily display evidence of winter occupation (Charlton 1974; 1980), but to date, neither of them have had substantial analyses of archaeological plant remains (the remains that most often indicate summer occupation). Sleil-Waututh has seasonal indicators for the late winter and spring (Lyons 2014; Wigen 2014), but has only been investigated on a very limited scale. The Reed Point site primarily displays archaeological evidence of summer occupation (Ham and Yip 1992). I emphasize that, in all cases, except Reed Point (**Table 5, Table 9, Table 11, Table 13, Table 15**), these seasons of occupation are based on centuries' worth of accumulated archaeological remains, not a single season of occupation at AD 1846. That is to say, these are long-term trends in indigenous use of the site; these are empirical measures of traditional Tsleil-Waututh resource use. The seasonality identified from the Reed Point assemblages (i.e., DhRr 373), on the other hand, may represent decades worth of use and occupation. There, excavators identified what are a series of discrete stratified living surfaces (or floors) in a midden with evidence of very large-scale food processing (steaming red elderberries) right around contact-sovereignty (Ham and Yip 1992; Lepofsky and Lyons 2013:53).
611. And although Inlailawatash is consistently described as a fall fishing village, the Spanish encountered Coast Salish (almost certainly Tsleil-Waututh) people there in June of 1792 (Wagner 1933:265–266). *To me, this highlights the fact that using ethnographic analogy or normative modeling of specific seasons of occupation to villages simplifies the actual nature of past Coast Salish and Tsleil-Waututh land use. I am much more confident of demonstrated, rather than inferred seasonality based on normative modelling*. A village like Inlailawatash may have indeed been most populated during the fall chum salmon fishery, but some families may have lived and collected resources there in the early summer, and occasionally some families may have over-wintered there. Each of these five villages could have supported a near year-round population that would have participated in the seasonal round as described below.
612. For the purposes of this discussion of the seasonal round, and within the Study Area of eastern Burrard Inlet, we will base this discussion with the conclusion that Tsleil-Waututh occupied about five primary villages at AD 1846:
- a) Tum-tumay-whueton;
 - b) Whey-ah-wichen;
 - c) Sleil-Waututh;

- d) Inlailawatash; and
 - e) Reed Point.
613. Evidence of occupation of these sites is discussed in detail above. There is some evidence for occupation of three or more additional villages, but the evidence dating the occupation of those villages to AD 1846 is currently fairly limited. Following a period of winter sedentism and intensified ceremonial activity, the Tsleil-Waututh seasonal round would really begin around April. People would relocate from one or more of these villages to temporary camps, or join relatives in villages at those spring resource locations.
614. Recall in Gabriel George's account of the Tsleil-Waututh origin story, wherein "the little birds would come and tell him when the berries were going to ripe high up in the mountain. The spá:th, the black bear, he taught my young grandfather how to fish, how to gather berries" (Gabriel George 2014:71, 2704). The Tsleil-Wautuh oral history regarding their origin in Burrard Inlet specifies that the first Tsleil-Wat person learned from the animals where and when the resources became available. The spatio-temporal variability in the availability of these resources necessitates some form of relocation, or seasonal round to harvest them. I have heard Tsleil-Waututh people say many times (paraphrasing here) "our ancestors were like the bears and the eagles; we went where the food was."
615. My reconstruction of the Tsleil-Waututh seasonal round below relies on essentially the same principles. *Tsleil-Waututh people would have relocated to resource patches as they became seasonally available. Unless there is some strong evidence to suggest otherwise, it is logical to assume that Tsleil-Waututh people would have seasonally relocated to different parts of their territory, and, following Coast Salish protocols, the territories of neighboring groups to harvest seasonally available resources.* I rely on specific archaeological and ethnographic examples below as supporting evidence for this proposed seasonal round.

4.9.2 Spring Villages and Landscape/Seascape Use

616. The first substantial resources to become available in the Study Area after winter were herring (April) (Coupland 1991; Ham 1982) and eulachon (April) (Moody and Pitcher 2010). Pre-contact early spring villages that focussed on the herring food chain and shellfish harvesting are a locally recognized type of shell midden (e.g., Coupland 1991; Ham 1992; Monks 1987). That is to say, spring herring and shellfishing villages are a demonstrated seasonal site type. Herring and smelt were available in eastern Burrard Inlet, but were more numerous in outer Burrard Inlet (e.g., the Jericho-Locarno Beach area) (Coupland 1991). Given that herring was most abundant in outer Burrard Inlet and eulachon in the Fraser River at the same time (Duffield and McHalsie 2001), individual Tsleil-Waututh families had to choose which fishery to participate in.

617. Tsleil-Waututh families traveled to places like Jericho to mass harvest herring, their spawn, and many of the other species that feed on herring (**Figure 64**. Tsleil-Waututh seasonal round—spring). Traveling via canoe at about 6.5 km/h (Ames 2002; Morin and Hunt 2014) from Tum-tumay-whueton to the Jericho area would have taken about 4 hours. The Point Grey archaeological site (DhRt 5), just west of Spanish Banks, has been identified as a village occupied during spring where subsistence was strongly oriented toward harvesting herring (Coupland 1991). While this archaeological village dates to about 1500–2000 BP, it provides an analogue for how early historic era Tsleil-Waututh groups seasonally relocated to this area to harvest herring, their spawn and all the predators that follow them (see also Ham 1982:271). As noted by Monks (1987), Coast Salish people did not just harvest herring, but they harvested the entire food chain that was also dependent on herring—seals, sea lions, birds, salmon etc. As described by Gabriel George in the Tsleil-Waututh origin story, the first Tsleil-Wat person learned from the animals when resources were available (2014). Herring schools are accompanied by flocks of seagulls, large groups of sea lions, etc. as the whole marine ecosystem turns its attention to this resource bloom (Monks 1987). Tsleil-Waututh people set up temporary camps for the herring/smelt fisheries in outer Burrard Inlet, or joined their relatives living in villages here. Herring have been reported from the shell middens at DhRr 18, DhRr 6, DhRq 1 and DhRr 20 (**Table 5, Table 9, Table 11, Table 13, Table 15**), and could have been harvested in proximity of those sites, or could have been brought in from other locations such as Jericho Beach.
618. It is important to note here that herring is essentially absent from the Tsleil-Waututh TUS records (Tsleil-Waututh 2000, 2011) because local populations were extirpated before the start of the 20th century, probably by 1898 (Mathews 1955). But the ubiquity of herring bones in the archaeological sites in the Study Area clearly indicate it was being harvested in the past. This also highlights the problems with using modern TUS data to infer past subsistence practices. Herring and smelt were harvested from canoes and from the shore essentially everywhere in Burrard Inlet, and intensively harvested around the Jericho Beach area. Spawning beaches were intensively used for spawn collection.

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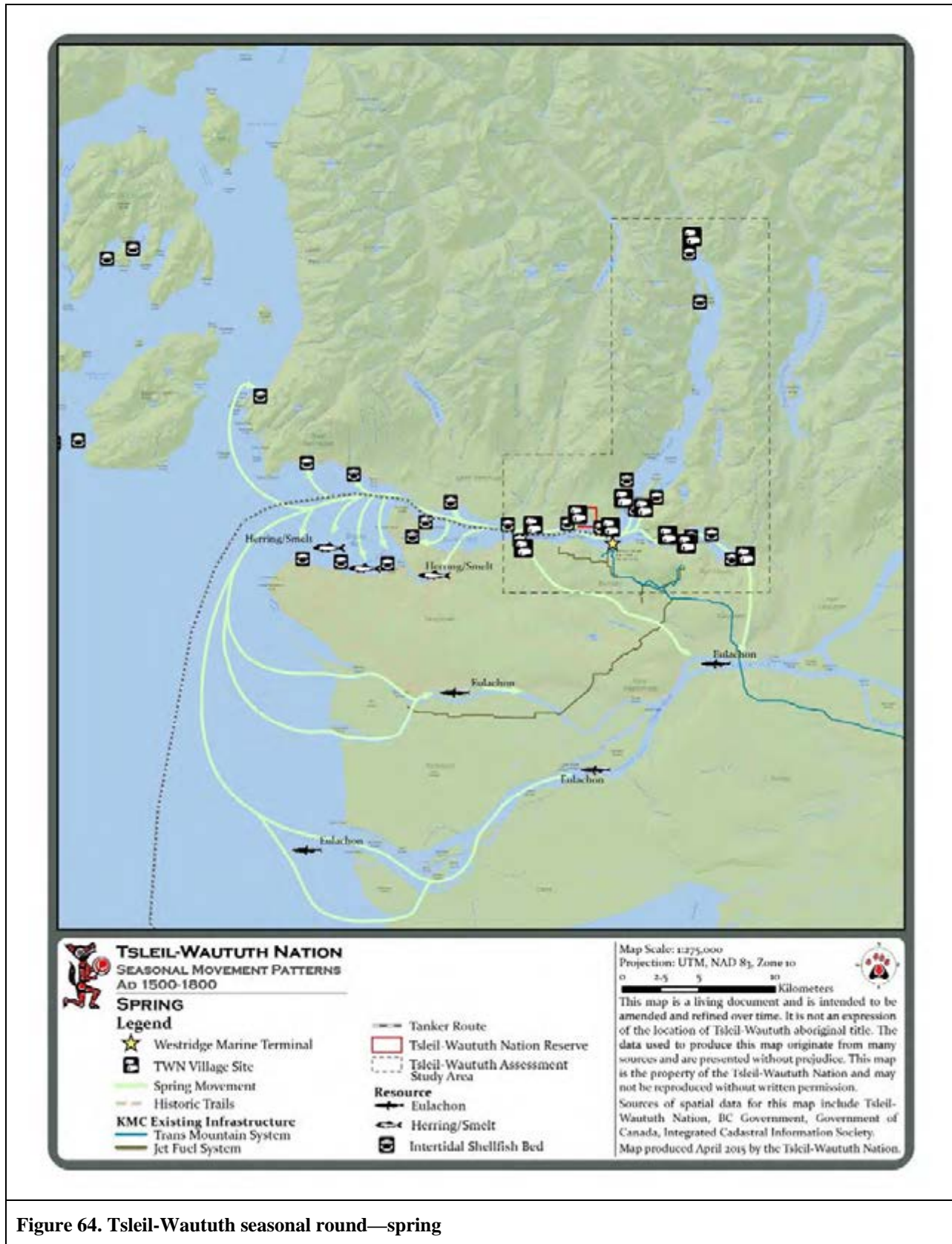


Figure 64. Tsleil-Waututh seasonal round—spring

619. Eulachon were available around April in the Fraser River (Duffield and McHalsie 2001), but were probably not numerous in Burrard Inlet (although they have been identified in substantial numbers archaeologically at DhRq 1, Say-mah-mit) (Pierson 2011). At least one Tsleil-Waututh individual indicated that eulachon used to run in the Indian River (George and Joe 1983:2). Eulachon were hyper-abundant in the Fraser River (Moody and Pitcher 2010), and Tsleil-Waututh families travelled to the Fraser River to mass harvest them. Eulachon were also available in the Squamish River, but I have not come across evidence to suggest that Tsleil-Waututh participated in that fishery. Tsleil-Waututh families would have travelled to harvest eulachon either around the Fraser Delta, approximately 12 hours away via canoe, or the Lower Fraser River around the confluences of the Coquitlam and Brunette rivers with the Fraser River, approximately 2.5 hours away via foot, or 16 hours via canoe (**Figure 64**). It is possible that the eulachon identified from DhRq 1 (Pierson 2011) was transported overland from the Fraser River to Port Moody, or that they were harvested in Port Moody. Tsleil-Waututh families set up temporary camps along the Fraser River here, or joined their kin at Kwantlen and Kwikwitlem villages here. Following Coast Salish protocols, Tsleil-Waututh families would have drawn upon their kinship connections to those communities, and requested permission to harvest eulachon in their territory. This decision of where to travel to fish was predicated on kinship connections and status. Alternatively, it is possible that Tsleil-Waututh families owned specific harvesting locations on the Fraser River. Eulachon were caught in nets via canoe in the Fraser River.
620. These small fish—herring and eulachon—comprised a substantial proportion of Coast Salish diet, perhaps equivalent to salmon (McKechnie et al. 2014; Pierson 2011; Trost 2005). These small fish were staples, and past Tsleil-Waututh peoples harvested them extensively across Burrard Inlet and the Fraser River. During the spring months, Tsleil-Waututh people relied very heavily on the intertidal areas of Burrard Inlet, the offshore marine areas in Burrard Inlet, and the waters of the Fraser River.
621. In addition to focusing on these small fish, Tsleil-Waututh people also harvested across the herring food chain (e.g., seals, sea lions, salmon, birds) and harvested other resources. This included harvesting salmon berries and other early-ripening plant foods, terrestrial hunting, and shellfish harvesting (Ham 1982). Additionally, offshore fishing for a variety of rock fish, flat fish, and salmon occurred practically whenever weather permitted.

4.9.3 Summer Villages and Landscape/Seascape Use

622. The summer months before the Fraser River sockeye runs is often described as a time where Coast Salish people would disperse across the landscape in small task groups harvesting berries and other seasonally abundant and dispersed resources (Barnett 1955; Suttles 1951) (**Figure 65**). However, many other resources were also available at this time, such as berries (inland) (Duffield and McHalsie 2001), smelt (Outer Burrard Inlet), and in alternating years, pink salmon (Indian River, Seymour Creek, Capilano River). Summer would also likely be the season for high-elevation hunting for valued game like

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mountain goat. Individual families chose which environments and resources they would focus their efforts on at this time—inland or marine (Deur and Turner 2005).

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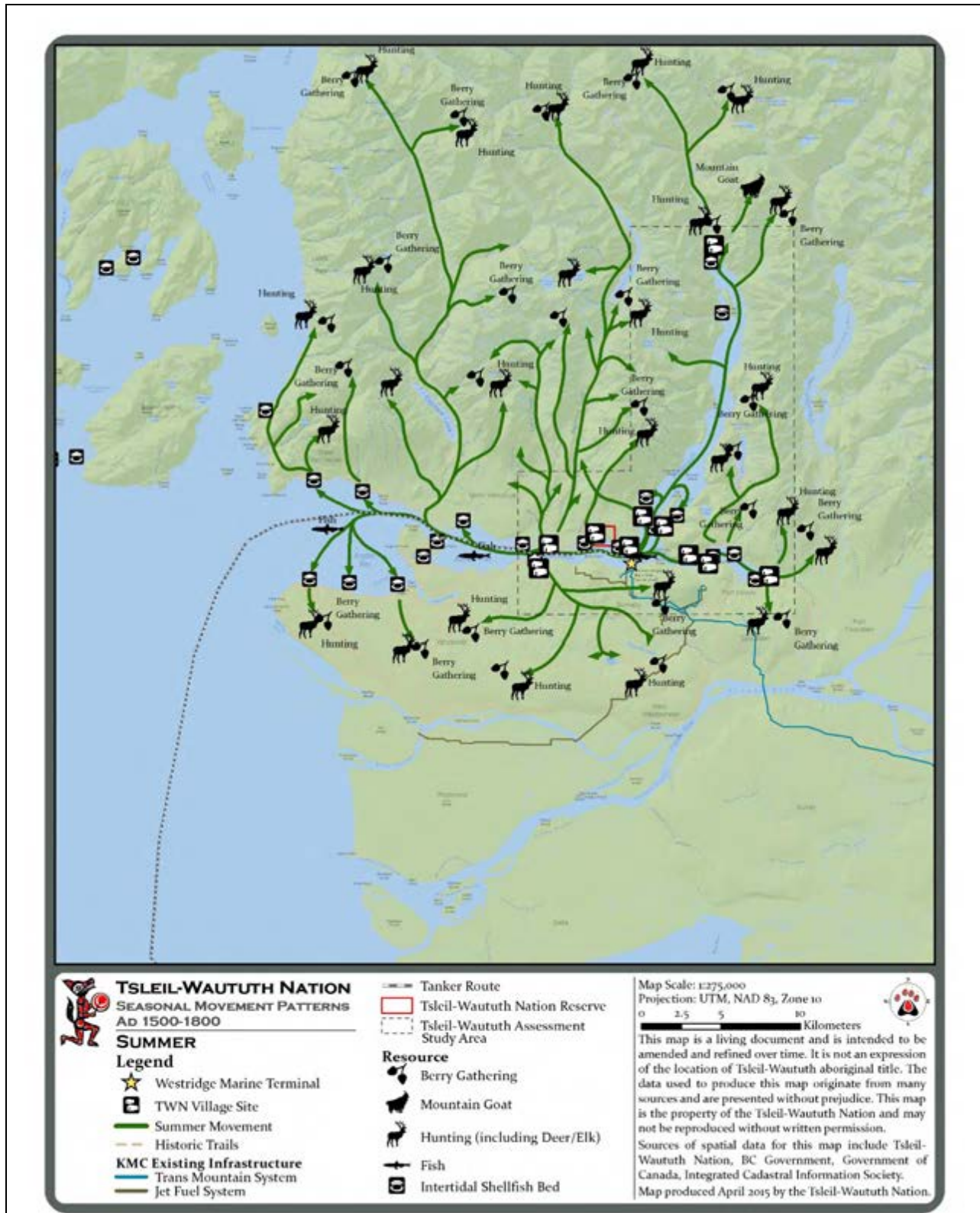


Figure 65. Tsleil-Waututh seasonal round - summer

623. Berries (e.g., blueberry, salmon berry, salal (“docka berry” to Tsleil-Waututh people), huckle berry, red elderberry, thimble berry, black caps) for example, are available in very large patches and not in as spatially concentrated locales as the fish species described above (Lepofsky et al 2005). Inland resources such as sub-alpine berry patches and hunting territories are relatively dispersed locations compared to fishing camps (McHalsie 2007) (**Figure 65**). It is possible that the group of people (almost certainly Tsleil-Waututh) encountered by the Spanish in June of AD 1792 at Inlailawatash/Indian River were likely primarily engaged in such resource harvesting activities (Wagner 1933:265–266). During summer months, groups of Tsleil-Waututh people (especially women) gathered berries across the breadth of the Tsleil-Waututh territory. Several rock shelter sites located in the Indian River Valley approximately 10 km inland (Morgan Ritchie pers. Comm. 2015), and another rockshelter (DiRs 4) in the Seymour River Valley provide evidence of this precontact inland resource use.
624. While berry patches are generally broadly distributed across the landscape, there are some important factors that structure how and when people would have harvested berries. First, different berry species ripen across the landscape by elevation and aspect at different times. Berries in the lowest elevations (the shoreline) and low elevation southerly aspects (e.g., Burnaby Mountain and North Burnaby, and the lower levels of North Vancouver) ripen earliest. Berries at higher elevations ripen later (see Gabriel George 2014). For this reason, specific task groups (almost certainly women) focused their berry-picking efforts at certain areas and moved to other high elevation areas as the season progressed. The slopes of the North Shore Mountains, more than two hours walk from the nearest villages, were accessed by groups living in temporary camps at these higher elevations near the berries (Deur and Turner 2005). Save perhaps for the most extreme terrain, the entire breadth of the Study Area was used for harvesting berries, from sea shore to mountain top (**Figure 65**). While only one archaeological site has been identified in the Study Area in high elevation areas (e.g. DiRs 3), to my knowledge, no effort has ever been directed at locating such sites in the North Shore Mountains. In all probability, if such efforts were undertaken, pre-contact sites would be identified here, as they have been in the Squamish Valley and elsewhere where such research has been undertaken (Frank 2000; Reimer 2003, 2011).
625. Additionally, berry plants typically thrive in recently disturbed environments. It is well-documented that Coast Salish people purposefully lit fires around high-elevation berry patches to prevent forest encroachment and to maintain or expand prime berry habitat (Lepofsky et al. 2005; Turner 1991, 1999). Past Tsleil-Waututh people also used prescribed burning to maintain berry patches across the Burnaby, Port Moody, and North Vancouver areas (within the Study Area). The most productive berry patches were likely lineage owned property. Coast Salish berry harvesting and processing for storage (i.e., drying them) occurred on very large scales at a range of elevations (Barnett 1955; Frank 2000; Ham and Yip 1992).
626. Tsleil-Waututh families traveled up the other watersheds of the North Vancouver area (i.e., Capilano and Seymour), and around the Burnaby/Deer Lake area of Burnaby to

harvest plant resources and hunt game (**Figure 65**). The presence of many elk skeletons around Deer Lake in Burnaby discovered by early settlers can be interpreted to mean that the area was used by aboriginal hunters for harvesting elk (Kennedy and Bouchard 1987). The recorded archaeological sites around Deer Lake (DhRr 38 and DhRr 39) are indicative of such summer hunting and plant harvesting camps. The Seymour, Capilano, and Indian River watersheds offered excellent opportunities for families to follow ripening plant foods to increasing high elevations as summer progressed. Berry remains have been recovered archaeologically from DhRr 18 (Lepofsky and Karpiak 2001) and DhRr 373 (Ham and Yip 1992), and Tsleil-Waututh TUS records describe berry harvesting activities around their current village and other camps (Tsleil-Waututh 2000, 2011).

627. Summer hunting of inland and high elevation species was undertaken in association with berry harvesting (Barnett 1955:95; McHalsie 2007:88). That is to say, small groups established base camps in areas with rich berry resources. These base camps would generally be lower elevation early in the summer then shift to higher elevations later in the summer as berries ripened. There, groups of women and girls harvested berries, and men hunted and set traps. Small game would probably be eaten at these camps, but larger game was processed (dried) for winter use, and the valuable skins/hides cured (McHalsie 2007:88). Many different species would be hunted: bear, deer, elk, and mountain goat (Duffield and McHalsie 2001). The remains of all these species, and many other smaller game have been recovered from archaeological sites also known to be ancestral Tsleil-Waututh villages (**Table 5, Table 9, Table 11, Table 13, Table 15**). Toolstone and other technological materials (e.g., bow staves, fibres for basket making) were also procured at this time. One of the reasons that so few Tsleil-Waututh people were observed in Burrard Inlet at the time of contact (June 1792) is that many people had probably relocated to inland hunting and harvesting camps at this time (Bartroli 1997).
628. Because of the intensive logging, development, and reservoir construction, combined with the lack of archaeological research in these environs, there is very limited archaeological evidence of Coast Salish use of the North Shore Mountains for hunting and berry harvesting activities. In Burnaby, around Deer and Burnaby Lakes, there are archaeological sites they likely correspond to berry harvesting and hunting camps there (e.g., DhRr 7, DhRr 38). Berry harvesting involved intensive use of berry patches when ripe (from the shoreline to sub-alpine), while hunting would have generally involved extensive use of the landscape in search of game.
629. Elk and mountain goat were especially sought-after species. Elk was especially sought after because of its sheer size (up to 1,000 kg), because elk hides were valuable and used in making armour (Suttles 1951:267), and because elk bones and antlers were used for making tools such as harpoons and wedges (Matson and Coupland 1995; Stewart 1996). Both Barton (1990) and McMillan (1982) have commented on the quantity of elk antler tools at Say-mah-mit/DhRq-1. Elk products may have been a specialized export product from Tsleil-Waututh territory to other areas where they were scarce, such as the Gulf Islands. It is worth noting that elk are absent from Tsleil-Waututh TUS records (Tsleil-

Waututh 2000, 2011) because they were locally extirpated by the late 19th century (Kennedy and Bouchard 1987).

630. Similarly, the mountain goat was a very valuable species because of its wool and horns. The white wool blankets worn by Coast Salish elites were made of this goat wool mixed with dog hair from a special breed of dog (Suttles 1951:262). These wool blankets were valuable objects, and goat wool was not available across much of the Coast Salish world. For this reason, Tsleil-Waututh hunters were well-positioned to export raw wool, or wool blankets to other areas. Suttles (1951:95) specifies that the Straits Salish obtained their goat hides from the Squamish; similar trade relationships with Tsleil-Waututh are highly probable. Goat horns were carved into elaborate spoons (Carlson and Hobler 1993). These spoons have been recovered on Pender Island, where there are no mountain goats, and trade or exchange with mainland goat hunters, such as Tsleil-Waututh is implied (Carlson and Hobler 1993). Mountain goats live in high elevation areas in the North Shore Mountains and have been recovered from Tum-tumay-wheaton/DhRr 6, and Whey-ah-wichen/DhRr 8 archaeological and ancestral Tsleil-Waututh village sites (**Table 5, Table 9**). *These mountain goats must have been hunted in high elevation areas (probably in summer) and brought back to these Tsleil-Waututh villages.* Tsleil-Waututh TUS records describe mountain goat hunting around Mt. Bishop (sometimes called 'Goat Mountain', probably an English translation of a Down-River Halkomelem name) (Tsleil-Waututh 1998; 2000).
631. The most important points to this discussion about summer inland resource use are:
- Berry harvesting and hunting/trapping activities spanned across large areas and all elevations.
 - Berry harvesting made a significant contribution to traditional diets and was probably the largest source of non-marine foods in traditional diets.
 - Inland hunting and trapping supplemented diets.
 - Inland hunting/trapping also obtained valuable raw materials (elk and goat skins, goat horns) that could be traded to other peoples who lacked such resources in their territories.
632. Also, the enormous recent run of pink salmon (1.2 million, 2013) up the Indian River illustrates the richness of that fishery. Because pink salmon only spawn in alternating years, every second year some Tsleil-Waututh families harvested and smoked large numbers of pink salmon in the summer at Inlailawatash.
633. During the summer, a wide array of resources would have been available in the immediate vicinities surrounding Tsleil-Waututh villages on the coast. The aboriginal people, almost certainly Tsleil-Waututh, were observed in Outer Burrard Inlet and First Narrows by Vancouver (Bartoli 1997) and Galiano-Valdez (Wagner 1933) and were offered small fish. This is one of the few recorded direct observations of the contact-era

- Tsleil-Waututh seasonal round. In summer a variety of resident fish and shellfish species, and local plant foods and game were harvested around villages. Such species were harvested throughout the year. The highly diverse range of fish, animal and bird remains recovered from excavations in the shell middens associated with Tsleil-Waututh village sites indicates regular intensive use of immediate environs with specific emphasis on intertidal and aquatic resources (see **Table 5, Table 9, Table 11, Table 15**) (Charlton 1974; Lepofsky et al. 2007; Pierson 2011; Trost 2005). Forays of about a 1–2 hour paddle from village sites (about 13 km) would have been undertaken more or less daily by individual families or task groups to procure food resources. This topic was discussed in detail above. Temporary camps would also have been located at many productive resource harvesting locations. There are numerous archaeological examples of these in the Study Area (e.g., DhRr 9, DhRr 23, DhRr 212, DhRr 216, DhRr 374, DiRr 16, DhRr 38, DhRr 7, DhRr 112).
634. Excavations at Reed Point (DhRr 373) have identified evidence of large scale processing of elderberries (which ripen in late summer) (Ham and Yip 1992), and is a very short distance from large shellfish beds at the head of Port Moody. Sleil-Waututh is located adjacent to Maplewoods mud flats, perhaps the most productive clam beds in Burrard Inlet. Similarly, Whey-ah-wichen is located adjacent to Dollarton, also known as a highly productive clam bed (Tsleil-Waututh 2000). Tsleil-Waututh people intensively dug clams at prime areas in the early summer when the tides are low and occur during daylight hours. Large shellfish (i.e., cockles) were dried for future use and trade (Gabriel George 2014; Suttles 1951:66). The very productive shellfish beds around each village were very likely owned by the village or a lineage within it and were intensively used and managed (see Lepofsky et al. 2015). Additionally, people travelled from each village by canoe to other shellfish beaches around the territory. Foreshore regions where shellfish beds are located, were very intensively used, managed, and probably owned areas.
635. Sleil-Waututh, Whey-ah-wichen, Inlailawatash, and Reed Point were all fortified in the early nineteenth century (Dan George cited in BC Archaeological Site Inventory Form for DhRr 8, 1972; George 1990:4; Ham and Yip 1992; Thornton 1966:168). Whey-ah-wichen, Sleil-Waututh and Reed Point all have excellent visibility towards outer Burrard Inlet, the direction from where Lekwiltok would be approaching. Such visibility makes these locations inherently more defensible (Martindale and Supernant 2009; Maschner 1996; Sakaguchi et al. 2010). It is also noteworthy that the most common season for raiding by Lekwiltok was late-spring and summer, when weather was most conducive for long distance canoe travel (Bill Angelbeck pers. comm. Jesse Morin 2014). Recall the devastating Lekwiltok attack at Musqueam that occurred on July 11/12, AD 1828 (Galois 1995:53). These harvesting areas and task groups would also be near a fortified village site, so that if Lekwiltok were observed or otherwise anticipated, people could quickly congregate to a relatively safe place.
636. In the late summer, Tsleil-Waututh families travelled to the Fraser River to participate in the sockeye fishery along with thousands of other Halkomelem-speaking people (recall that Tsleil-Waututh's traditional language was a dialect of Halkomelem) (Lepofsky et al.

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2007). Indeed, there is oral history evidence of a Tsleil-Waututh long house at Musqueam that has been corroborated by Musqueam informants (Point 1996a:32–33). They relocated to Musqueam at the North Arm, Coquitlam River, or the Cowichan village of Tlkenes on the Lower Arm, depending on kinship connections and status (**Figure 66**. Tsleil-Waututh seasonal round—late summer).

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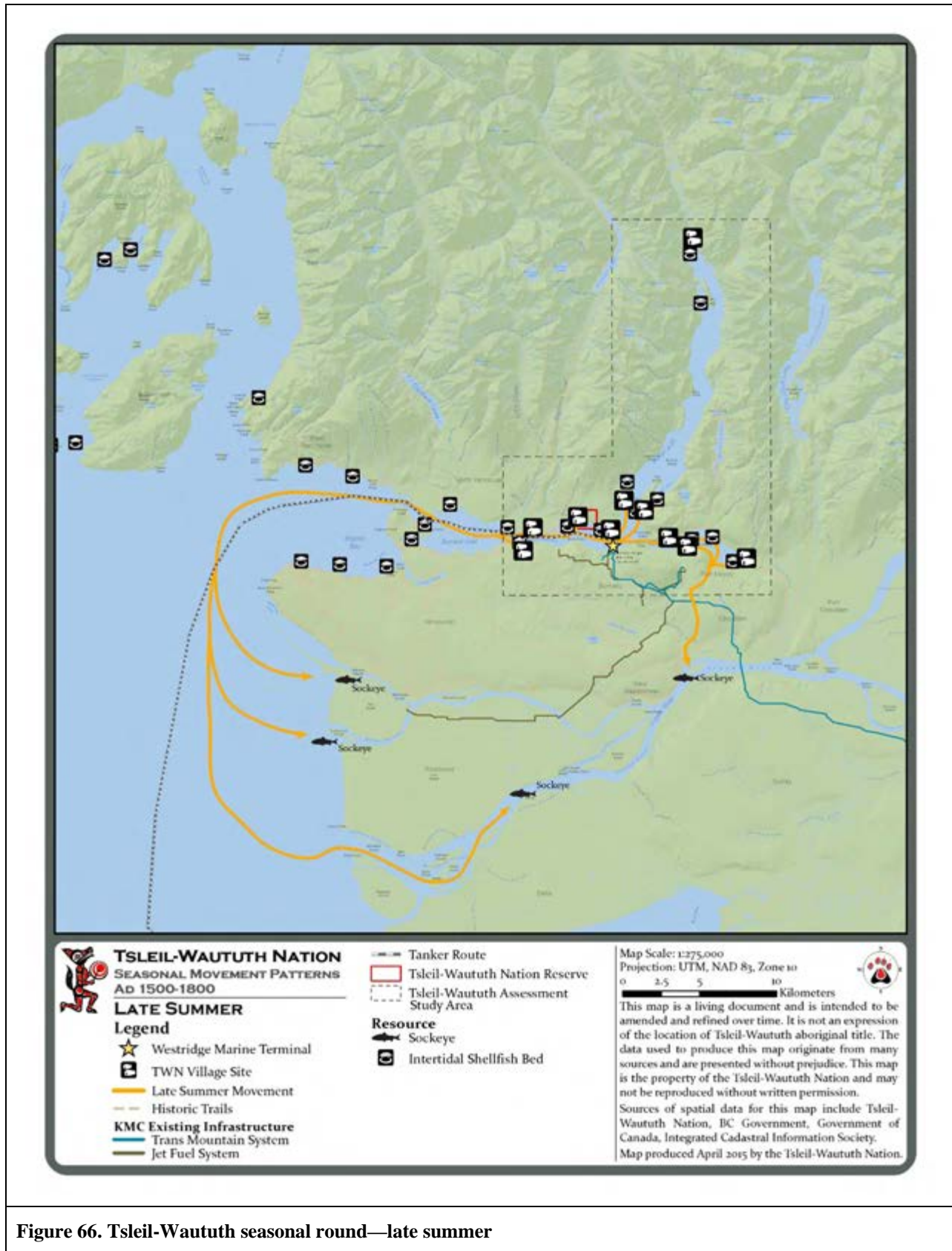


Figure 66. Tsleil-Waututh seasonal round—late summer

637. Tsleil-Waututh families fished at places where they had kinship connections. The George family for example (James Sla-holt and then George Sla-holt) maintained a plank house at Musqueam that their very large extended family likely lived in during sockeye season (Tsleil-Waututh 2000:4, 13, 17). I note that this “George House at Musqueam” is corroborated by both Tsleil-Waututh and Musqueam individuals (Point 1996a:32–33). This is an example of what Mitchell (1983) has termed as a ‘multi-village aggregation site’. Other Tsleil-Waututh families fished alongside their relatives anywhere from Musqueam to Yale (Carlson 2001). The Fort Langley Journals specifically describe people travelling past Fort Langley back to their winter homes in Burrard Inlet (MacLachlan 1998). Many Tsleil-Waututh families fished with relatives on the Fraser River between the Brunette and Coquitlam rivers, the Chehalis River, and around Yale (Duffield and McHalsie 2001) (**Figure 66**. Tsleil-Waututh seasonal round—late summer). Again, sockeye was harvested and preserved in very large numbers—many hundreds of fish per family at least—and was brought back to the village sites in Burrard Inlet by the ton in canoes (see Ames 2002, Carlson 2001). Thus, Tsleil-Waututh people relied heavily on the Fraser River sockeye fishery. Sockeye was a staple. Tsleil-Waututh’s sockeye fishing on the lower Fraser River was structured by their kinship connections with more proximate groups there.
638. Overall, in the summer months, Tsleil-Waututh were intensively using inland and upland environments, the intertidal areas of Burrard Inlet, the marine waters of Burrard Inlet, the rivers and streams of the North Shore area, and the waters of the Fraser River. Summer was probably the season of the maximum areal extent of Tsleil-Waututh landscape use (e.g., mountain top to open ocean).

4.9.4 Fall Villages and Landscape/Seascape Use

639. In the fall, Tsleil-Waututh families travelled to their fall fishing camps/villages on the Indian, Seymour, and Capilano rivers (Duffield and McHalsie 2001) (**Figure 67**). This fall chum salmon fishery was highly important because smoked chum was a winter staple for Tsleil-Waututh (Tsleil-Waututh 2000). “Most hunting was done in the summer and late fall” (Barnett 1955:95), and deer and elk were described as staples. The village of Inlailawatash on the Indian River was by far the preferred fall fishery for Tsleil-Waututh families in the historic area. Inlailawatash is about a 3 hours (at 6.5 km/h) from Tumtumay-whueton via canoe. Here, individual families partook in the rich pink and chum salmon fisheries (coho and steelhead were also available in lower numbers). Tsleil-Waututh elders describe these earlier fisheries as exceptionally productive, such as the Indian River being too full of fish to paddle a canoe in it (Tsleil-Waututh 2000; 2011). As with the earlier sockeye fishery, each family would harvest and smoke hundreds of chum for use over winter (Tsleil-Waututh 2000, 2011).
640. Estuaries, such as the one at Inlailawatash, are also noted as being exceptionally rich in resources used and eaten by aboriginal people (Deur and Turner 2005:12–13). In addition to fishing, estuaries were places where people hunted waterfowl, and collected berries, tule reeds, cattail, stinging nettle, springbank clover, pacific silverweed and northern rice-

root (Deur and Turner 2015:12–13). Such harvesting could occur during the fall with the chum run, or at other times of the year as determined by the resource availability.

641. Chum were netted, speared or gaffed by canoe or from the banks of the Indian River, Seymour Creek and many of the smaller streams around Burrard Inlet. From relatively small locations at river banks, Tsleil-Waututh people harvested large quantities of this primary staple. This chum was smoked for use throughout the winter (Tsleil-Waututh 2000). Also in the fall, waterfowl and edible plants were gathered from the Indian River estuary and the Indian River Valley (Duffield and McHalsie 2001). Inlailawatash was probably primarily a fall village (or fishing camp), although use during other seasons was likely.
642. This aspect of the Tsleil-Waututh seasonal round continued until about the 1940's, and the eldest living Tsleil-Waututh people partook in it during their childhoods (Tsleil-Waututh 2000, 2011). Tsleil-Waututh elder, Rosemary Thomas, for example, lived for weeks at a time in a plank house at Inlailawatash with her extended family in the fall while harvesting and smoking chum there in the late 1930s (Rosemary Thomas interview, 2015). Mrs. Thomas also specified that a range of other hunting activities also occurred at this time in the fall (*ibid.*). Gabriel George (2014:71) also described Inlailawatash as the source of Tsleil-Waututh's chum fishery.

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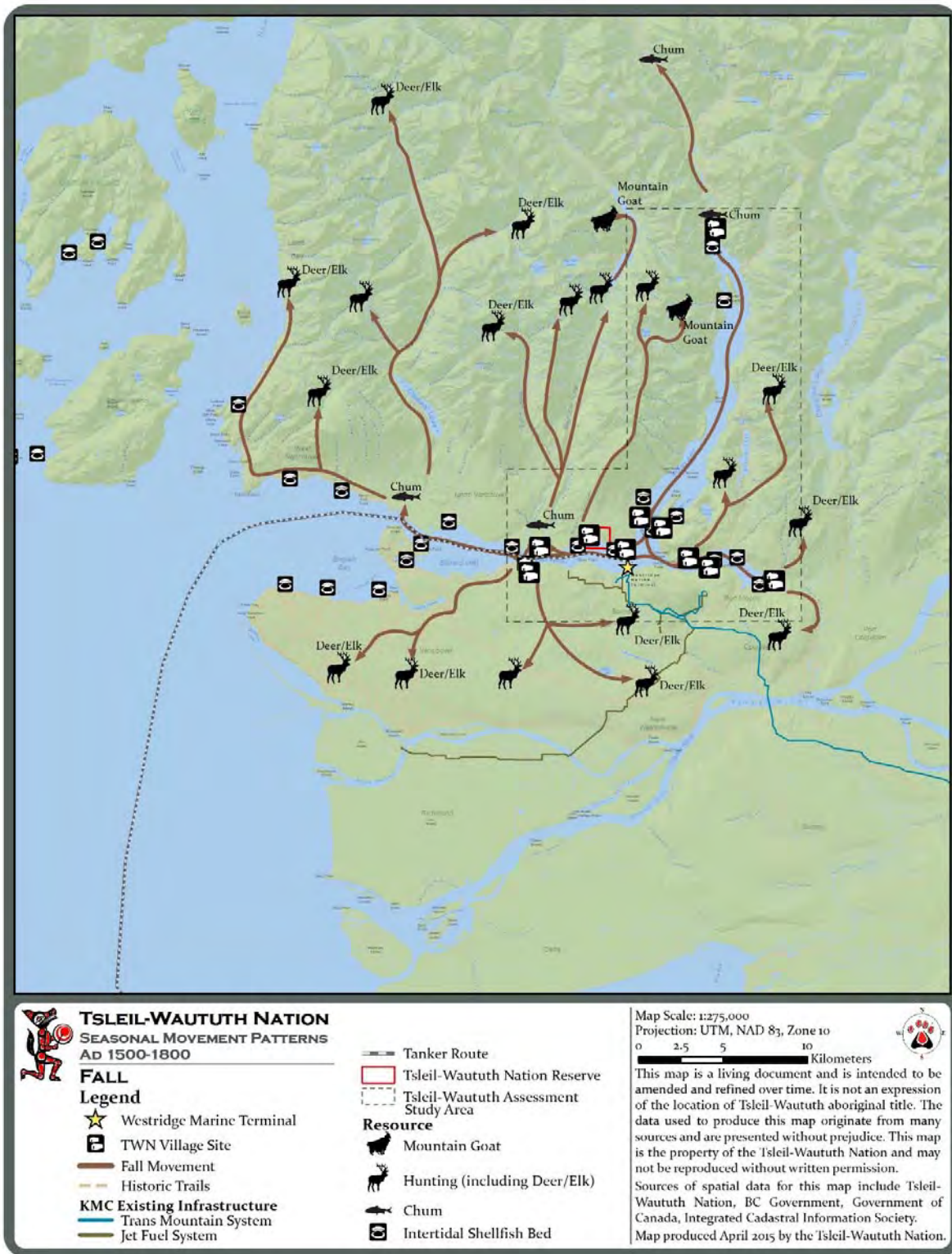


Figure 67. Tsleil-Waututh seasonal round—fall

643. Fall was also the season where individual or pairs of hunters would pursue game such as deer and elk inland (Barnett 1955:95; Duffield and McHalsie 2001) (**Figure 67**). The length and breadth of Tsleil-Waututh territory was used for hunting, but there were probably well-known preferred hunting areas. One Tsleil-Waututh example located on the east shore of lower Indian Arm is often noted, as is hunting on Burnaby Mountain and around Burnaby/Deer Lakes (Tsleil-Waututh 2000; Chief Ernest George Sla-holt to Jesse Morin 2014) (see s. 3.6, *Tsleil-Waututh's Place Names*, above). Elk, deer, bear, and based on the remains from the major midden sites, virtually all birds and animals were hunted/trapped (Charlton 1974; Stantec 2010; Trost 2005, **Table 5, Table 9, Table 11, Table 15**). Large game was tracked, hunted, and captured with deadfall and other traps (Barnett 1955:92–104). Owned hunting locations, deer net locations, and duck net locations are probable (see Suttles 1951:72). Sea birds, especially ducks, were hunted across the breadth of Burrard Inlet (e.g., hunted from canoe with nets, slings, spears and arrows), but were likely also taken in large numbers at ideal locations with set nets.
644. Similar to Sleil-Waututh (a palisade), Whey-ah-wichen (a palisade and tower), and Reed Point (a trench embankment), Inlailawatash was also fortified (a trench embankment). Recall that Tsleil-Waututh's chief Waut-salk (II) was killed in battle at Inlailawatash by a raiding party from "Alert Bay" (probably actually Lekwiltok from Salmon River and Topaze Harbour) around AD 1840 (Menziess 1934). Tsleil-Waututh oral histories also describe at least one Squamish raid here (Tsleil-Waututh 1998). Defensive features at major seasonal village sites appear to be the norm in Tsleil-Waututh territory around AD 1846. Around late November, Tsleil-Waututh families would have relocated from Inlailawatash and their other fall fisheries to Tum-tumay-whueton and other village sites, each with hundreds of smoked chum salmon and other foods for winter use.

4.9.5 Winter Villages and Landscape/Seascape Use

645. Traditionally, for Coast Salish people the winter is the time for potlatches and spirit dancing (Duffield and McHalsie 2001). People congregated at their ancestral villages and travelled to other villages for events such as potlatches. Leaders or *si?em* of such villages drew upon their stockpiles of foods and goods to host such events (Miller 1999; Snyder 1964; Suttles 1951).
646. While it was not a notable season of much effort dedicated to resource harvesting, some resource harvesting around the vicinity of winter villages was undertaken, if only for break from preserved staple foods like smoked chum and clams. Fishing (especially trolling), shellfishing, trapping and hunting (especially waterfowl) was undertaken throughout the winter in the vicinity of villages (Suttles 1951:135, **Figure 68**). Large-scale duck hunts in advance of potlatches and feasts also occurred periodically (see Suttles 1951:80). The very diverse array of species recovered archaeologically from large shell middens (ancient villages) indicates very intensive regular use of the surrounding environment by the inhabitants of those villages (Lepofsky et al. 2007). Barnett (1955:95) also indicates that mountain goat hunting sometimes occurred during early winter.

647. Peoples' day-to-day labour was largely focused on producing or repairing gear used throughout the resources harvesting seasons, such as canoes, baskets, nets, weapons etc., rather than resource gathering/processing. Winter was likely not a time when raids would have been particularly anticipated (stormy weather prevents long-distance raiding).

648. In summary, landscape/seascape use during the winter season was the least extensive of any season, as people were primarily living off of previously harvested and preserved food, and were focused on social and cultural activities at the major village sites. Major relocations of people during winter were probably for visiting friends and relatives for potlatches and feasts rather than resource harvesting.

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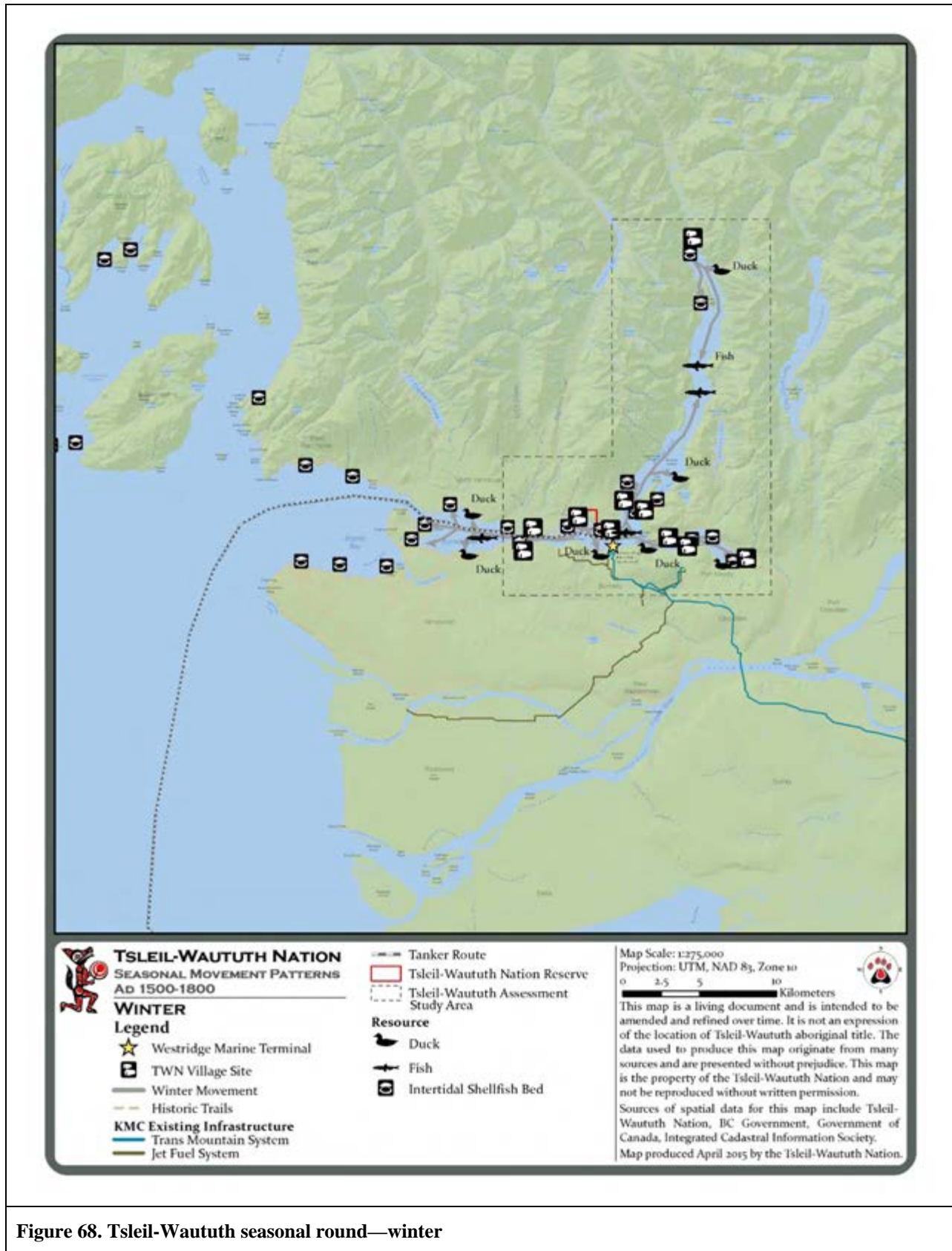


Figure 68. Tsleil-Waututh seasonal round—winter

4.9.6 Summary of Tsleil-Waututh Seasonal Round

649. The Tsleil-Waututh settlement subsistence system described above, prior to and as of AD 1846, is highly generalized, and given specific conditions, likely would have differed from that described above. For example, some Tsleil-Waututh families visited relatives and harvested resources at locations other than those described above. Tsleil-Waututh kinship connections extend from Lillooet, to Lummi, and from Victoria to Powell River, and all relatives could hypothetically be visited in any season. The 5 residential moves described above for Tsleil-Waututh is similar to the range of residential moves 0–4 for the Squamish and 3–5 for the Straits Salish (Kelly 1995:125). Along similar lines, the distance between each of the residential moves described above fall within the range of 5–30 km described by Kelly (1983:294) for other Salish groups.
650. The Tsleil-Waututh seasonal round as described above prior to and as of AD 1846 would have been similar, but not identical to their centuries-long settlement subsistence system. Greatly lower populations would be expected after AD 1782 (smallpox) and a greater concern for defense from about AD 1790–1862. The seasonally punctuated resource blooms (e.g., spawning salmon or herring) would have remained the same, but Tsleil-Waututh people would have to have been very concerned with raiding at this time.
651. Beginning in the spring, Tsleil-Waututh families relocated to either the Fraser River for eulachon or outer Burrard Inlet for smelt and herring (**Figure 64**). Then, for much of the summer, Tsleil-Waututh families dispersed into upland and interior environments to hunt and harvest a myriad of plant foods, or relocate to summer villages to harvest local shellfish and fish (**Figure 65**). In late summer, Tsleil-Waututh families relocated to the Fraser River to partake in the sockeye fishery (**Figure 66**). In fall, Tsleil-Waututh families relocated to their fall fishing and hunting villages along the Capilano, Seymour, and especially Indian rivers (**Figure 67**). Around late November, after the chum fishery, Tsleil-Waututh families congregated at one or more winter village sites (**Figure 68**). While much of Tsleil-Waututh's subsistence activity took place within Tsleil-Waututh's ancestral territory (Burrard Inlet and the lands draining therein), some highly significant subsistence activities were undertaken in the territories of other Coast Salish groups on the Fraser River where permission would be sought for access.

4.10 Summary of Tsleil-Waututh Landscape/Seascape Use and Occupancy Prior to and as of AD 1846

652. As described in detail above, Tsleil-Waututh's landscape/seascape use is best characterized as a hunter-gatherer-fisher economy that included a seasonal round. That seasonal round consisted of the occupation of villages, resource harvesting camps, and village aggregates. Within the Study Area, I described a number of village sites and resource harvesting camps that were used by ancestral Tsleil-Waututh prior to and as of AD 1846. I described aggregate LCC areas around both the villages and the resource harvesting camps.

4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

653. To address the totality of lands and waters regularly used by Tsleil-Waututh within the Study Area, the aggregate LCC for both villages and resource camps need to be considered. In **Figure 69**, I present the aggregate LCC area for both camps and village sites in the Study Area.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
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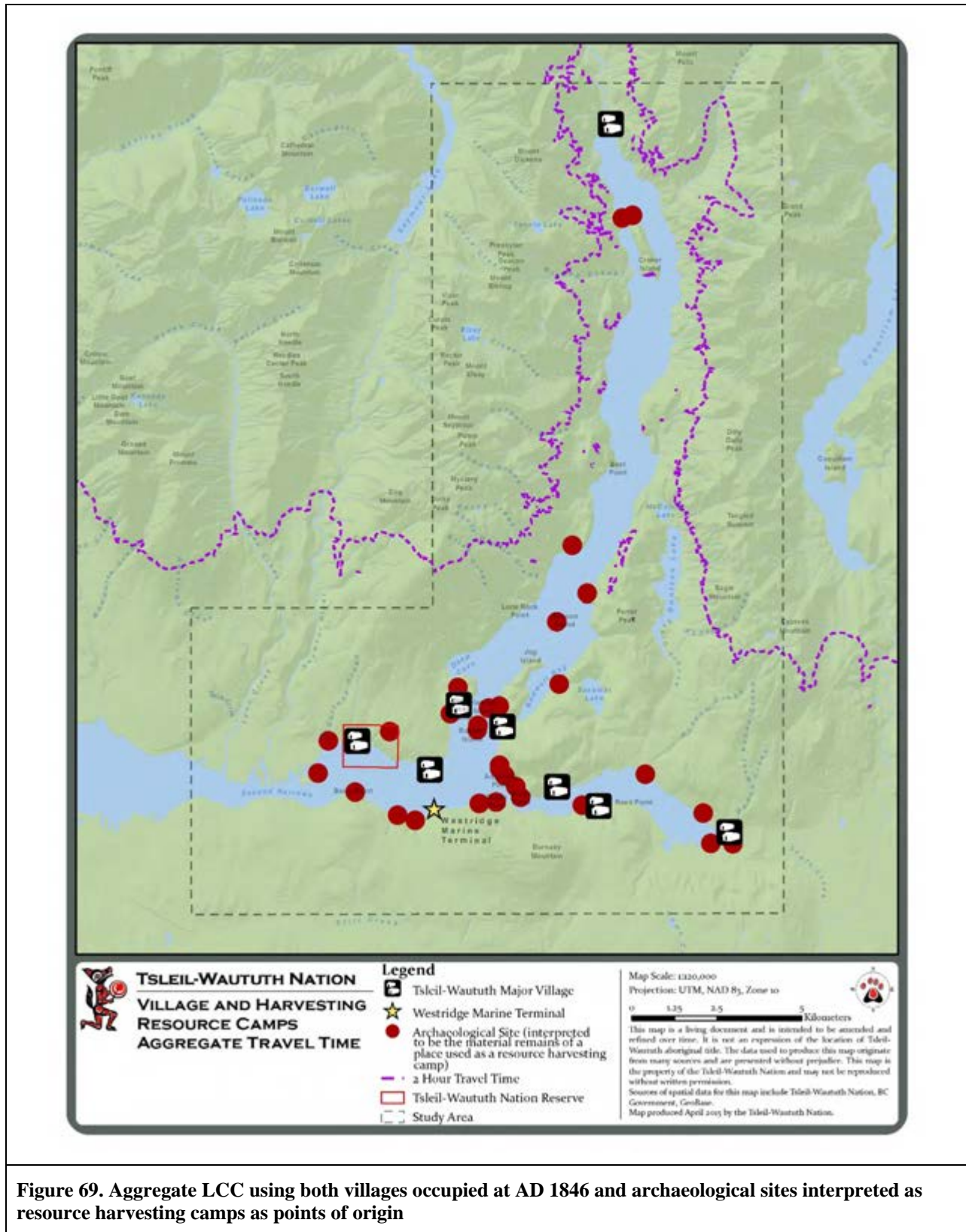


Figure 69. Aggregate LCC using both villages occupied at AD 1846 and archaeological sites interpreted as resource harvesting camps as points of origin

654. This map indicates that almost all of the Study Area was feasibly within the daily foraging radius of several villages and camps within the Study Area. More specifically, given the scope of resources that we know were harvested (i.e., shell midden remains), the modelled extent of daily foraging radii from known places of inhabitation (i.e., villages and camps), Coast Salish food-getting technology, and ecology and resource structure in Tsleil-Wat/Burrard Inlet, the following comment describes Tsleil-Waututh landscape/seascape use prior to and as of AD 1846 within the Study Area (see **Figure 70**).

*When the totality of Tsleil-Waututh landscape/seascape resource harvesting and other activities are considered, all of the Study Area would have been exclusively, regularly, and intensively used by Tsleil-Waututh people at AD 1792 and AD 1846. This is described visually in **Figure 70**. My conclusion is based on the following:*

- All of the marine waters were regularly used for resource harvesting; this includes fishing a myriad of species, hunting a variety of waterfowl, and hunting sea mammals and swimming terrestrial mammals.
- All of the marine waters were regularly used for canoe travel; this includes travel to and from other villages and camps, travel to Outer Burrard Inlet, and resource harvesting undertaken while travelling (e.g., trolling).
- All of the intertidal and foreshore environments were regularly used for harvesting activities; this includes harvesting shellfish and crabs, management of and harvesting resources from fish weirs and similar traps/facilities, near-shore fishing for a variety of species, harvesting fish roe, hunting birds, collecting seaweeds, landing canoes, and hunting sea mammals and terrestrial mammals.
- All of the near-shore (~1 km) terrestrial areas were variably used for places of habitation and places of regular resource harvesting. This includes many places of habitation (i.e., villages and camps), cemeteries, storage facilities, defensive constructions, places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- All of the terrestrial environments within about 8 km from well-documented villages or camps were regularly and extensively used for hunting, gathering and spiritual training purposes. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where

game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.

- All of the terrestrial environments adjacent to sizable rivers, streams, and lakes in the North Shore Mountains immediately north of Burrard Inlet were regularly and exclusively used for fishing, hunting, trapping, and gathering including places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- Specific remote and steep environments including cliffs, rockshelters, and similarly relatively inaccessible areas, and/or in proximity to bodies of water or waterfalls (e.g., pictograph locations) were regularly used for spiritual/ceremonial purposes. This includes places of spiritual practice/training.
- High elevation areas were used regularly for hunting valuable game like mountain goat and other resources collected. This includes very steep and precipitous terrain such as cliffs.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
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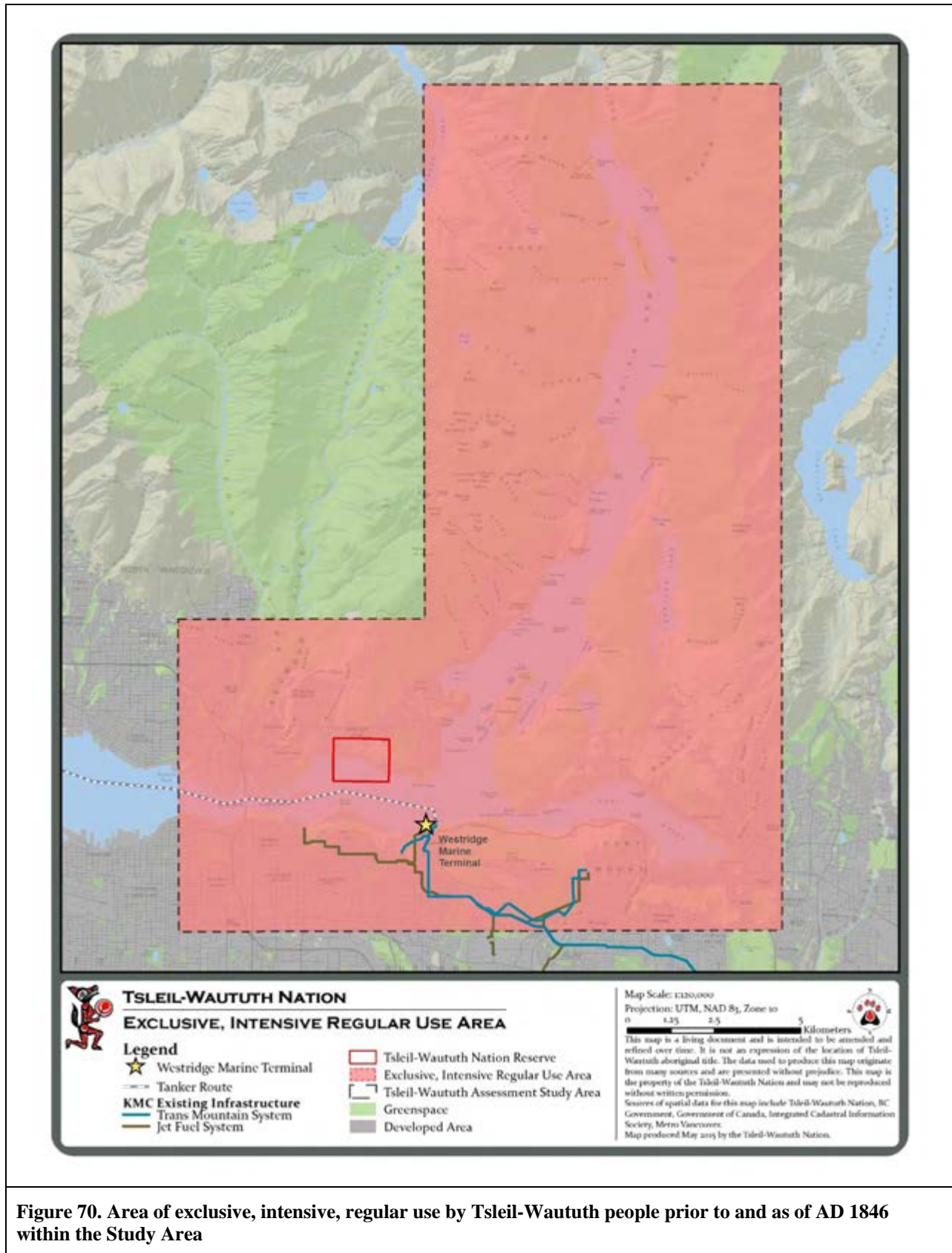


Figure 70. Area of exclusive, intensive, regular use by Tsleil-Waututh people prior to and as of AD 1846 within the Study Area

4.11 Exclusivity of Occupation up to and as of AD 1846

655. There are at least three major themes of evidence that describe the exclusivity of Tsleil-Waututh occupation of their territory and the resources available from it: 1) military defense and control of their territory; 2) specific rules regarding access of resources; and 3) the closely associated role of kinship and marriage connections. Much of this evidence has already been at least mentioned already, but it is worth reviewing here with a specific lens towards exclusivity.

4.11.1 Warfare

656. As described above, in the early 19th century practically all Coast Salish were severely raided by Lekwiltok, and in the northern Salish Sea, this resulted in territorial conquest (Galois 1994). Coast Salish people generally responded to the threat of raids by fortifying their villages and launching retaliatory raids against the Lekwiltok (Angelbeck 2009; Schaepe 2006; Suttles 1951). In this context, around AD 1846, Tsleil-Waututh people lived in several fortified village sites and were involved in numerous offensive and defensive battles with the Lekwiltok (~AD 1790–1850), then Haida (~AD 1850–1862). Hereditary Tsleil-Waututh Chief, John L. George, specifically described how a Tsleil-Waututh village at Stanley Park relocated back to Tum-tumay-whueton after this raiding with the Lekwiltok began (Tsleil-Waututh 2000). This is a good example of a strategic defensive relocation.

657. I briefly describe the evidence for these fortified villages below, then describe how these villages and lookout locations were integrated into a defensive network (see Schaepe 2006). In following sections I provide examples of Tsleil-Waututh oral histories of battles or engagement with raiders. This evidence supports that Tsleil-Waututh people actively and successfully defended their lands and property against their enemies.

658. Recorded Tsleil-Waututh oral histories describe palisaded villages at Sleil-Waututh (George 1990; Thornton 1966:68) and Whey-ah-wichen (Chief Dan George cited in DhRr 8 Site Form). Both of these sites have archaeological materials associated with them that date to the early 19th century, and it is highly probable that both of these fortified villages were inhabited by Tsleil-Waututh people around AD 1846. There is archaeological evidence of villages fortified with trench embankment features at Inlailawatash (**Figure 38**) and Reed Point (Ham and Yip 1992). The trench embankment feature at Reed Point has been radiocarbon dated and it spans the AD 1846 period (Ham and Yip 1992, see **Table 16**). The trench embankment feature at Inlailawatash is newly discovered, but Tsleil-Waututh oral histories place battles there around AD 1840 (Menzie's 1934). Indeed, all the Tsleil-Waututh villages occupied at this time except for Tum-tumay-whueton appear to have been fortified. This demonstrates both the intention and ability of Tsleil-Waututh people to defend their lands and people from raiders.

659. While these villages have all been discussed in isolation of one another, they were linked together in a defensive network based on line of sight and signal stations (**Figure 24**,

Figure 71). Defensive networks are coordinated defensive activities of multiple villages, and have been described in Coast Salish territory (e.g., Schaepe 2006). This defensive network was partially described by Tsleil-Waututh's hereditary chief Ernest I. George (Sla-holt) (2011), and former elected chief Leonard George (2014) in separate TUS interviews. The rest of it is recreated through line of sight analysis from documented defensive sites (e.g., Whey-ah-wichen, Reed Point) and look-out locations (e.g. Admiralty Point).

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

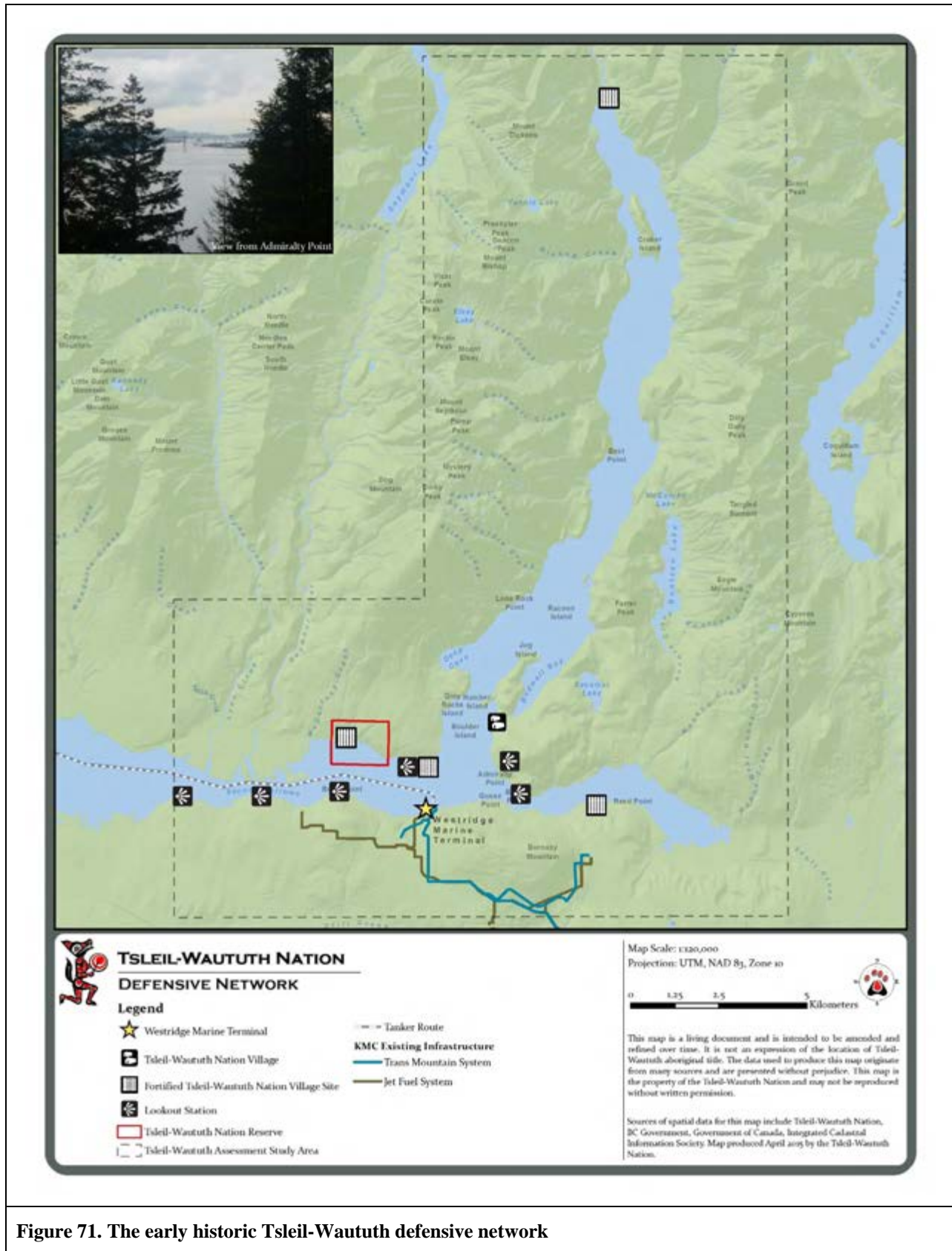


Figure 71. The early historic Tsleil-Waututh defensive network

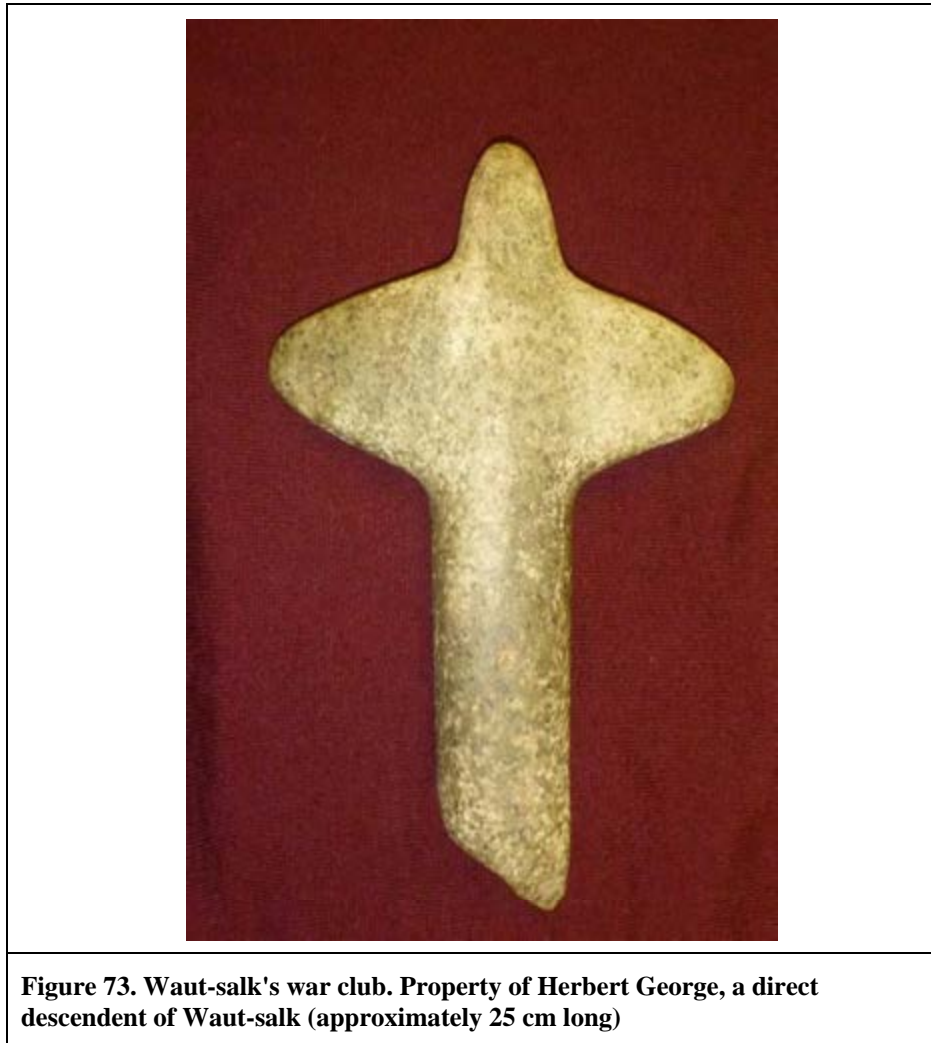
660. *Briefly, the early historic (~AD 1846) Tsleil-Waututh defensive network consisted of at least three fortified villages (Sleil-Waututh, Whey-ah-wichen, and Reed Point), one perhaps unfortified village (Tum-tumay-whueton) and look-out stations at New Brighton Park, Burns Point, the hill above Admiralty Point, and perhaps Berry Point and Second Narrows (Figure 71, Figure 72). Inlailawatash was also fortified at this time, but is distant from these former sites. These look-out stations were probably also signal stations (see George Vancouver's comment on "beacons" elsewhere in the Salish Sea, Lamb (1984:604). The wooden tower reported at Whey-ah-wichen was also a look-out station. From these look-out stations, especially the one at Admiralty Point, one can see well-past Second Narrows towards Stanley Park.*



Figure 72. View from bluff atop Admiralty Point looking west towards downtown Vancouver

661. When unexpected groups of canoes would pass through First Narrows (about an hour distant), they would be observed by the young men manning these look-out/signal stations, who would light large smoke signals and send runners to nearby villages to alert people there. By the time raiders would have approached Second Narrows, most of the inhabitants of the four major Tsleil-Waututh villages in the area would have been alerted.
662. Such an early alert system would be invaluable, as raiders primarily relied on the element of surprise for successful attacks. Tsleil-Waututh people could arm themselves within their fortified villages, and perhaps send women and children into the deep forest out of harms' way well-before the raiders actually arrived. After First Narrows, the major geographic obstacle for raiders would be Second Narrows, with its very strong east-west tidal currents, and the flow of Seymour Creek that would push canoes south. *Indeed, a Tsleil-Waututh oral history specifically describes Tsleil-Waututh warriors taking advantage of this local terrain and ambushing a large party of Haida raiders there* (MacDonald et al. 1998; Menzies 1934). Once inside (east) of Second Narrows, a group of raiders would have to pick which of the four primary Tsleil-Waututh villages they wished to attack. If they chose to attack Sleil-Waututh, the westernmost village, then groups of Tsleil-Waututh warriors from other villages (e.g., Tum-tumay-whueton, Reed Point) could then counter attack the raiding party.
663. In brief, several Tsleil-Waututh villages coordinated the defense of the larger Tsleil-Waututh territory for the mutual benefit of Tsleil-Waututh people (see Angelbeck and Grier 2012; Schaepe 2006). To do so, they monitored the most likely approach for raiders (the western portion of Burrard Inlet), they took advantage of the local geography, and they reinforced their kin in neighboring villages when attacked. This element of a coordinated defense network is probably one of the best examples of Coast Salish inter-community political organization. Such arrangements are not described in the Coast Salish ethnographic literature, but have been identified archaeologically in the immediate pre-contact period (see Angelbeck and Grier 2012; Schaepe 2006).
664. A class of specially trained warriors did exist in contact-era Coast Salish society (Barnett 1955:153; Smith 1940:163; Suttles 1951:277). The repeated association of Waut-salk (II) with battles, and Waut-salk's association with wolves (a common warrior spirit animal, see Barnett 1955:153) in Tsleil-Waututh oral histories suggests that he, like Kiapilano, was both a warrior and political leader. Also Smith (1940:163) notes that war clubs were only owned by professional warriors, and Waut-salk's war club is carried as an heirloom by one of his descendants (**Figure 73**). Other past Tsleil-Waututh people are recalled specifically as warriors, and have names with clear bellicose overtones, e.g., Ha-ma-queya "he took the heads off those that he had killed in war" (George 1930:2). *It is near certain that, as elsewhere in the Coast Salish world, a class of specially trained Tsleil-Waututh warriors was responsible for the defense of their territory.*
665. Most accounts of conflict in Tsleil-Waututh territory describe Chief Waut-salk (II) as leading both offensive and defensive actions against specifically non-Coast Salish people. *The death of Chief Waut-salk (probably Waut-salk II, chief George Sla-holt's*

grandfather) is described as resulting from numerous arrow wounds inflicted in battle defending the settlement at Inlailawatash against a Lekwiltok raiding party (Menziess 1934; Tsleil-Waututh 1998:181). Chief George Sla-holt noted that Waut-salk (Chief George's grandfather) had led raids as distant as Alert Bay (Menziess 1934). This almost certainly refers to the retaliatory raids by Coast Salish groups into Lekwiltok territory (~AD 1827–1850), just prior to the Battle of Maple Bay (Arnett 1999:25; Curtis 1915). Based on these Tsleil-Waututh oral traditions, it seems that a major role of Tsleil-Waututh leaders was to defend their people and lands against raiders.



666. With regards to specific examples of warfare, Tsleil-Waututh oral histories nearly exclusively describe conflict with non-Coast Salish raiders from the north, either Haida (~AD 1850–1862), or Lekwiltok (~1780–1850), rather than conflict with other Coast Salish peoples. To my knowledge, there is only a single reference to Tsleil-Waututh conflict with another Coast Salish group. This account describes a small Squamish raiding party at Inlailawatash (the Tsleil-Waututh village at the mouth of the Indian River). This Squamish raider was clubbed to death there at Inlailawatash. This event was recounted to have occurred before the time of Sla-holt (James Sla-holt, b~1820) (Tsleil-Waututh 1998:9 interview with John L. George (Hereditary Chief, Sla-holt), and Lillian George, June 25, 1998). John and Lillian George noted that this was also the only story of fighting between Squamish and Tsleil-Waututh people (*ibid.*).
667. This oral tradition is important for several reasons. Presumably the “Squamish raider” in question: 1) did not seek permission to enter the Inlailawatash area, and 2) was thieving from Tsleil-Waututh stores, property, or molesting Tsleil-Waututh people. *First, the oral tradition describes Tsleil-Waututh's active defense of their homeland against outsiders.* Tsleil-Waututh territory, people, and wealth were not freely turned over to those who wanted to intrude. The Squamish individual had entered a tribally owned watershed (the Indian River Valley) collectively owned by all Tsleil-Waututh people. Inlailawatash was not part of Squamish territory, and Squamish individuals did not have free or open access to this area.
668. *Second, this oral tradition describes the appropriate penalty for breaking Coast Salish protocols regarding trespass and theft, that is, death.* Following Coast Salish laws/traditions, unless one had rights of access through kinship connections, one could not enter the territory of another group to harvest resources. Permission was always sought by the appropriate owners of the land for entrance (Kennedy 2000:216; Suttles 1951:221). And, as described in detail above, notions of private and familial/house property were well-developed amongst the Coast Salish. Sharing was, of course, widely practiced among extended family members, but non-kin and non-Tsleil-Waututh people were not permitted to freely take goods from others (i.e., thievery). And, of course, the repercussions for harming extended family members (if that was part of the raid) would have been severe.
669. According to Coast Salish law/tradition, inappropriate access to Tsleil-Waututh territory, thievery, and abuse of Tsleil-Waututh people was punishable by death (Arnett 1999:23; Snyder 1964:432). Leonard George (2014:15–16) recently described this in detail:

LG: ...And sometimes they try to kill them, but the intention of compromising our way of life and future home of great-great grandchildren to come and kill them and cut off their head and stick their head on a pole to show people that what they just tried to do here, they're not allowed.

BE: Right.

LG: So that was how it was seen. I don't (unclear). On the (unclear), it's—and we still have it today (unclear) you come in (unclear) and you ask permission from our (unclear) to come inside. And then is it allowed? Then send them in. That's how (unclear) permission, right? And that was the difference of (unclear) somebody coming over here with (unclear) permission, then their intention isn't good and you have to suffer the consequences of whatever their intention is.

670. The following two accounts provide vivid depictions of successful defensive battles waged by Tsleil-Waututh against raiders. These two accounts may actually describe a single event that took place at Second Narrows.

4.11.1.1 Defeat of the Haida

671. From a hilltop near what is now Admiralty Point, the Tsleil-Waututh kept a lookout for marauding Haida who made periodic forays into the Inlet to capture slaves. When they spotted the invaders, the warriors of Tum-tumay-whueton crossed the water to a cliff on the southern shore. Here they lay in wait. Chief George recounts the story of his ancestors' defeat of the fierce Haida: "It was the Haida's practice to paddle close to the southern shore. On their last venture the Haida were seen approaching in a fleet of large war canoes. The defenders took up their positions on the cliff and, as the Haida paddled near the bank, they were showered with boulders from above. Many were killed outright, and when the survivors scrambled ashore they were clubbed to death. The bodies of the Haida were laid out in rows and there followed a great celebration at Tum-tumay-whueton" (MacDonald et al. 1998:13).

4.11.1.2 Second Narrows Battle

672. As told by Chief George to T. P. O. Menzies at Burrard Reserve in 1934:

The Northern Tribes, Indians of Alert Bay, also the Haidas were in the habit of sending out raiding parties ravaging the country as far up the Burrard Inlet as Indian River, and there were frequent battles fought, and many lives lost. Chief George stated with pride that his Grandfather [wáts'a7kw, Waut-Salk] had headed raiding parties as far away as Alert Bay. His Grandfather and Father were the heroes of a very successful affair which took place to the Second Narrows, here they waylaid a large raiding party, sinking the canoes by hurling rocks into them, then slaughtered the struggling Indians, in this case some 200 of the Raiders were killed and their bodies carefully laid out in rows on the bank, and all the Indians of Belcarra were brought to see them, to the glory of their fighters.

673. These accounts are highly pertinent to this discussion because they demonstrate that around AD 1846, Tsleil-Waututh had the means and ability to protect the integrity of their territory and the safety of their people against outsiders who meant to harm them.

674. In most cases, accounts of past battles involving Tsleil-Waututh defense of their homeland contain far fewer details than those above. An exception to this is an account described by Pauline Johnson (1997:98–103); however it is unclear how much of her work is description of oral histories or fiction. Johnson (1997:98–103) describes, in very poetic terms, a major battle between a coalition of “northern Indians” versus “southern Indians” at Deadman’s Island near Stanley Park. If there is some truth to this account, it involved Tsleil-Waututh warriors in the coalition of “southern Indians.”
675. Several Tsleil-Waututh respondents in TUS interviews describe a mass burial of Haida or ‘northern’ raiders at Sleil-Waututh, and the location of this burial is relatively ‘common knowledge’ in the Tsleil-Waututh community (Tsleil-Waututh 2000; 2011). *Two respondents specifically described that the decapitated heads of these raiders were placed on the ends of pikes and were displayed at prominent locations to dissuade further raiders* (Tsleil-Waututh 2000:3–4; 2011:8). An account of the battle associated with these deaths was presented by Gabriel George to the NEB (2014). In this account, the village of Sleil-Waututh was successfully defended against Haida raiders, whose bodies were left on the beach.
676. As part of a Tsleil-Waututh oral history recounted by Chief John L. George and his mother, Ta-ah (Talbot 1952:2–5), regarding the serpent, Tsleil-Waututh people from Belcarra launched a retaliatory raid against Haida encamped at Kitsilano. The retaliatory raid is a very minor component of this oral history. However, if this oral history does describe a specific raid against the Haida encamped in Outer Burrard Inlet, it would have occurred between about AD 1850 and 1862. In 1972, Chief Dan George noted that battles had taken place at Whey-ah-wichen, but no details were provided (Archaeological Site Inventory Form for DhRr 8).
677. In summary, there are a number of Tsleil-Waututh oral histories that describe the defense of their homeland against raiders. These oral histories regarding battles are corroborated by separate oral histories that describe fortifications, and archaeological evidence of fortified villages and weapons in eastern Burrard Inlet. Based on the evidence I reviewed, including oral histories from current Tsleil-Waututh leaders, it is highly likely that these villages were linked by specialized lookout and signal stations into a coordinated defensive network. Specialist warriors were likely responsible for leading this defence. There is, to my knowledge, no evidence that Tsleil-Waututh ever lost any of their territory within the Study Area to conquest by outside groups. Based on all this evidence, it seems clear that around AD 1846, Tsleil-Waututh actively and successfully defended their territory against outsiders.

4.11.2 Rules of Access to Resources

678. Coast Salish people had and have clearly defined rules of access to specific resource patches. I described these Coast Salish rules of access above in s. 3.2.2, *Coast Salish Kinship, Ownership, and Non-Local Resource Rights*, and above in s. 3.7, *Tsleil-Waututh Resource Ownership/Land Tenure*. I specifically describe how these rules would have

- operated within Tsleil-Waututh territory and provided examples of those rules. Restated briefly, Coast Salish society was primarily organized by kinship connections rather than political bodies, and because they recognize descent bilaterally and are primarily exogamous, Coast Salish people recognize a very widespread network of kin. One's kinship network at birth would broadly define the spatial extent of what resource patches one had an inherent right to access; establishing new kin through marriage would extend the extent of those resource rights.
679. At birth, one was a member of a lineage, household or corporate descent group. If this group was relatively high status, they would have owned particular, usually the most productive, resource patches (Barnett 1955:250–251, Jenness 1955:22–23, 26–27; Snyder 1964:66–67, Suttles 1951:56–69, 212–218). The head of this household or corporate group would generally act as the manager or steward of such a resource patch. If people from outside this group wanted to harvest resources from such an owned location, they would have to request permission from the household head to do so (Jenness 1955:22, 27; Suttles 1951:221). Typically, an individual who was requesting permission to access such a resource patch would draw upon their kinship connections to that household to do so. Accessing such a resource patch would be undertaken in conjunction with visiting distant kin (Snyder 1964:74–75). That is to say, perhaps a message would first be sent to distant kin, providing intent to visit, then later, upon arrival, permission would be requested to partake in the harvesting of local resources with one's hosts.
680. Procuring such resources without permission would have generally been considered an act of trespass and poaching, the penalty for which could be death (Arnett 1999:23; Snyder 1964:432). All sources agree that permission was always granted to those who requested it (e.g., Jenness 1955:22–27). Leonard George (2014:15–16) also described how "...we still have it today (unclear) you come in (unclear) and you ask permission from our (unclear) to come inside."
681. Beyond lineage or household-owned resource patches, there were also broader tracts of tribally owned territories. These are usually defined by watersheds or their equivalents (Carlson 2001, 2010). At birth, a member of a tribal group inherited access to the resources of such a territory through their distant kinship connections to First Peoples, or the founding ancestors of a particular tribe (Arnett 1999:17; Boas 1889:37–38; Suttles 1951:9, 1955:10). While the rules of access for non-tribal members to such tracts of tribally owned territory are less clearly defined, they were also predicated on kinship connections. Similar to lineage or household-owned resource patches, outsiders would seek permission to harvest resources from an appropriate representative, likely a village leader or *si?em*. In doing so, they would draw upon their kinship connections (through marriage) to that particular village.
682. From the discussion above, it is clear that it was important for Coast Salish households to establish kinship connections with other, perhaps distant households, especially those with access to resources not available in one's natal territory. Marriages were, therefore, strategic, especially among high-ranking families. Marriages and the establishment of kin

with distant groups provided a measure of security or insurance that could be drawn upon when needed. In the sections below, I briefly review Tsleil-Waututh examples of such rules of resource access.

683. As described in sections above, the 'Crease Map' (1863) explicitly identifies the North Vancouver area as 'Lillooet Indians Ground' (Crease 1863). This is the only indication of tribally owned territory on that map, and it is representing Tsleil-Waututh's collective tribal ownership of those lands. The Crease Map then partially corroborates Tsleil-Waututh's concept of their owned territory.
684. Some of the evidence collected by Bouchard and Kennedy (1986) sheds light on the nature of 'tribal ownership' of resources in Burrard Inlet held by Tsleil-Waututh. For example, one of Bouchard and Kennedy's Squamish informants (Adeline Billy) told them that "when non-selilwet Squamish Indians went to Indian Arm to dig clams, they were told by the Burrard people to leave because "this wasn't their land" (Bouchard and Kennedy 1986:149). Additionally, Bouchard and Kennedy (1986:45) paraphrasing an interview with Ted Band (Squamish) "recalls there was a reciprocal arrangement between the people from the Mission and Capilano Reserves (i.e., Squamish people) in North Vancouver and the Burrard people -- the Burrards shot ducks at Capilano and Mission Creek and the Capilanos and Mission Creek people dug clams at Burrard." While neither of these examples contains evidence of requesting permission to access resources in Tsleil-Waututh territory, they do indicate that Squamish people recognized Tsleil-Waututh people's territorial and resource rights in eastern Burrard Inlet.
685. As described above, Rosemary Thomas (2015) described her Squamish cousins requesting permission to visit Inlailawatash and fish there. In that case, they approached her grandfather, George Sla-holt, for permission. Tsleil-Waututh's current hereditary chief emphasized that in the past there were no clear territorial boundaries, just protocol regarding knowledge of your territory and the territory of others, and protocols of asking permission and trading resources (Tsleil-Waututh 2011:6). In the recent past, this protocol was conducted through individual families (Tsleil-Waututh 2011:7).
686. There are several indications of Tsleil-Waututh lineage or family-owned resource patches from a series of TUS interviews (Tsleil-Waututh 2000, 2011). While almost all of these examples are confined to IR No.3, in my opinion, they represent the remnants of a previously much more widespread system of land tenure. The most commonly identified owned resource patches are stretches of beach (clamming areas), and individual creeks. Several Tsleil-Waututh informants recounted that the older generation owned specific tracts of beaches that were marked by prominent boulders or creeks. These examples were best described by Lillian George (a Tsleil-Waututh person), the wife of Hereditary Chief, John L. George, on June 23, 1998 (Tsleil-Waututh 1998). First, Lillian George described a system of Tsleil-Waututh land tenure regarding parcels of the beach in front of IR No.3 (Tsleil-Waututh 1998:23-24). Specifically, she indicated that each family had their own areas of the beach to dig clams on, and that the older generation emphasized to children that they were not to harvest clams from other families' areas. Adults did not

need to be reminded of these rules, because they already knew which parcels belonged to which families. Such a system ensured that no stretches of beach would be over-exploited. I would add that this system of family or lineage owned parcels of beach front on IR No.3 continues to this day, and forms the basis of modern inheritance and land allocation. Similarly, specific family heads are recognized as the stewards of the archaeological sites on their land (property), and consultation and permission must be sought to access those lands and investigate those sites. In a similar vein, the individual creeks on IR No.3 were owned by individual families (Tsleil-Waututh 1998:33–34), and that is why these creeks bear the names of the primary Tsleil-Waututh families (i.e., George Creek, Thomas Creek, and Guss Creek). These creeks were the primary water sources for the respective families' cluster of houses before running water was brought to the reserve.

687. While the examples provided above of Tsleil-Waututh land ownership are essentially modern, they can be understood as remnants of a much more extensive system of land tenure that would have governed resource access in Tsleil-Waututh territory around AD 1846. This system would have likely approximated the generalized Coast Salish model of resource access and land tenure described above. The most salient aspects of this system are:
- a) There would be recognized owners of resource patches (lineages, tribal members, and perhaps village members);
 - b) The recognized owner's permission must be sought to harvest resources from these locations; and
 - c) Kinship connections between parties would ensure that permission would be given.
688. As described above, protocol involved knowing the extent of one's own territory, and the territory of others, and when to ask permission to use that territory (Leonard George 2014). All of the productive or most valuable resource harvesting patches, or portions of them, were likely owned by specific lineages, while the rest of the Inlet and the lands draining therein would likely have been considered tribally owned Tsleil-Waututh territory. Non-Tsleil-Waututh people could access to the resources of Tsleil-Waututh territory by requesting access from appropriate Tsleil-Waututh kin. Access to the rich shellfish beds of Burrard Inlet would have been one of the primary resources that non-Tsleil-Waututh people, especially those that live on the Fraser River, would have been keen to obtain access to.

4.12 Continuity in Tsleil-Waututh Uses of the Study Area

689. The modern Tsleil-Waututh community at Sleil-Waututh in Burrard Inlet is hemmed between urban sprawl, industrial development, shipping, and transport. Because of the pollution derived from these sources, and current government management regimes, current Tsleil-Waututh people are greatly limited in accessing the local wild foods that

they want. That is to say, modern Tsleil-Waututh people do still move around their territory and harvest some wild foods, but they are greatly limited in doing so. From a pre-AD 1846 baseline, when all of Tsleil-Waututh's diet was comprised of local wild foods, and most of that being seafood, such wild foods now only comprise a small percentage of Tsleil-Waututh people's diet. Tsleil-Waututh has undertaken a number of TUSs that describe members harvesting activities in the 20th century (Tsleil-Waututh 2000; 2011). In the following sections, this data is relied on to spatially describe Tsleil-Waututh's modern harvesting activities. The Tsleil-Waututh TUS information primarily describes harvesting activities undertaken by people living at Sleil-Waututh/IR No.3 in the 20th century (Tsleil-Waututh 2000, 2011). These TUS studies were map-based interviews with Tsleil-Waututh members were resource harvesting and other cultural sites were recorded and entered into a GIS database.

4.12.1 Modern Tsleil-Waututh Fishing

690. Fishing continued to be a very regular and important resource harvesting activity in the 20th century (**Figure 74, Figure 75**). The area from Second Narrows to Roche Point within Burrard Inlet was very intensively fished. This included: gaffing salmon at Seymour and McCartney creeks, trolling for salmon, snapper and cod in Burrard Inlet, near-shore fishing for flatfish, and using set nets for an unknown type of small fish. Such fishing activities sometimes were undertaken by canoe or small boat, or sometimes on foot (e.g., to McCartney and Seymour creeks) (**Figure 75**). Notably, despite the ubiquity of herring in the archaeological record here, there are only a few TUS interviews describing herring/herring roe harvesting in the Study Area. I interpret this lack of information on herring to indicate that herring was either absent or so few in number to not be worth harvesting by the mid 1950s or so. I know that some Tsleil-Waututh individuals still harvest fish locally within the Study Area. In fall of 2014, for example, Tsleil-Waututh people harvested chum salmon from Indian River. Practically all of Tsleil-Waututh's fish allocation is Fraser River sockeye and spring/chinook, outside of the Study Area.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

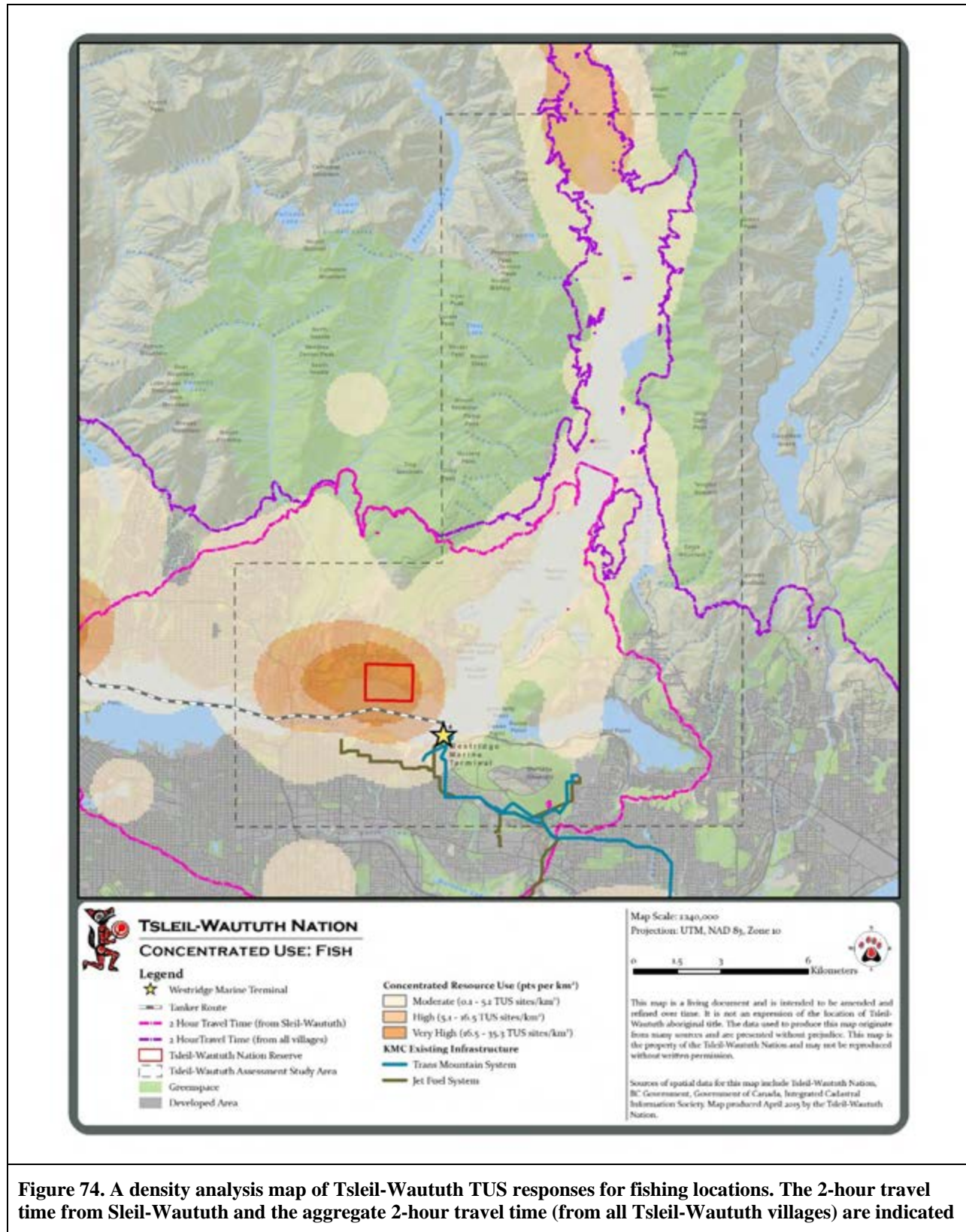


Figure 74. A density analysis map of Tsleil-Waututh TUS responses for fishing locations. The 2-hour travel time from Sleil-Waututh and the aggregate 2-hour travel time (from all Tsleil-Waututh villages) are indicated

Figure 75 has been redacted from this version of the report because it contains confidential information.

4.12.2 Modern Tsleil-Waututh Shellfish Harvesting

691. Shellfish harvesting activities are well-represented in Tsleil-Waututh's TUS information (Tsleil-Waututh 2000, 2011, **Figure 76, Figure 77**). As with fishing, shellfish harvesting was undertaken most intensively from about Second Narrows to Roche Point, especially on the beaches in front of IR No.3 and in Maplewoods Mud Flats (**Figure 76, Figure 77**). The Dollarton area (just northeast of Roche Point) and Bedwell Bay are also areas that were very often described as places where Tsleil-Waututh people had harvested shellfish. The south shore of Burrard Inlet is also described as a place where people harvested clams (Tsleil-Waututh 2011, **Figure 77**). As described in detail below (see s. 5.1.3, *Pre-1792 Shellfish Harvesting*), the vast majority of Tsleil-Waututh people stopped harvesting clams and cockles from local beaches in the late 1960's because of pollution (Tsleil-Waututh 2000, 2011). Shellfish harvesting has been closed by DFO in Burrard Inlet since 1972. Harvesting crabs is also a notable subsistence activity described in the Tsleil-Waututh TUS (Tsleil-Waututh 2000, 2011). Maplewoods Mud Flats is probably the most commonly described place where people harvested crabs.
692. Presently, a few Tsleil-Waututh people still do harvest shellfish from the beach in front of IR No.3 (I have observed it). The Tsleil-Waututh TUS information also indicates that at least occasionally people travel some distances to harvest shellfish with relatives elsewhere. Crabs and prawns are still harvested locally by Tsleil-Waututh. Tsleil-Waututh individuals commercially fish crab and prawn in Burrard Inlet and Indian Arm. Overall, while there is continuity in Tsleil-Waututh shellfish harvesting practices, there has been a massive reduction in the amount of shellfish harvesting from about the late 1960s.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

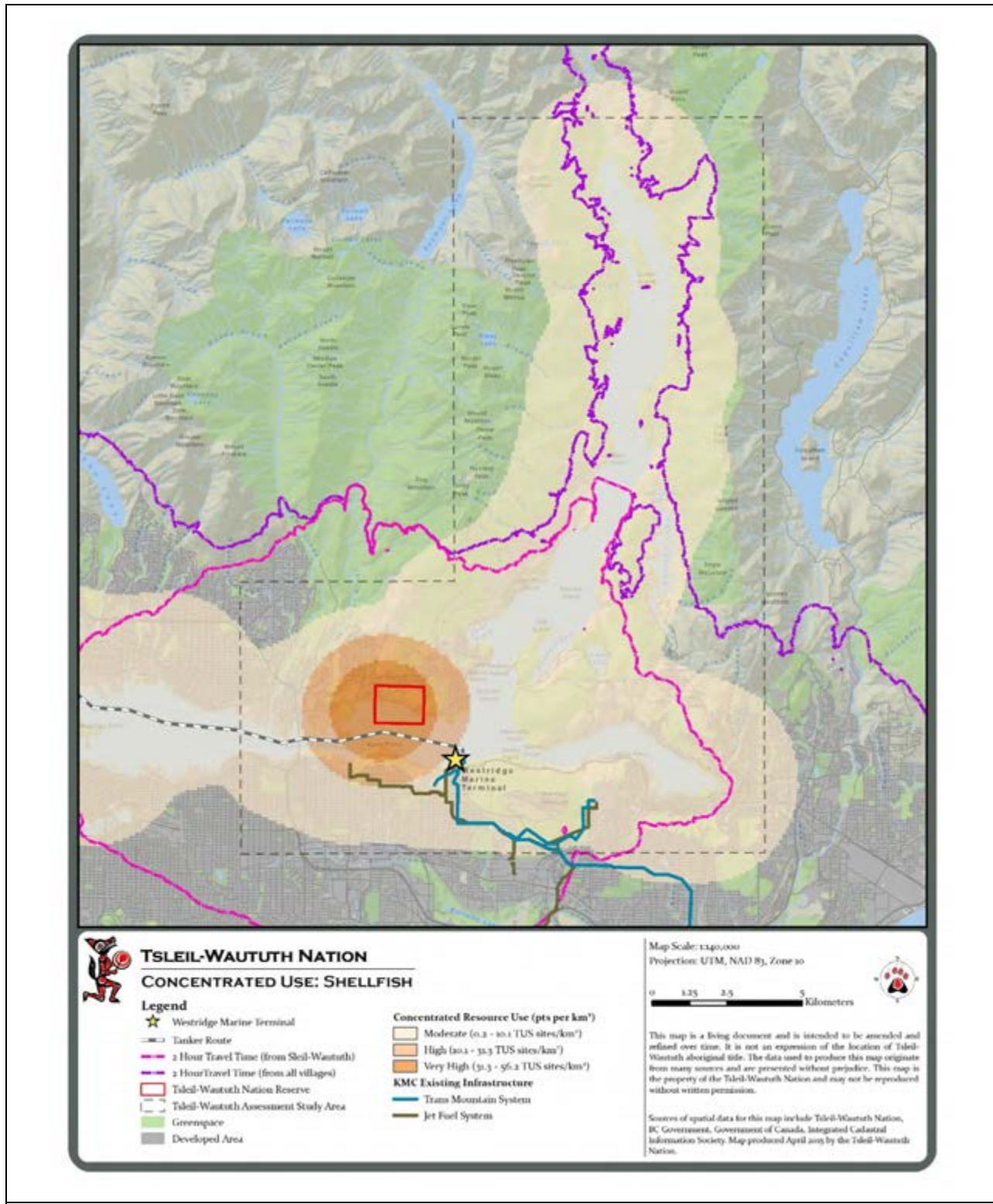


Figure 76. A density analysis map of Tsleil-Waututh TUS responses for shellfish harvesting locations. The 2-hour travel time from Seil-Waututh and the aggregate 2-hour travel time (from all Tsleil-Waututh villages) are indicated

Figure 77 has been redacted from this version of the report because it contains confidential information.

4.12.3 Modern Tsleil-Waututh Bird Harvesting

693. Bird hunting activities are also well-represented in the Tsleil-Waututh TUS information (Tsleil-Waututh 2000, 2011, **Figure 78, Figure 79**). The most densely reported area where bird hunting took place was Roche Point to Second Narrows (**Figure 78, Figure 79**). As described above, birds were often hunted from blinds and houses along the shore of IR No.3, and were incidentally hunted when encountered while travelling. Bird hunting is specifically described on the south shore of Burrard Inlet opposite Roche Point (Tsleil-Waututh 2000; 2011). Secondary dense areas of bird hunting are at the entrance to Indian Arm and around Twin Islands (**Figure 78, Figure 79**). Most of the bird hunting in the Study Area is the hunting of ducks and other waterfowl. Because of firearms regulations, virtually no Tsleil-Waututh bird hunting is presently undertaken within the Study Area.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

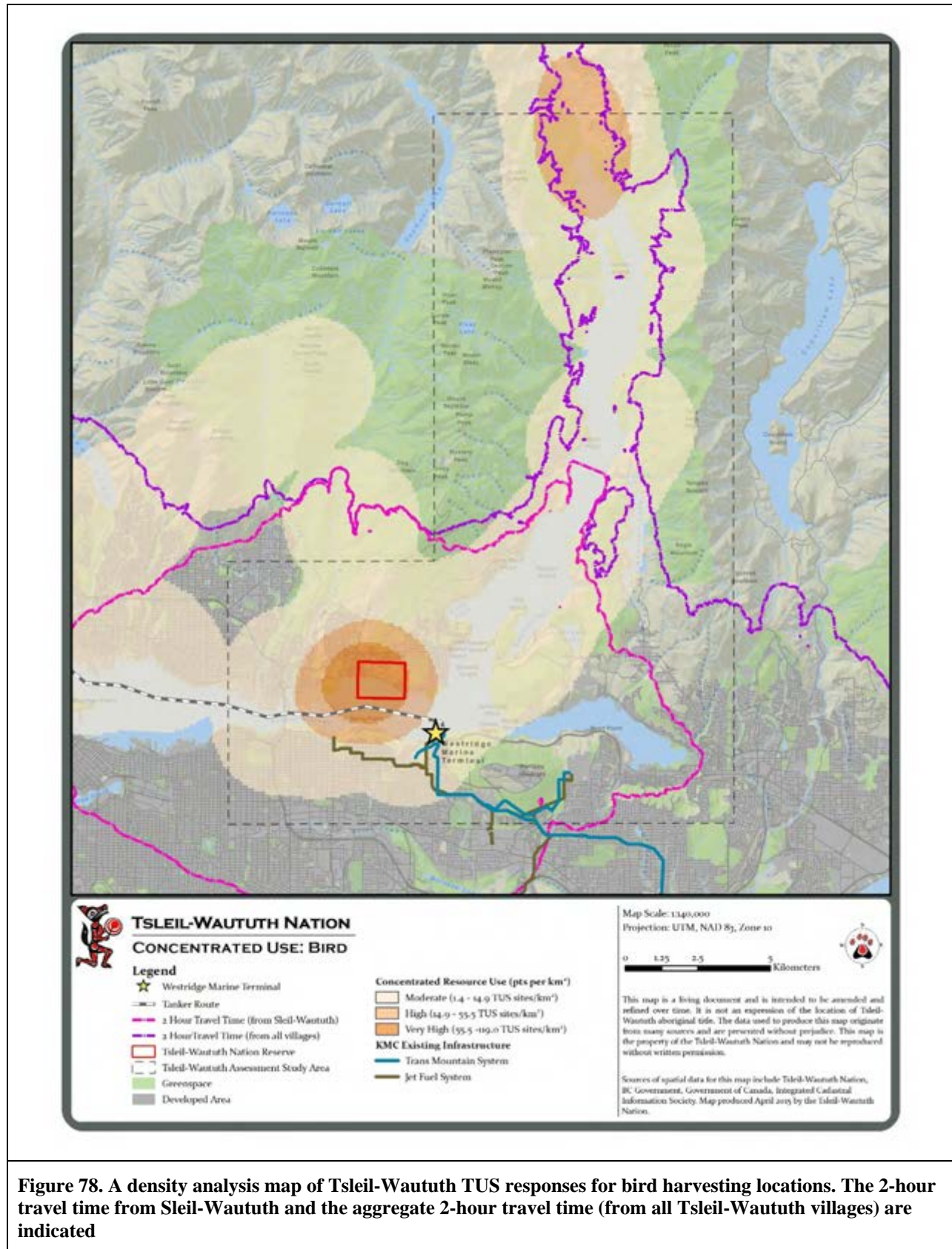


Figure 78. A density analysis map of Tsleil-Waututh TUS responses for bird harvesting locations. The 2-hour travel time from Sleil-Waututh and the aggregate 2-hour travel travel time (from all Tsleil-Waututh villages) are indicated

Figure 79 has been redacted from this version of the report because it contains confidential information.

4.12.4 Modern Tsleil-Waututh Mammal Hunting

694. The Tsleil-Waututh TUS data describes a range of mammal hunting activity throughout the Study Area in general, and the south shore of Burrard Inlet and Burnaby Mountain area specifically (Tsleil-Waututh 2000, 2011, **Figure 80, Figure 81**). Deer are by far the most commonly described hunted animal. Mountain goat and bear are also frequently mentioned, and a mountain locally known as “Shoemaker Mountain” (likely Mount Bishop) was called “Goat Mountain.” One of the Tsleil-Waututh place names, Kwe kwe xau, was described as specific hunting grounds used or owned by the George family. Gabriel George also described ancestral Tsleil-Waututh elk hunting at False Creek and Burnaby Mountain (2014:109–110, 3021, 3022). This would have been prior to about 1890, when elk were locally extirpated from the Lower Mainland area (Kennedy and Bouchard 1987). Hunting no longer takes place on or around Sleil-Waututh IR No.3, because of urban firearms restrictions. Tsleil-Waututh currently receives an allocation of two elk from the Indian River watershed, and these have been hunted for a few years now. To my knowledge, many Tsleil-Waututh people hunt in distant areas with relatives there.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

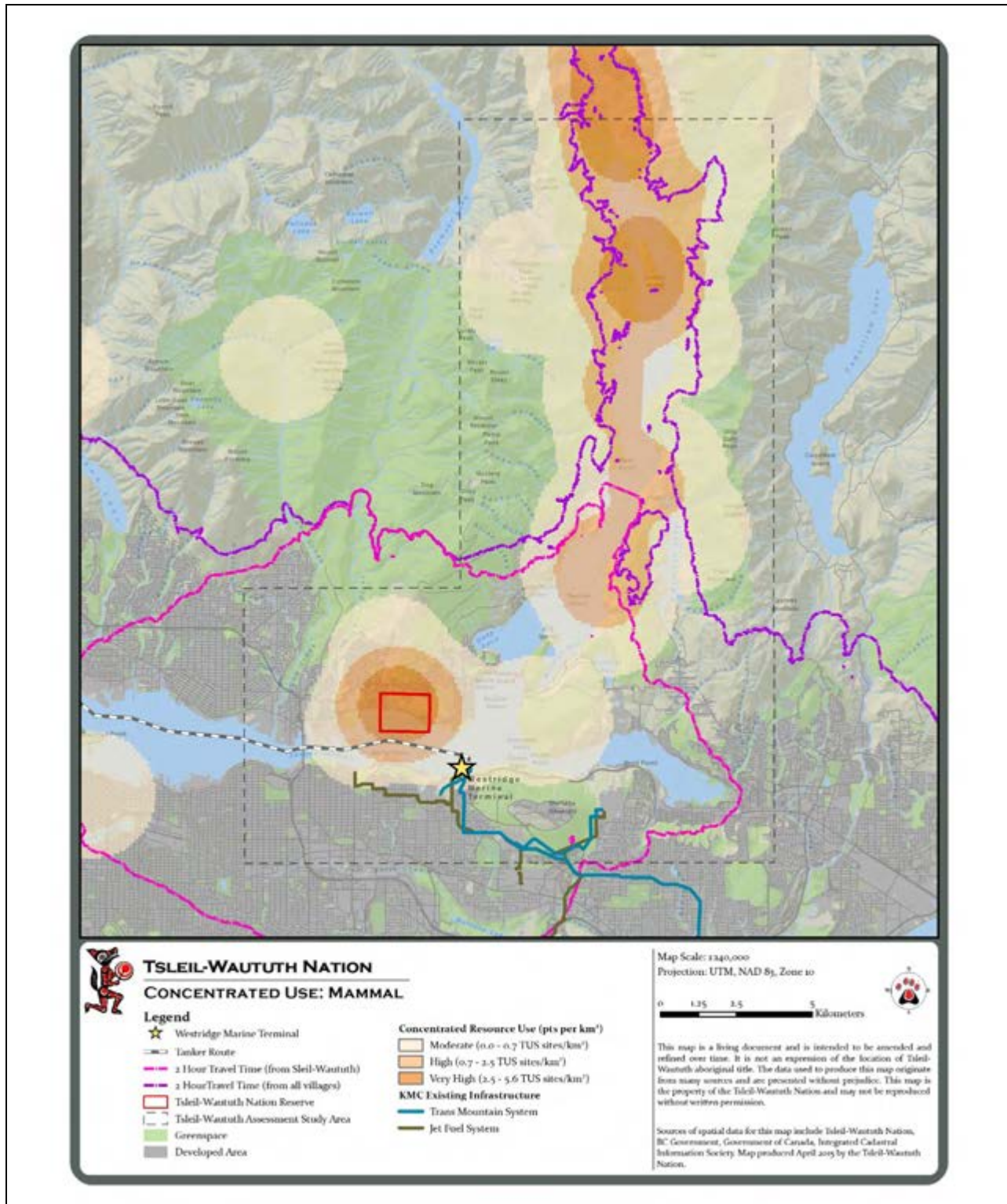


Figure 80. A density analysis map of Tsleil-Waututh TUS responses for mammal harvesting locations. The 2-hour travel time from Sleil-Waututh and the aggregate 2-hour travel time (from all Tsleil-Waututh villages) are indicated

Figure 81 has been redacted from this version of the report because it contains confidential information.

695. As described in detail below (see s. 5.0), this same Tsleil-Waututh TUS record also describes a strong historical trend of pollution curtailing shellfish harvesting, government regulation curtailing fish harvesting, and firearms regulation curtailing hunting activities. Tsleil-Waututh members will presently hunt and fish with relatives living considerable distances from their territory to maintain access to wild foods.

4.12.5 Modern Travel of Traditional Routes

696. Presently, Tsleil-Waututh maintains several boats, racing canoes, war canoes, and kayaks that seasonally, travel the Study Area on a daily basis. At least one small Tsleil-Waututh boat collects crab traps from around Burrard Inlet. At least one small “crew boat” is maintained by Tsleil-Waututh’s Treaty, Lands and Resources Department for a fisheries crew that works primarily at Inlailawatash (shuttling daily between Whey-ah-wichen and Inlailawatash). There is a canoe club in the modern Tsleil-Waututh community that stores their canoes on IR No.3 at DhRr 15 and paddles around eastern Burrard Inlet and Indian Arm. As of the time of writing (March 10, 2015) several dugout canoes were being carved on IR No.3 for use by the canoe club. Tsleil-Waututh owns a successful cultural tourism company called “Takaya Tours” that rents kayaks and offers canoe tours around eastern Burrard Inlet and Indian Arm.⁸ Takaya Tours has offices in both Whey-ah-wichen (Cates Park) and Tum-tumay-whueton (Belcarra Park) and are busy throughout the summer season. All that is to say, Tsleil-Waututh people still travel the Study Area by traditional means for harvesting foods, stewardship activities, and cultural tourism.

4.12.6 Modern Tsleil-Waututh Resource Management

697. Tsleil-Waututh’s Treaty, Lands and Resources Department maintains a number of environmental stewardship initiatives in its Natural Resources program. These initiatives are built into Tsleil-Waututh land use plans, such as the “Indian River Watershed Plan” (2014) and “Bringing it Back” (2011). Other specific stewardship initiatives undertaken by Tsleil-Waututh within the last 10 years or so include:

- Marine Water Quality monitoring with Environment Canada (~2005–present);
- Shellfish tissue quality monitoring (2010–2013);
- Marine stewardship program (2005);
- Reintroduction of Roosevelt elk into the Indian River watershed (2006);
- Sediment quality testing;
- Shellfish stock assessment;
- Harmful algae bloom monitoring;

⁸ See <http://takayatours.com>.

- Indian river restoration projects (salmonid habitat enhancement);
 - Marine bioregional inventory atlas;
 - Indian River salmon stock assessments, habitat enhancement, habitat assessments, minnow surveys, habitat restoration projects, etc.;
 - Lynn Creek estuary restoration;
 - Maplewood mudflats restoration;
 - Invasive species management (in Say Nuth Khaw Yum Park, IR No.3, and the Indian River watershed);
 - Say Nuth Khaw Yum Park maintenance;
 - Co-management of Say Nuth Khaw Yum park with BC Parks (2010);⁹
 - Co-management of Whey-ah-wichen park with the District of North Vancouver (2007; and
 - Capping and erosion control of the midden at Whey-ah-wichen (2014).
698. There are likely more stewardship initiatives, that have been undertaken by Tsleil-Waututh in recent decades, than those listed above; any errors or omissions are my own. Overall, Tsleil-Waututh strives to engage partners within Tsleil-Waututh territory (e.g., governmental bodies, industry and other groups) to pursue measures that will restore the health of local ecosystems. Generally speaking, these stewardship measures are undertaken with the long-term goal of obtaining local traditional foods for the Tsleil-Waututh community.

4.13 Summary of Tsleil-Waututh Use and Occupation of the Study Area

699. In the sections above, see s. 4.2, 4.3, 4.4, 4.5, 4.7, 4.8, 4.9, and 4.12), I described the range of evidence describing Tsleil-Waututh's past and on-going use of eastern Burrard Inlet. Tsleil-Waututh's pre-contact subsistence economy was overwhelmingly reliant on marine and intertidal resources, especially salmon, small fish (herring, oolichan/eulachon, anchovy), and shellfish (clams, mussels, crabs). That is to say, they were hunter-gatherer-fishers. The material evidence of this resource use is very rich (archaeological evidence) and demonstrates 3000 years of approximate stability of resource use up to contact. Tsleil-Waututh's seasonal round was not only primarily focused on mass harvesting hyper-abundant fish runs, and harvesting local shellfish, but also included dispersal and land-based harvesting and hunting over broad areas.

⁹ See http://www.twntation.ca/en/About%20TWN/Stewardship/~/_media/Files/SNKY_ParkManagementPlan_Feb10.ashx

700. GIS modelling of traditional harvesting areas (foraging radii) of selected Tsleil-Waututh village sites and resource harvesting camps was undertaken. This modelling indicates that even if only a few sites were occupied contemporaneously or seasonally-sequentially, then past Tsleil-Waututh people would likely have used most of the Study Area on a daily basis at some season. That is to say, because of the speed and efficiency of canoe travel, Tsleil-Waututh people living at central locations in Burrard Inlet (e.g., Tumtumay-whueton) could have harvested the resources from much of the territory on a daily basis.
701. *Considering the general framework of Coast Salish resource ownership, territoriality, and protocol, with the number of densely packed Tsleil-Waututh villages here, there were recognized rules of access and ownership by the local inhabitants. Importantly, only local inhabitants can regularly monitor such valuable resource patches to ensure they are not over-exploited. All villages used the area immediately surrounding themselves more intensively than anyone else, and therefore had the greatest interest in maintaining the abundance of local resources. What specific areas or resource patches were owned or controlled by the lineage, village, or tribe could be argued at length, but following Coast Salish protocols, visitors would request permission from the appropriate resource owners or stewards before harvesting from them.*
702. Above, I described this system as a nested hierarchy of ownership rights, with the tribe being the highest or most inclusive level, and the lineage being the least inclusive level. These could be considered nested rules of exclusive access. Usually, such permission-seeking would be predicated on marriage/kinship ties between parties. That is to say, if non-Tsleil-Waututh people wanted to access resources of Tsleil-Waututh territory, or a specific Tsleil-Waututh housegroup's territory, they would visit and seek permission to harvest from any kin connections they had there. This permission requesting protocol is significant because it indicates that in the past, Coast Salish people had very clear concepts regarding what territories and areas belonged to whom.
703. *Following Coast Salish concepts of land tenure, ownership, and territoriality, Tsleil-Waututh are the stewards of the lands, waters, and resources of their territory, including all of the Study Area. It is their birth right and obligation. It is theirs to use because of their descent from the First Ancestors here, and it is their obligation to maintain for future and past generations. To maintain the health and abundance of the resources of their territory, Tsleil-Waututh regulated access to their territory. This included clear concepts of ownership, protocols of permission seeking, and military defense. Above, I provided numerous examples demonstrating that around the time of sovereignty, Tsleil-Waututh actively defended their territory against raiders. No evidence of territorial loss or displacement of Tsleil-Waututh territory within the Study Area was identified.*
704. The evidence regarding modern and on-going Tsleil-Waututh resource use in general depicts very active resource harvesting up until about the 1970s, then a sharp decline thereafter. This decline in traditional harvesting practices is explicitly associated with increased local pollution and prohibition against use of firearms in Tsleil-Waututh

4.0 Tsleil-Waututh Land Use and Occupation of the Study Area

(Tsleil-Waututh 2000, 2011). Extensive urbanization throughout most of Tsleil-Waututh territory have encroached upon most terrestrial resource harvesting areas. Species that once were staples—clams, herring—are now rarities in the Tsleil-Waututh diet. Salmon is now the only traditional staple that comprises a notable contribution to most Tsleil-Waututh diets. Local crabs are still a component in Tsleil-Waututh diets, but they should probably now be considered a specialty rather than a staple.

5.0 Tsleil-Waututh Harvesting, Governance, Stewardship and Cultural Practices

705. In the previous two sections of this Report, I described Tsleil-Waututh's cultural identity and history, and then described the scope of Tsleil-Waututh land use and occupancy of the Study Area. Here, I address specific issues of Tsleil-Waututh cultural practice and resource harvesting activities. Specifically:

a) Whether and to what extent Tsleil-Waututh carried out the following practices as of and prior to contact with Europeans:

i) Harvesting of fish, shellfish, animals, birds, plants (including medicinal plants), and any other marine resources. In each instance, identify with reference to the relevant factual basis, explain whether such harvesting was for subsistence, trade, and/or ceremonial purposes;

ii) Regulation, management, stewardship, and/or decision-making by Tsleil-Waututh over specific matters or resources, in relation to members of Tsleil-Waututh and/or third parties;

iii) Any other important cultural practices, including bathing in the Inlet

b) The extent to which the practices described in a) were important or integral elements of Tsleil-Waututh's culture before, at, and after first contact with Europeans (in the sense that each practice contributed to the Tsleil-Waututh's overall distinctiveness as a culture, and made them who they were);

c) The extent to which such practices continue today and if so, whether and to what extent they occur in a different manner, form, and/or with different method(s); and

d) To the extent that such practices do not subsist, the probable reason(s) for the same.

706. To address these issues, I will rely heavily of information already presented in Sections 3.0 and 4.0. In order to avoid unnecessary repetition, I strive to point the reader to specific details presented earlier, but will also specify the evidence relevant to each issue. Again, this discussion relies heavily on archaeological research and Tsleil-Waututh TUS data. In this case, First Contact is defined as occurring in 1792, when a British expedition under George Vancouver, and shortly thereafter a Spanish expedition under Dioniso Galiano entered the Study Area (Bartroli 1997; Jane 1930; Lamb 1984; Newcomb 1923; Wagner 1933). These specific accounts of First Contact were described in detail above (see *Contact*). In the following sections, I first describe the general context of Tsleil-

Waututh resource harvesting and management practices, then describe the evidence of such practices prior to and as of contact.

707. In this section, I address specific issues regarding pre-1792 Tsleil-Waututh cultural practices and resource harvesting activities. In reviewing the available evidence, I conclude that:
- a) Tsleil-Waututh acted as per stewardship principles that maintained the health of their lands and the abundance of their resources. They actively managed stocks and modified the environment to promote the growth of desired species. This management included terrestrial and intertidal components.
 - b) Tsleil-Waututh intensively fished the marine, near shore, and freshwater areas of the Study Area (and beyond). These resources (fish) were the basis of the pre-contact Tsleil-Waututh subsistence economy. Fish, harvested and preserved in surplus, were also likely used for trade/exchange for other goods, and to underwrite potlatches and other feasts. Fishing must be considered a practice that was integral to Tsleil-Waututh culture because fishing was the basis of their entire economy and way of life. Fishing structured the past Tsleil-Waututh seasonal round, their relationships with other First Nations. Fish play a central role in Tsleil-Waututh religious and ceremonial activities. For these reasons, fishing must be understood as a practice that made Tsleil-Waututh culture what it was. Current Tsleil-Waututh fishing practices have been heavily curtailed, including the near-complete absence of herring and other small fish from Tsleil-Waututh diets. Almost all of Tsleil-Waututh's fish now comes from the Fraser River, outside of the Study Area. Harvesting fish was an integral pre-contact Tsleil-Waututh practice.
 - c) Tsleil-Waututh intensively harvested shellfish from the intertidal areas of, and beyond the Study Area. Shellfish were a major component of the Tsleil-Waututh subsistence economy. Shellfish were harvested in surplus and preserved, and were likely used to underwrite potlatches/feasts, and for trade/exchange for other goods. Shellfish harvesting must be considered a practice that was integral to Tsleil-Waututh culture because shellfish harvesting was a pillar of their entire economy and way of life. Shellfish harvesting structured the past Tsleil-Waututh seasonal round, their relationships with other First Nations, and influenced the location of Tsleil-Waututh settlements. Shellfish play a central role in Tsleil-Waututh religious and ceremonial activities. For these reasons, harvesting shellfish must be understood as a practice that made Tsleil-Waututh culture what it was. Currently, very few Tsleil-Waututh people harvest shellfish in the Study Area because they are unsafe to eat. Harvesting shellfish was an integral pre-contact Tsleil-Waututh practice.
 - d) Tsleil-Waututh intensively hunted and trapped animals across the terrestrial and marine portions of, and beyond, the Study Area. While terrestrial animals were a relatively minor component of overall pre-contact diets, they also provided very important goods such as antlers and bones for tool production, and hides and

horns for exchange. Mountain goat hides and horns would have been a particularly important trade good. Animal harvesting must be considered a practice that was integral to Tsleil-Waututh culture because animal harvesting was a pillar of their economy and way of life. Animal harvesting structured the Tsleil-Waututh seasonal round, and was a significant part of their economic interactions with other First Nations. Tsleil-Waututh people maintained close spiritual relationships with animal spirits, and these beliefs are a core principle of Tsleil-Waututh culture. For these reasons, harvesting animals must be understood as a practice that made Tsleil-Waututh culture what it was. Current Tsleil-Waututh hunting occurs in the Indian River, and areas well-beyond the Study Area. Harvesting animals was an integral pre-contact Tsleil-Waututh practice.

- e) Tsleil-Waututh intensively hunted and trapped birds across the terrestrial and marine portions of, and beyond, the Study Area. Waterfowl were a notable component of the pre-contact Tsleil-Waututh subsistence economy. Waterfowl were important foods at feasts and potlatches, and their feathers were used in clothing and ritual paraphernalia. To my knowledge, Tsleil-Waututh no longer harvest waterfowl within the Study Area, but do hunt birds in association with other terrestrial hunting elsewhere. Harvesting birds was an integral pre-contact Tsleil-Waututh practice.
- f) Tsleil-Waututh intensively harvested plants from the terrestrial and intertidal portions of, and beyond, the Study Area. Plant foods (especially berries) were a notable component of the pre-contact Tsleil-Waututh subsistence economy. Plant products, that is, wood, bark and fiber, were the most important technological goods to pre-contact Tsleil-Waututh material culture. Plant based technology allowed for essentially all of the resource harvesting practices described above. Harvesting plants (including trees) must be considered an integral Tsleil-Waututh cultural practice. Plant harvesting activities structured the Tsleil-Waututh seasonal round and settlement location. Beyond subsistence, Tsleil-Waututh plant harvesting activities literally structured the configurations of their houses, canoes and other technologies. Plant products play highly significant roles in Tsleil-Waututh ritual/ceremonial activities. For these reasons, plant harvesting activities must be understood as a practice that made Tsleil-Waututh culture what it was. Current Tsleil-Waututh terrestrial plant harvesting occurs on and round Sleil-Waututh/IR No.3, and to my knowledge, intertidal plant harvesting no longer occurs. Harvesting plants/plant products was an integral pre-contact Tsleil-Waututh practice.
- g) Prior to 1792, regulation of access to the resources of the Study Area was defined by Coast Salish concepts of resource ownership and permission seeking behavior. Tsleil-Waututh lineage heads or *si?em* were responsible for regulating such access. Raids or other violent incursions were regulated by coordinated military defense of Tsleil-Waututh territory.
- h) Prior to 1792, there were many other integral Tsleil-Waututh cultural practices that articulated closely to the local environments of the Study Area. These

include: spirit questing, spiritual relationship maintenance, trade and exchange, and travel/canoeing. These were all integral cultural practices to Tsleil-Waututh that contributed to the distinctive Tsleil-Waututh culture. These cultural practices (including all food harvesting activities) were culturally transmitted (passed from generation to generation) by individuals partaking in such activities alongside more experienced people.

5.1 Pre-Contact Tsleil-Waututh Resource Harvesting

708. As described in detail in section 4.0, prior to contact, Tsleil-Waututh and all Coast Salish peoples were hunter-gatherer-fishers (Barnett 1938, 1955; Smith 1940; Snyder 1964; Suttles 1951, 1955, 1990). That is to say, using a sophisticated food-getting technology, and a seasonal round that involved relocating to places of temporary seasonal resource abundance, Tsleil-Waututh harvested and preserved the natural subsistence resources of their territory and lived off these stored foods throughout the winter. The most important of these resources was fish, but a wide array of shellfish, animals, birds and plants were also used (Barnett 1938, 1955:78–92; Smith 1940; Snyder 1964; Suttles 1951:114–250, 1955, 1990). These generalized ethnographic references indicate that Tsleil-Waututh harvested fish, shellfish, animals, birds and plants as a regular daily part of their subsistence. Evidence for use of these subsistence resources that is more specific to Tsleil-Waututh is derived from archaeology, oral histories, and historical records.

5.1.1 Pre-1792 Stewardship and Resource Management

709. As described above, pre-contact Tsleil-Waututh people were not passive collectors of the bounty of their territory. They were active stewards and managers of those resources who undertook an array of practices to maintain and enhance resource productivity “from the sub-alpine to sub-tidal” (Lepofsky et al. 2015:237). According to the leading authorities on plant use by aboriginal people in British Columbia “...we suggest that Northwest Coast peoples were actively cultivating plants, as the term is now defined, and that they were doing so before contact” (Deur and Turner 2005:8). This included modifying the landscape in a number of ways to stimulate the production of desired species (Deur and Turner 2005). Ownership and regulation of access to resource patches can also be considered a cultural adaptation that acts to ensure that such patches aren't overexploited (Drucker 1951; Turner et al. 2005).

710. Such cultural techniques of resource management, resource enhancement and regulation of access, are adaptations that are common to perhaps the entire Northwest Coast Culture Area (Deur and Turner 2005; Lepofsky et al. 2015). These stewardship practices are as common and widespread as the practice of smoking salmon on the Northwest Coast (Hewes 1947; Kroeber 1939). *Like smoked salmon, regulation of access and resource enhancement are cultural adaptations to the specific climate and ecology of the Northwest Coast. Based on this region-wide trend, such practices and customs should be expected among the pre-contact Tsleil-Waututh people of the Study Area.*

711. Prior to contact, a population of up to several thousand Tsleil-Waututh people were living within eastern Burrard Inlet by actively and expertly managing the rich natural resources of Burrard Inlet and surrounding areas. Pre-contact Coast Salish populations were 10–20 times higher than observed at contact (Harris 1994), and maintenance of such dense populations required a stable predictable resource base. Indeed, the entire Coast Salish cultural pattern of living in large houses and large villages could only be supported by such a pattern of regular intensive use (e.g., Matson and Coupland 1995; Suttles 1968).
712. There is clearly no direct evidence of pre-1792 regulation of resource access in the Study Area, because there were no European observers there, and no early interviews with Tsleil-Waututh people. By the 1960s when a few individuals began to record Tsleil-Waututh oral histories (e.g., Carter 1966, 1972), the majority of Tsleil-Waututh territory had been eclipsed by the Greater Vancouver area, and the Tsleil-Waututh economy had only limited reliance on traditional foods. However, much later evidence indicates that this Coast Salish system of permission seeking was still in place in the early 20th century (Bouchard and Kennedy 1986:149; Rosemary Thomas 2015). Because of this context, regulation of access to their territory was impossible, and habitat enhancement measures futile. For these reasons, it is not surprising that there is only limited evidence specific to Tsleil-Waututh resource management and ownership.
713. I described above how prior to contact (~AD 1000–1770), several Tsleil-Waututh villages were essentially adjacent to one another, spaced 1–2 km apart. It should be expected that the inhabitants of such villages both owned local resource patches, and actively managed them to enhance their productivity. Shellfish beaches would have been amongst the most important managed resource patches. Tsleil-Waututh resource ownership was described in detail above (*Tsleil-Waututh Resource Ownership*). Examples of resource enhancement techniques from elsewhere in the Coast Salish world are described below. Tsleil-Waututh undertook most of these, and many other resource enhancement measures.
714. Terrestrial environments were managed to enhance resource abundance. Meadows and clearings were maintained by using controlled burnings to burn down large trees and stimulate the growth of fruiting bushes and shrubs (Lepofsky et al. 2005). These open areas are also preferred grazing areas for deer and elk, offering increased hunting opportunities. It is expected that Tsleil-Waututh used controlled burning in the past to maintain and enhance berry patches and hunting habitat around their village sites and surrounding hillsides. Other Coast Salish examples of enhancement of plant habitat, such as replanting camas or wapato, support the same principle, but because those species are not reported within Tsleil-Waututh territory, the specific examples are less relevant.
715. Intertidal environments were managed to enhance resource abundance. Because they are immobile, shellfish are vulnerable to over-harvesting (Lepofsky et al. 2015). The most remarkable evidence of shellfish habitat enhancement in the Coast Salish area was a form of artificial terracing creating features called “clam gardens” (Lepofsky et al. 2015; Williams 2006). These clam gardens increased the amount of ideal habitat for clams, and

thus enhanced clam abundance (Lepofsky et al. 2015). While clam gardens have not been reported from the Study Area, much of the suitable shoreline here has been heavily modified, and they would have likely been destroyed. There are what appear to be beaches that have been purposefully cleared of boulders in the Study Area (personal observation), but it is unknown if these are pre-contact in origin. One Tsleil-Waututh TUS interview describes some vague “taking care of a part of a beach” to promote oyster growth (Tsleil-Waututh 2000). But both the location and actions undertaken are not clear from the interview.

716. Shellfish populations were also actively maintained by selective harvesting of aged individuals (Croes 2013). Croes' (2013) long-term excavations at the *Qwu?gweš* site near Squaxin Island (within the Coast Salish area) has identified strong evidence of selective harvesting of butter clams and has interpreted this as evidence of strict resource management. This selective harvesting of large and older individuals allows the smaller younger clams to fully develop, and reduces competition for habitat. Similar selective harvesting of shellfish should be anticipated among all Coast Salish shell middens, including the Tsleil-Waututh sites discussed above. This pattern of selective harvesting indicates regulation of access by a local group, rather than unrestricted access by all.
717. Intertidal areas were also modified in other ways to increase resource production. For example, hemlock boughs were often embedded in known herring spawning grounds to collect the spawn (Kennedy and Bouchard 1983). Here, the branches mimic the seaweeds that herring spawn adheres to. The branches are easily removed after the spawning, and the spawn are then removed and dried. Tsleil-Waututh individuals describe harvesting herring this way in front of IR No.3 and in Bedwell Bay in TUS interviews (Tsleil-Waututh 2000).
718. These practices of resource enhancement are not isolated examples of particular practices. They are examples of a widespread ethos of stewardship and responsibility that is part of the Coast Salish and Tsleil-Waututh worldview. Gabriel George (2014:71) described this in his account of Tsleil-Waututh's creation: “The *spá:th*, the black bear, he taught my young grandfather how to fish, how to gather berries, *how to look after the land, the ha'ha'tamuch (ph), the sacred lands*” (emphasis added). “Looking after the land” means ensuring its health and abundance. This theme is also emphasized in the Tsleil-Waututh oral history regarding Waut-salk and the fish (Gabriel George 2014). To Tsleil-Waututh people, a healthy productive land results in a healthy productive people. This stewardship ethos permeates all aspects of pre-1792 Tsleil-Waututh resource harvesting activities described below.
719. A burning ceremony (described in detail below), a ritual offering of food, goods, and prayers to the dead or other spirits, are closely tied to the Coast Salish concept of stewardship, wherein one is obligated to care for the lands and waters of their territory, to ensure that their ancestors, living relatives, and future relatives can sustain themselves from the land (McHalsie 2007:118). One of the primary motivations behind undertaking a burning is to take care of the ancestors by providing them with food and goods. *Tsleil-*

Waututh's stewardship responsibility then necessitates management of the resources of their territory for future and past generations. This is a central concept in terms of how Coast Salish people generally, and Tsleil-Waututh people specifically, view their relationship to their territory.

5.1.2 Pre-1792 Fish Harvesting

720. Marine fish, especially salmon (spring/chinook (*Oncorhynchus tshawytscha*), sockeye (*Oncorhynchus nerka*), pink (*Oncorhynchus gorbuscha*), chum (*Oncorhynchus keta*), and coho (*Oncorhynchus kisutch*), herring (*Culpea pallasii*), anchovy (*Engraulis mordax*) and eulachon (*Thaleichthys pacificus*) were the foundation of the pre-contact Tsleil-Waututh diet (see **Table 5, Table 9, Table 11, Table 13, Table 15**). Tsleil-Waututh, being a Coast Salish people, were included within Kroeber's (1937) "salmon culture area," defined by the indigenous peoples' shared heavy reliance on salmon as a staple. As described above, analysis of single 2200 year-old burial from Tum-tumay-whueton indicated that individual's protein was comprised of about 96% marine sources (Chisholm 1986:140; Chisholm et al. 1983:397). *That is to say, of all the "meat" this individual ate, about 96% of it was from the ocean—fish, shellfish, and sea mammals.* Marine fish probably comprised the largest portion of this marine protein. These species were all caught in large quantities and eaten fresh, or smoked or dried for later use. Depending on local abundance, these species (collectively salmon and small fish) were the most important food source to all Coast Salish people. Here I collectively refer to the five species of salmon in Tsleil-Waututh territory as 'salmon' and herring, anchovy and eulachon collectively as 'small fish'.
721. Recall Gabriel George's account of the Tsleil-Waututh origin story, wherein "*spá:th*, the black bear, he taught my young grandfather how to fish..." (Gabriel George 2014:71, 2704). Fishing is Tsleil-Waututh cultural practice that becomes visible archaeologically around 1000 BC with the first extensive evidence of occupation of Burrard Inlet.
722. *The central importance of salmon and small fish to pre-contact Tsleil-Waututh diet is beyond dispute.* All ethnographic (e.g., Barnett 1955; Jenness 1955; Suttles 1951, 1990) and archaeological research (e.g., Burley 1980; Butler and Campbell 2004; Carlson and Hobler 1993; Chisholm et al. 1983; Matson 1992; Matson and Coupland 1995; McKechnie et al. 2014) in the Coast Salish region concurs that salmon and small fish were staples of pre-contact Coast Salish diets. Salmon and small fish remains have been recovered in prodigious quantities in all large shell middens in eastern Burrard Inlet (e.g., Say-umiton/DhRr 18, Tum-tumay-whueton/DhRr 6, and Say-mah-mit/DhRq 1) (Lepofsky et al. 2007; Pierson 2011; Stantec 2010; Trost 2005). Some of these archaeological salmon bones have been identified to species using DNA analysis. Trost (2005:55) reports DNA analysis of 11 samples of salmon bones from Say-umiton/DhRr 18 and the results indicated that this small sample included two pink and 9 chum salmon. These deposits have all been radiocarbon dated to pre-contact periods (Morin 2014). Indeed, the dating of the deposits from which these salmon and small fish remains were recovered indicates two to three millennia of stable use of these resources, and intensive

- reliance on salmon and small fish in the decades and centuries prior to contact (Lepofsky et al. 2007; Morin 2014; Pierson 2011; Trost 2005).
723. Salmon and small fish were staples of Tsleil-Waututh diet and what have been termed 'cultural keystone species' (Garibaldi and Turner 2004). 'Cultural keystone species' are defined as those species of plants and animals upon which a specific culture relies on most heavily for "food, clothing, shelter, fuel, medicine, and other necessities of life" (Garibaldi and Turner 2004:1). Hewes' (1973:136) estimates annual contact era consumption estimates for the Coast Salish of the Fraser Delta (circa 20 km from eastern Burrard Inlet) at 1000 lbs per person per year. In my opinion, Hewes (1973:136) estimate of salmon consumption for the Fraser Delta Coast Salish is also a reasonable estimate of pre-contact Tsleil-Waututh salmon consumption. Given a pre-contact Tsleil-Waututh population of several thousand within the Study Area, many hundreds of thousands of salmon per year were being consumed by the Tsleil-Waututh community.
724. Musqueam's aboriginal right to fish was recognized in the Sparrow case (*R v. Sparrow* 1990). Also recall that prior to contact, Tsleil-Waututh was perhaps more associated with Musqueam than any other neighboring group, and probably equally reliant of salmon. To Tsleil-Waututh, salmon is, and was of central importance to their social gatherings, and their ceremonial events. *Its importance extended beyond subsistence and permeated most aspects of the subsistence or domestic economy.*
725. *Based on the enormous volumes of herring and other small fish remains in ancestral Tsleil-Waututh village sites (Pierson 2011; Trost 2005), these small fish likely comprised about an equal portion of pre-contact Tsleil-Waututh diet as salmon.* Such foods dominated most daily meals, and were probably occasionally exchanged for other foodstuffs with other groups. As described above in the description of the Tsleil-Waututh seasonal round, most seasonal harvesting locations were focused on harvesting salmon and small fish (e.g., summer sockeye at the Fraser River, fall chum at the Indian River, spring herring in outer Burrard Inlet, spring eulachon on the Fraser River). And, as described ethnographically for Coast Salish (Barnett 1955:85; Suttles 1951:134–136), and for Tsleil-Waututh in particular (Tsleil-Waututh 2011), trolling for salmon across the inlet was also undertaken.
726. Tsleil-Waututh has maintained reliance on salmon, and to a much lesser extent, small fish up to the current day. Tsleil-Waututh's TUS information is replete with accounts of salmon harvesting (**Figure 82, Figure 83**) (Tsleil-Waututh 2000, 2011). This fishing occurred on the Fraser River, Squamish River, Indian River, Capilano River, Seymour River, and McCartney Creek, and throughout much of Burrard Inlet (**Figure 82, Figure 83**). Tsleil-Waututh's IR No.4 and 4a (Inlailawatash) were specifically designated as 'fishing stations' (JIRC 1877) and Tsleil-Waututh's oral histories emphasize salmon fishing there in the Indian River (e.g., Tsleil-Waututh 2000; George 1990). Tsleil-Waututh presently (and historically) has received Fraser River sockeye and spring salmon fish harvesting allocations, and partake in this fishery with their Musqueam relatives. All Tsleil-Waututh members receive a portion of this fishery in the form of fresh and canned

sockeye. The volume of sockeye portioned to each member is dependent on Tsleil-Waututh's overall proportional allocation, which, in turn, is dependent the annual sockeye return. Tsleil-Waututh has been undertaking salmon stock estimates in the Indian River for about 10 years, and has initiated several salmon stock enhancement measures there. Finally, Tsleil-Waututh are partial owners of a commercial fishing company (Salish Seas) that presently derives economic benefit from commercial salmon and other fisheries.

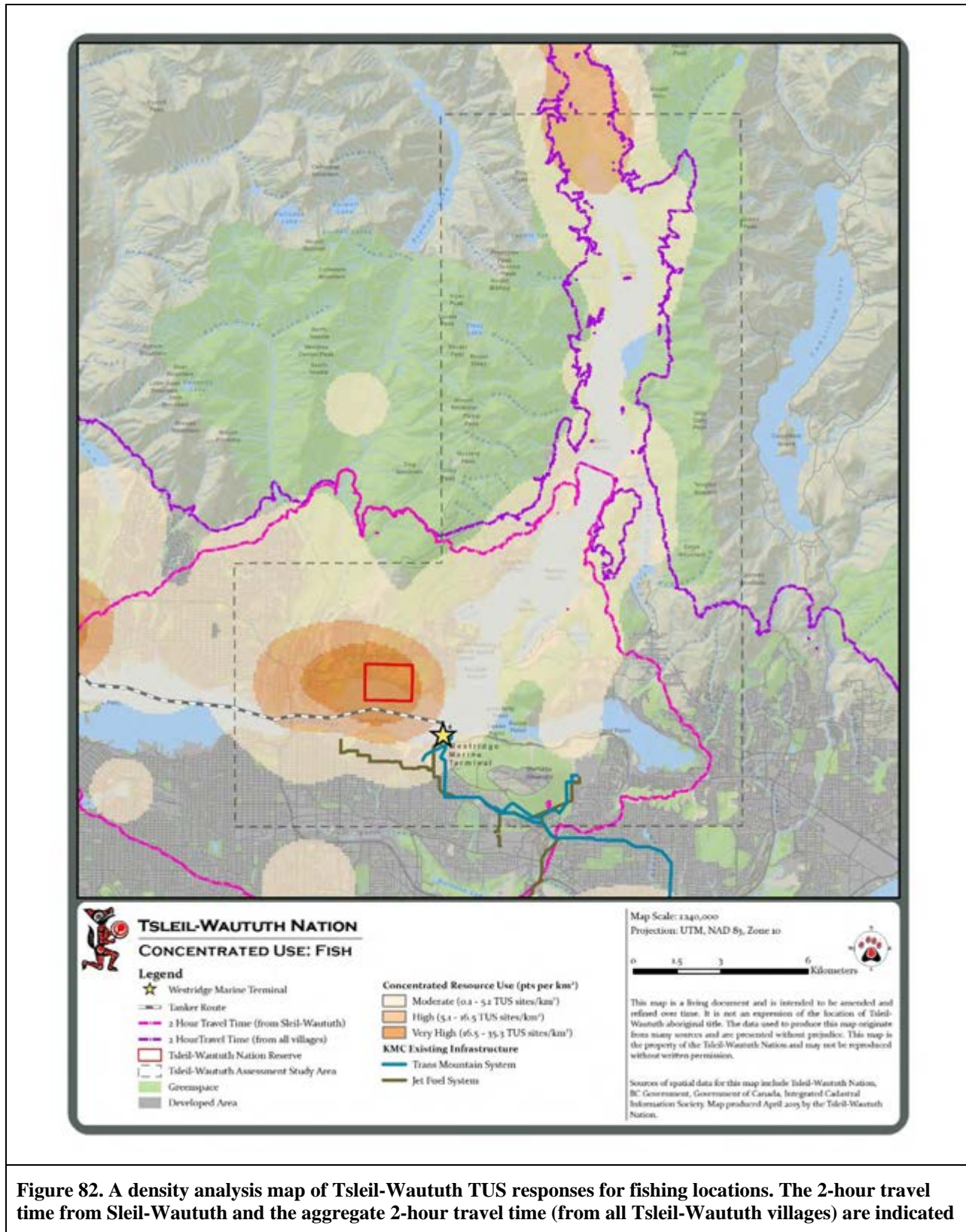


Figure 82. A density analysis map of Tsleil-Waututh TUS responses for fishing locations. The 2-hour travel time from Sleil-Waututh and the aggregate 2-hour travel time (from all Tsleil-Waututh villages) are indicated

Figure 83 has been redacted from this version of the report because it contains confidential information.

727. As described above, Tsleil-Waututh had a sophisticated technology for obtaining fish (see *Tsleil-Waututh Food Getting Technology*). This included a variety of nets, spears, leisters, rakes, traps, hooks, and lures (Barnett 1955:77–90; Mathews 1955:217; Suttles 1990:457). Such items are rarely preserved in archaeological sites, except for the bone and antler harpoon points, fish hook shanks, and herring rake teeth. These objects—bone points and harpoon points—have been recovered in considerable numbers from shell middens associated with ancestral Tsleil-Waututh villages (Charlton 1980:30–39; Lepofsky et al. 2007). Additionally, a wooden fish weir (DhRs 312) is known to exist on Maplewoods mud flats in front of IR No.3 (Arcas n.d.). *In light of the information above, prior to contact Tsleil-Waututh harvested fish.*
728. At the time of contact, the early explorers in Burrard Inlet noted that they were given or traded for fish with the indigenous people, and almost certainly with the Tsleil-Waututh people there (see s. 3.11.1—*Contact*, above). For example:
- On June 13, 1792, near Stanley Park, George Vancouver was presented with “several fish cooked and undressed of a sort resembling smelt” and “from them we procured an excellent supply of smelts in exchange for trinkets, etc...” (Bartroli 1997:70).
 - On the evening of that day, near the entrance to Port Moody Arm, Vancouver was promised more fish from the indigenous people there “Our Indian visitors...promised an abundant supply of fish the next day, our seines having been tried in their presence with very little success” (Bartroli 1997:70).
729. These accounts of First Contact specify that Vancouver's party was given or traded for a small fish by the canoe-borne indigenous, almost certainly Tsleil-Waututh inhabitants of the Study Area.
730. Tsleil-Waututh's oral histories specify that fishing was the mainstay of their traditional subsistence (Gabriel George 2014). More specifically, the oral histories of Waut-salk, the Fish, and the Serpent of Indian Arm emphasize the importance of fish to the traditional Tsleil-Waututh diet (Gabriel George 2014). In the Tsleil-Waututh Origin Story, the first Tsleil-Wat person specifically, “learned from the salmon the cycle of life and the highways of the ocean and why they would go out and the times they did and why they would return” (Transcript of sworn evidence by elected Chief Leonard George, February 10, 1997, p1476–1480). According to Tsleil-Waututh oral histories, fishing has then always been the most important part of the Tsleil-Waututh diet.
731. Probably all pre-contact Tsleil-Waututh people fished to some degree, but there were specialized fishermen. “Such men specialized in fishing, even in one kind of fish, particularly cod or halibut, and earned wealth and renown. Everybody fished, but these professionals were regarded as supernaturally favored (Barnett 1955:79). The majority of fish harvested by Tsleil-Waututh people prior to contact were used for subsistence by the families of those that caught and preserved them, but some harvested fish were probably used to sponsor feasts/potlatches (ceremonies) and to exchange for other goods (trade). In

traditional Coast Salish societies, potlatching (hosting large feasts and giving gifts) was perhaps the primary means of establishing economic and social relationships with distant villages (Snyder 1964:76–86). In all probability, fish were often a staple at potlatches, and were given away.

732. In addition to potlatching, Suttles (1987:18–19) describes the Coast Salish custom of a man taking surplus food to his parents-in-law with the expectation of receiving wealth in exchange. Here, surplus foods from one area/territory, such as fish, could be taken to another area and exchanged for wealth such as blankets, etc. Suttles (1987:19) specifies that this is separate from potlatching. One could see how then, a specialist fisherman who caught much more fish than he needed could earn “wealth and renown” (Barnett 1955:79). This is then both an avenue of economic exchange and a means of maintaining relationships with distant kin.
733. Similarly, it is probable that Tsleil-Waututh traded dried/smoked fish for other goods. Exotic (non-local) goods that were likely obtained via trade are known to occur in ancestral Tsleil-Waututh village sites (e.g., nephrite/jade from the Hope and Lytton/Lillooet area (Morin 2012:350–363, 441, 2015), and dentalia (“tusk shell”) from the west coast of Vancouver Island (Barton 1990,1994; Lepofsky et al. 2007). Tsleil-Waututh people must have traded something for such goods (nephrite/jade and dentalia). Given Tsleil-Waututh’s excellent access to the Fraser River and many small salmon rivers/streams, and a direct travel corridor inland (via the Indian River valley, and a well-documented trail), they would have been well positioned to exchange dried/smoked salmon and shellfish inland to upper Squamish or Lil’wat peoples. Similarly, shellfish could have been exchanged to the south east, to groups along the Fraser River who lacked direct access to shellfish beds.
734. Fish presently, and probably also in the past, is the cornerstone of every meal served at a formal or ceremonial occasion in Tsleil-Waututh culture (personal observation). Fish is presently used in ceremonial “burnings” or offering of foods to one’s ancestors, and was probably used so in the past.
735. *Fish was the subsistence base and the foundation of the pre-contact Tsleil-Waututh economy.* Fish played a role in most daily meals. Salmon in particular was consumed in large quantities, estimated at up to 450 kg per person per year (Hewes 1973). Fish played a major part of special meals and feasts. At potlatches and winter ceremonials hundreds of guests would be fed largely with preserved fish, and fish was probably also distributed as gifts in such contexts.
736. *Fish, especially preserved fish, was likely exchanged/traded for other goods.* This sort of exchange would have happened both between families and households, and between potlatch guests. Trade of preserved fish to interior groups is also probable. The very rich sockeye fishery around Yale has been posited as a pre-contact market-like setting where wind-dried sockeye and other goods were exchanged among Coast Salish people (Carlson 1996; Morin 2012:514–516).

737. *The seasonal presence of fish structured Tsleil-Waututh settlement patterns.* For example, the local hyper-abundance of fish was the primary impetus behind at least 3 of Tsleil-Waututh's seasonal relocations (spring—herring or eulachon, summer—sockeye, fall—chum). Tsleil-Waututh's IR No.4 and IR No.4a were allocated as fishing stations (Sproat 1876). The pre-contact daily Tsleil-Waututh work cycle would have been largely structured by the preferred daily harvesting times for particular species.
738. Fish on the Fraser River in the territory of other First Nations, would have necessitated key marriages to maintain rights of access. *In this way, fish and fishing would have structured the direction of Tsleil-Waututh marriages. These seasonal aggregations of people from many villages and tribes at rich fisheries was the one of the primary avenues of regional interaction among Coast Salish people.*
739. The absence of fish threatened Tsleil-Waututh with famine when the serpent blocked access across Indian Arm (Gabriel George 2014). Access to the fisheries of the Indian River, especially the fall chum runs that would be harvested and preserved as a winter staple, were critical parts of Tsleil-Waututh subsistence. Without access to the rich salmon fisheries, the dense Tsleil-Waututh village populations could not be supported through the winter season. *Fishing and the consumption of fish must be thought of as a central practice, if not the central practice of Tsleil-Waututh culture.*
740. Tsleil-Waututh's continued reliance on small fish has been much reduced compared to salmon. This is partially associated with the near collapse of local herring and smelt fisheries (circa AD 1900) (McKechnie et al. 2014). Indeed, Burrard Inlet was essentially "ground zero" for the coast-wide collapse of the herring fishery (McKechnie et al. 2014). That being said, Tsleil-Waututh's body of TUS information does describe modern harvesting in Burrard Inlet, and eulachon harvesting in the Fraser River (Tsleil-Waututh 2000; 2011). I have heard from Tsleil-Waututh people that Tsleil-Waututh currently receives small quantities of eulachon as gifts from their relatives at Musqueam and Kwantlen.
741. Tsleil-Waututh Nation currently holds a fishing allocation for Fraser River sockeye, chinook, pink and chum, and an Indian River allocation of pink and chum. Tsleil-Waututh fishermen work with or on Musqueam fish boats to obtain most of this Fraser sockeye. This fishery is undertaken with fully modern equipment and the sockeye fishery opening lasts a few days per year at best. Most of this catch is distributed among community members.
742. Based on Tsleil-Waututh TUS data (see **Figure 82, Figure 83**), and conversations with many Tsleil-Waututh people, Tsleil-Waututh individuals harvest fish, mainly salmon, from the Indian River, the Capilano River, the Squamish River, and much of the lower Fraser River. I do not know of any present fishing activities in Burrard Inlet itself (except for crabbing).

5.1.3 Pre-1792 Shellfish Harvesting

743. Prior to contact, Tsleil-Waututh people harvested shellfish. Shellfish was a staple. This is evident in the large shell middens associated with ancestral Tsleil-Waututh village sites in the Study Area. These shell middens are composed of literally billions of shells from shellfish that were collected from nearby beaches and cooked and consumed at these village sites (see **Table 5**). Shellfish has been a major component of past Coast Salish diets, in general (Barnett 1938, 1955; Carlson and Hobler 1993; Ham 1982; Matson 1976; Suttles 1951, 1990), and Tsleil-Waututh diets in particular (Charlton 1974, 1980; Lepofsky et al. 2007; Pierson 2011; Morin 2014; Trost 2005) for at least 3000 years, see **Table 5, Table 9, Table 11, Table 15**). All evidence indicates that shellfish harvesting was a continuous and regular subsistence practice for Tsleil-Waututh ancestors for centuries. *The primary source of evidence for this long historical pattern is the large shell middens in Tsleil-Waututh territory comprised of literally billions of discarded shells (Figure 84). Figure 84 displays an eroding section of shell midden at DhRr 8/Whey-ah-wichen.* Shell middens are places where aboriginal people lived for extended periods of time, and accumulated very large quantities of discarded shellfish remains and other debris. Shell midden composition can vary greatly within a site and can include residential features such as post holes and house floors, cooking features like hearths, and mortuary features such as burials (Ames and Maschner 1999; Matson and Coupland 1995). *All shell middens are exceedingly strong evidence of pre-contact aboriginal harvesting of shellfish.* Shellfish harvesting activities are well represented in the Tsleil-Waututh TUS studies (Tsleil-Waututh 2000, 2011).



Figure 84. Profile of shell midden at Whey-ah-wichen (DhRr 8). Note the horizontal black layer, a possible house floor, between shell-rich layers. There are tens of thousands of shellfish remains in this small section of a large midden. Photo by Jesse Morin, 2012

744. When I discuss 'shellfish' here I mean it to include clams (littleneck clam, *Mercenaria mercenaria*, horse clam, *Tresus sp.*, Nuttall's cockle, *Clinocardium nuttallii*, butter clam, *Saxidomus gigantean*, soft-shell clam, *Mya arenaria*, mud clams, *Mya arenaria lineaus*), mussels (blue mussel, *Mytilus edulis*), oysters (native oyster, *Ostrea lurida*, Olympia oyster), urchins (*Stronglyocentrotus droebachiensis*), and crabs (*Decapoda*). All of these are species identified from archaeological investigations in Tsleil-Waututh shell midden sites that date prior to, or just after contact (Charlton 1974, 1980; Lepofsky et al. 2007; Pierson 2011; Morin 2014; Trost 2005). Based on the intensive radiocarbon dating results in Morin (2014), aboriginal use of these species in Burrard Inlet can be tracked on nearly a century-to-century basis for about 3000 years.
745. In sections above, I described how many Tsleil-Waututh village sites were located proximate to large shellfish beds, and these were owned by specific lineages of the proximate or nearby community. Shellfish harvesting is one of the most commonly reported types of resource use reported in Tsleil-Waututh TUS studies (Tsleil-Waututh 2000, 2011), wherein shellfish are always recalled as a preferred food. Rich shellfish beds are commonly indicated as owned property by specific lineages (e.g., Suttles 1951:55–58; Turner et al. (2005:155), and the Tsleil-Waututh TUS data describes ownership of individual clamming beaches (**Figure 85**, **Figure 86**, Tsleil-Waututh 2000; 2011). Shellfish were harvested and eaten immediately, or smoked and stored for future use (Suttles 1951). The billions of discarded shells in ancestral Tsleil-Waututh village sites is ample demonstration of Tsleil-Waututh's ancestors' regular intensive reliance on shellfish from the local environment for their subsistence and economy.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
5.0 Tsleil-Waututh Harvesting, Governance, Stewardship and Cultural Practices

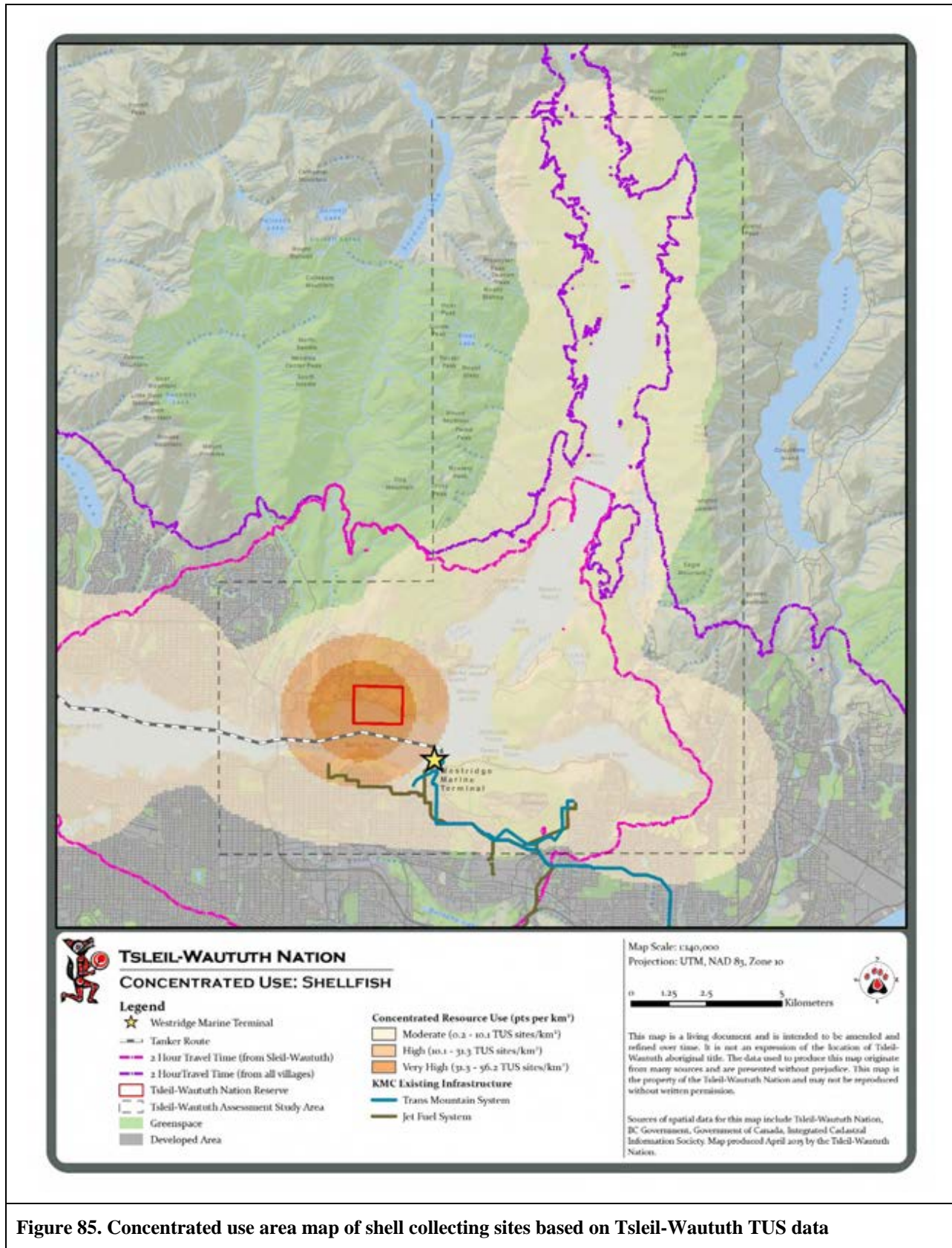


Figure 85. Concentrated use area map of shell collecting sites based on Tsleil-Waututh TUS data

Figure 86 has been redacted from this version of the report because it contains confidential information.

746. Further, in cases where individuals from aboriginal groups, other than Tsleil-Waututh, report accessing resources in Burrard Inlet, it is most often in reference to shellfish (e.g., Barnett 1935–1936; Suttles 1962; Bouchard 1996b:105). Along these lines, there is evidence of a shell midden as far east as Maple Ridge (15 km from Burrard Inlet or 32 km from the mouth of the Fraser) (Rousseau et al. 2003:103; Smith 1903), this implies that either: 1) groups with no access to shellfish beds traveled to areas outside of their territory to obtain them, or, and less likely, 2) groups in shellfish rich areas exchanged shellfish to other groups without direct access to such resources.
747. Tsleil-Waututh's direct access to, and ownership of, the rich shellfish beds of Burrard Inlet positioned them well socially and economically to interact with other Coast Salish groups lacking direct access to shellfish. Recall, that includes essentially all Sto:lo groups (Lower Fraser River), a population of tens of thousands prior to contact (Harris 1994). Barnett (1955:68) specified that Fraser River groups did like clams and "were eager to gather them and trade for them when they could." Shellfish, like salmon and small fish, should be considered a cultural keystone species (in this case a wide group of species) to Tsleil-Waututh (Garibaldi and Turner 2004).
748. *Tsleil-Waututh's intensive pre-contact reliance on shellfish is certain; shellfish comprised a major portion of Tsleil-Waututh's diet, and were used in both their social and economic interactions with other Coast Salish people. Tsleil-Waututh village location was in part determined by proximity to shellfish beds. Part of the Tsleil-Waututh seasonal round was probably structured by shellfish availability (winter, spring, summer). Past Tsleil-Waututh people's daily cycle of work was structured by the tides and access to shellfish beds. Tsleil-Waututh villages were always littered with shellfish remains, such that two-meter thick shell middens would develop there over time.*
749. *Shellfish were served at feasts and potlatches, and exchanged to groups who lacked direct access to shellfish. Tsleil-Waututh would have exchanged smoked/dried clams to lower Fraser River Coast Salish, Squamish, and Interior Salish groups. Other First Nations, especially those lacking direct access to rich shellfish beds (e.g., Musqueam, Squamish, Kwantlen, Katzie), probably married into Tsleil-Waututh families to obtain access to such resources.*
750. While Tsleil-Waututh's reliance on shellfish has decreased since pre-contact times, and perhaps most notably since about 1970, this has been due to factors entirely beyond the community's control (e.g., Thompson 1913). Tsleil-Waututh people have, however, continuously harvested shellfish for millennia before contact, and through to the present day (**Figure 85, Figure 86**).
751. Unlike clams and oysters, crab harvesting is still regularly undertaken by Tsleil-Waututh people. It is also my understanding that crabs are still safe to eat because they do not biomagnify toxins in the same way clams and oysters do.
752. Clam beds, especially productive ones, are commonly described as owned or inherited property (Suttles 1951:69). Tsleil-Waututh TUS interviews indicate that sections of the

beach on IR No.3 belonged to specific families (Tsleil-Waututh 1999). Stewardship, or proper management of shellfish beds, is important so as to not deplete stocks. Because they are immobile, shellfish are relatively susceptible to overharvesting (Lepofsky et al. 2015). Pre-contact selective harvesting of butter clams has been reported elsewhere in the Coast Salish world (Croes 2013) and should be an expected practice in the Study Area. Bouchard (1996b:94) cites Ted Band describing the past practice of “people from Burrard No.3 going to Capilano to hunt ducks in exchange for the Capilano people going to dig clams around Dollarton.” Beyond similarly very general statements, specific examples of Tsleil-Waututh regulation of clam beds are unknown to me. But, that being said, given that they were owned property elsewhere in the Coast Salish world, they should be expected to be owned property, access to which was regulated.

753. As was described above regarding fish, shellfish were a dietary staple that were also very likely involved in many other economic ways beyond subsistence. Examples of such exchanges likely involving shellfish include potlatching and the parent-in-law food for wealth exchanges (Barnett 1955: 260–271; Suttles 1987:16–20).
754. Harvesting and consuming shellfish should be considered an integral part of Tsleil-Waututh's culture. Shellfish was a staple. Winter villages were almost always located next to a shellfish bed. Preserved shellfish was a commodity that Tsleil-Waututh people could trade for other goods.
755. Within the modern era, pollution has had a profound effect on the abundance and edibility of shellfish in Burrard Inlet. This has been noted since at least 1913:

The oil-refinery a short distance westward of Port Moody, on the south shore of the Inlet, allows to escape large quantities of oil and waste, which flow on to the water and float there as a slight but continuous film. At the time of my inspection there was a large amount of it a distance of a mile or a mile and a half along the shore in the neighbourhood of the refinery, and for three-quarters of a mile all life was killed off along the beach (Thompson 1913).

756. These early industrial developments and resulting environmental impacts in Burrard Inlet influence contemporary Tsleil-Waututh resources use. For example, it is highly likely that around 1913, Tsleil-Waututh people were not harvesting shellfish from the oil refinery described above in Port Moody. Many of these industrial developments are older than the eldest Tsleil-Waututh people ever interviewed in TUS type studies. This means that apparent spatial ‘gaps’ in Tsleil-Waututh TUS data cannot be taken as a lack of evidence of pre-contact use, because they are often responses to early localized ecological devastation as described above (e.g., Thompson 1913). The cumulative impact of a century worth of industrial development on the Burrard Inlet ecosystem is severely taxing the health of the range of shellfish described here, and consequently Tsleil-Waututh's ability to safely harvest and consume them.

757. Over the last 40 years of so, consumption of local shellfish by the Tsleil-Waututh people has decreased dramatically (Donatuto et al. 2014). Shellfish harvesting has been closed in Burrard Inlet for about the last 40 years (Donatuto et al. 2014). Tsleil-Waututh people describe historical pollution and sedimentation on the beaches of IR No.3 and Maplewoods mud flats, and most people ceased harvesting clams here since about the 1970s (Tsleil-Waututh 2011). The 2007 Trans Mountain land-based oil spill into Burrard Inlet contributed to the perception amongst Tsleil-Waututh people that clams were not safe to eat from local beaches.
758. The Tsleil-Waututh TUS data explicitly describes a decay of the rich shellfish beds in front of Sleil-Waututh IR No.3 due to pollution. (Tsleil-Waututh 2000; 2011). In the late 1960s, the eel grass and seaweeds on the beach in front of Sleil-Waututh disappeared and the sediments of the beach became increasingly foul-smelling. Most people ceased harvesting shellfish from the local beaches at this time, although some have continued regular harvesting to this day. Many people interviewed in these TUS studies implicate the Chevron Berry Point oil refinery and/or a municipal storm drain outfall near IR No.3 as the sources of this pollution (Tsleil-Waututh 2000; 2011). The Tsleil-Waututh TUS data also describes how, in the 1970s, some families drew upon their kinship connections to families in Sliammon territory to travel there to harvest clams (Tsleil-Waututh 2000; 2011). Presently, all of Burrard Inlet is closed for shellfish harvesting and has been since 1972. Tsleil-Waututh is hoping to soon be able to harvest shellfish that is deemed safe for consumption at few locations at the northern end of Indian Arm.
759. As described by a Tsleil-Waututh (2000) person in a TUS interview:
- It'll never be what it use to be, never. Those are just going to be memories and these things are going to be passed on 'cause my grandpa use to, we lived here a day and night on the beaches when we were kids, we were down there all the time. All through the forests. Kids won't even swim in that water I don't think and all of us kids use to be down there and stuff and it was part of our life and today its not. Somewhere to launch our boat off. The food gathering will never happen again, I don't think"
760. I have been told by Tsleil-Waututh employees that Tsleil-Waututh is presently undertaking a number of shellfish and water quality monitoring projects and shellfish habitat enhancement projects within Burrard Inlet and Indian Arm. The goal of these projects is to identify areas with the lowest pollution levels in the inlet and encourage growth of particular shellfish species in those areas to provide traditional foods for Tsleil-Waututh people. Overall, very little shellfish harvesting is presently undertaken by Tsleil-Waututh people in Burrard Inlet. The reasons for this are primarily pollution and associated health concerns.

5.1.4 Pre-1792 Animal Harvesting

761. Prior to contact, Tsleil-Waututh people hunted animals. Although hunting was far less significant than fishing to the pre-contact Tsleil-Waututh diet, land and sea mammals were commonly hunted for their meat and hides. The extensive assemblages of animal remains recovered from middens associated with ancestral Tsleil-Waututh village sites is excellent evidence of pre-contact Tsleil-Waututh animal hunting practices (see **Table 5**, **Table 9**, **Table 11**, **Table 15**). These remains of hunted animals span from about 3000 years to 200 years ago (Charlton 1980; Morin 2014; Pierson 2011; Trost 2005; Williams 1974). These include large terrestrial game, small fur bearing animals, and sea mammals such as seals and dolphins (see **Table 5**, **Table 15**).
762. Land mammals were hunted with spears, bows, arrows, nets and a variety of traps (see **Table 18**). Sea mammals were hunted from canoe with spears, bows, arrows, and harpoons (see **Table 18**). Many bone and antler harpoons, stone arrows, and spear heads that were used in hunting such game have been recovered archaeologically (Charlton 1974, 1980; Lepofsky et al. 2007). Similarly, many of the tools used by past Tsleil-Waututh people were made of animal products (i.e., from hunted animals), such as antler wedges, bone harpoons and points, and awls (Charlton 1980; Lepofsky et al. 2007).
763. While most pre-contact Tsleil-Waututh people likely hunted to some degree, there were specialist hunters. Barnett (1955:92–93) describes the role of hunting specialists and the economic exchanges such hunters engaged in:
- As there were fishing specialists, so there were men who devoted most of their time and energy to the business of snaring, shooting, or harpooning land or sea mammals. *This seems to have been particularly true of mainlanders*. Specialization in hunting of course called for an exchange of the meat and by-products of the chase for clams, fish, berries, and other foods, and hunters also traded with other specialists for canoes, utensils, house boards, etc. (emphasis added).
764. As with specialized fishermen, hunters obtained specific spirit powers, such as wolf and killer whale that aided them in the hunt (Barnett 1955:93). Based on the Tsleil-Waututh oral histories regarding Waut-salk (Waut-salk and the wolves, the death of Waut-salk), I think it is probable that Waut-salk had wolf-powers and was a specialist hunter. Indeed, so many oral histories associate Tsleil-Waututh people with wolves (see *Oral History*, Gabriel George 2014), that, following a Coast Salish perspective, the wolf spirit power (i.e., the pre-eminent hunter) (Barnett 1955:93) may be a trait shared by all Tsleil-Waututh people (see **Figure 87**).



Figure 87. The Tsleil-Waututh Nation wolf (takaya) emblem

765. In sections above (see *Seasonal Round*), I suggested that Tsleil-Waututh people would have been well-positioned to exchange excess mountain goat horns and skins to Coast Salish people who lacked direct access to them (especially Coast Salish on Vancouver Island) (Barnett 1955:92). Recall that these were valuable goods and markers of status. Similarly, elk skin was used to produce armour (Barnett 1955:270) and likely held high exchange value. And of course, the skins of small fur-bearing animals were likely valued in addition to the meat.
766. In pre-contact times, dried meat from hunted animals was likely used as food during potlatches, and some animal products, especially mountain goat skins, were likely wealth given away in potlatches (Barnett 1955:256). The Hudsons Bay Company blankets given away in huge numbers at potlatches were the historical equivalent of the traditional mountain goat wool blankets. The meat from hunted animals could be exchanged to one's parents-in-law for wealth (Suttles 1987:17–18), and conversely the specialty products (wealth) such as mountain goat skins, goat horns, and elk skin armour could be exchanged for food or other wealth.
767. That is to say, while much of the meat hunted in pre-contact times was probably used for subsistence purposes, it was also exchanged for other goods, both food and wealth, in a variety of contexts. In this way, pre-contact Tsleil-Waututh hunting must be understood as fulfilling subsistence, trade, and ceremonial purposes.
768. As described above (see *Stewardship and Resource Management*), pre-contact Tsleil-Waututh people were actively managing and regulating access to the resources of their territory. For reasons outlined above, namely a lack of ethnographic description and early modern encroachment, there is very limited Tsleil-Waututh specific evidence for these practices. As described 60 years ago by Barnett (1955:252), one “cannot say whether my Sanetch, Maskwiam, Cowichan informants were at fault in not remembering family hunting-and-gathering land rights, or whether the partitioning of food gathering sites among them was less clearly defined than among other groups.” I would expect that prior to contact, specific lineages or villages had clearly defined hunting territories (probably watersheds or similar geographic units) and that these territories were regulated by a lineage head.
769. The practice of hunting must be understood as a practice that was central to pre-contact Tsleil-Waututh culture. Hunting provided food, tools and wealth, and stimulated exchange with others. Tsleil-Waututh was particularly well-positioned to take advantage of hunting and exchanging goat skins to groups lacking them, such as those on Vancouver Island, the Gulf Islands, and San Juan Islands. In Coast Salish terms, Tsleil-Waututh's affiliation with the wolf is linked to hunting animals (**Figure 87**).
770. Tsleil-Waututh people still hunt animals; they do so with guns. To my knowledge, Tsleil-Waututh Nation receives an allocation of two Indian River elk every year. Community hunted elk meat is distributed among community members. Based on casual conversations with a number of individuals, many Tsleil-Waututh people hunt with

relatives elsewhere, often quite distant. The Tsleil-Waututh TUS studies provide many examples of Tsleil-Waututh people's animal hunting practices (Tsleil-Waututh 2000, 2011, see **Figure 88**, **Figure 89**). Much of this hunting took place in the Indian and Squamish valleys. I have heard from Tsleil-Waututh people that individual Tsleil-Waututh hunters often distribute meat to friends and family.

771. Because this TUS data largely spans activities that took place from ~1930–2000, it is not baseline data. Thus TUS data spans a time where much of the Study Area, especially North Vancouver, Burnaby, and Port Moody, were already extensively urbanized and developed. Tsleil-Waututh hunting was limited in the 20th century by: 1) Crown game wardens/hunting allocations; 2) urban firearm regulations; and 3) urban sprawl and industrial development, especially along the shores of Burrard Inlet.

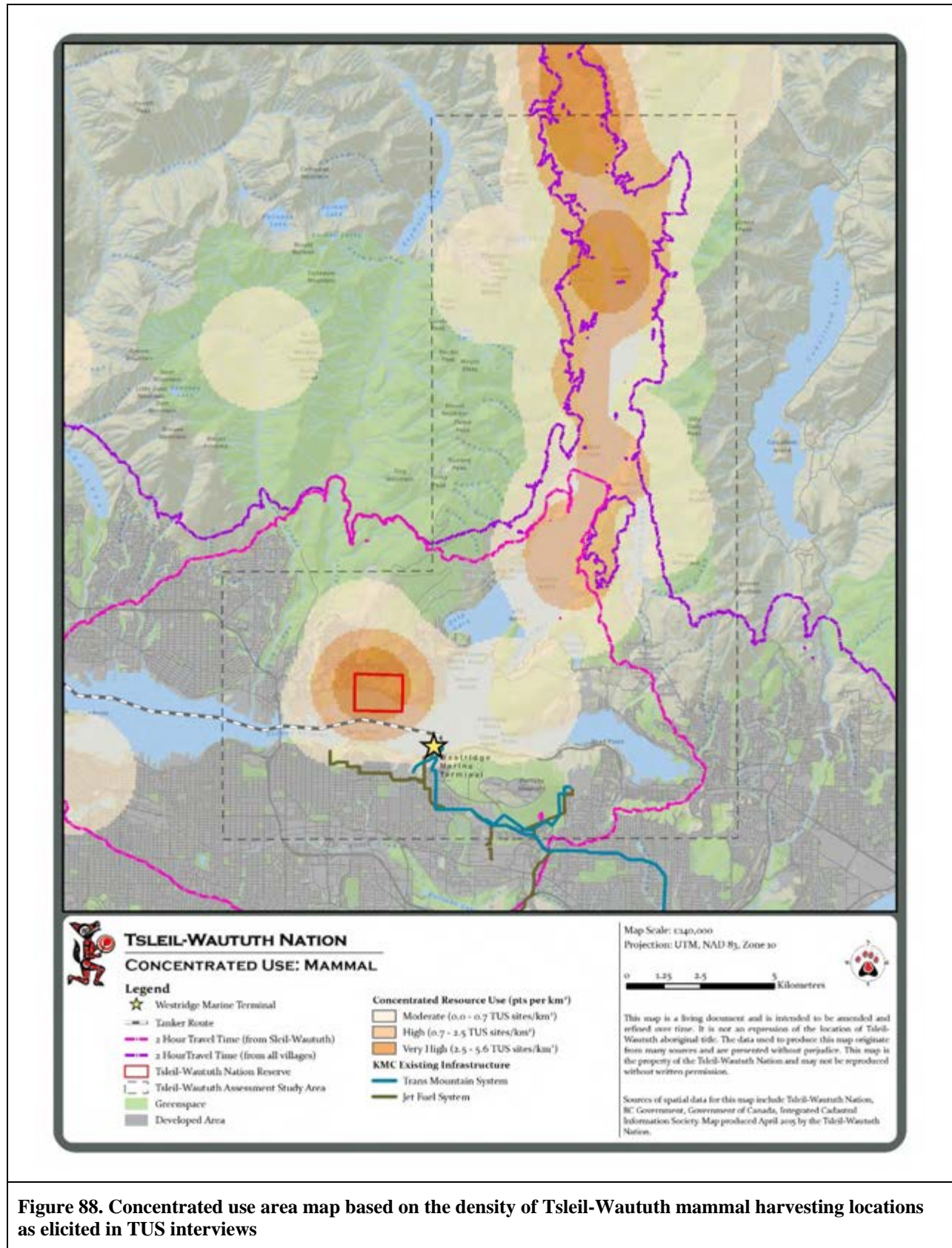


Figure 88. Concentrated use area map based on the density of Tsleil-Waututh mammal harvesting locations as elicited in TUS interviews

Figure 89 has been redacted from this version of the report because it contains confidential information.

5.1.5 Pre-1792 Bird Harvesting

772. There is substantial evidence for Tsleil-Waututh hunting a variety of marine birds prior to contact. Although hunting was far less significant than fishing to the pre-contact Tsleil-Waututh diet, birds were commonly hunted for their meat, and in many cases, their feathers or down was also valued. Marine birds are always described as a notable component of traditional Coast Salish diets. Bird bones are found in relatively low frequencies in practically every large shell midden site in Burrard Inlet (e.g., Williams 1974; Lepofsky et al. 2007; Pierson 2011; Trost 2005) (see **Table 5**, **Table 9**, **Table 11**, **Table 15**). The vast majority of these bird remains date to the centuries and millennia before contact, and some date to the early historic era (Morin 2014). While ducks and duck-sized birds dominate bird bone assemblages from these sites, a wide area of other marine bird species are also evident. The species of marine birds recovered and identified from shell middens in Burrard Inlet include: bufflehead/goldeneye (*Bucephala spp.*), Canada goose (*Branta canadensis*), glaucous-winged gull (*Larus glaucescens*), great blue heron (*Ardea herodias*), grebe (*Podicipedidae*), gull (*Laridae*), loon (*Gavia spp.*), mew gull (*Larus canus*), bay ducks (*Athaya spp.*), gadwall (*Anas strepera*), harlequin duck (*Historionicus historionicus*), northern pintail (*Anas acuta*), northern shoveler (*Anas clypeata*) and scoters (*Melanitta sp.*). These species could have been hunted incidentally on an encounter basis (i.e., shot with an arrow while one was paddling from one village site to another), or purposefully targeted and harvested in large numbers with specially set nets (Suttles 1951:72, 80).
773. Birds were hunted with spears, bows, arrows, nets and a variety of traps (see **Table 18**). Specific duck net sites were lineage owned property (Suttles 1951:72). As described above, while most people probably engaged in some level of bird hunting, relatively few specialist hunters excelled at, and probably gained wealth and prestige from, hunting birds. Bird meat was eaten, especially in winter when fresh food was scarce. Suttles (1951:80) specifically describes ducks being mass-harvested in the winter for feasts and for presents.
774. Birds were also valued for their feathers and down, and were used in a variety of ritual activities (e.g., sprinkling eagle down) and decorative and ceremonial dress (e.g., x^wáyx^way mask/costume) (Suttles 1990:464–468). In this way, bird hunting must be understood to have been undertaken to support ceremonial activities.
775. Bird hunting should be understood as practice that is central and integral to past Tsleil-Waututh culture. It was an important part of their subsistence economy, and the feathers from those birds were a part of arguably the most important Coast Salish ceremonial mask/costume, x^wáyx^way.
776. To my knowledge, Tsleil-Waututh people still hunt birds, primarily terrestrial birds, with guns. The older informants in Tsleil-Waututh TUS studies specifically describe hunting ducks in Burrard Inlet from hunting blinds on the shore of IR No.3, and indeed from the porches of houses (Tsleil-Waututh 2000; 2011, see **Figure 90**, **Figure 91**). Because of

urbanization and firearms regulations, Tsleil-Waututh people can no longer hunt birds in Burrard Inlet. For example, if one were to shoot into Burrard Inlet from a hunting blind on the shore of IR No.3, one would be shooting approximately at the Chevron Berry Point refinery on the south shore of the Inlet.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
5.0 Tsleil-Waututh Harvesting, Governance, Stewardship and Cultural Practices

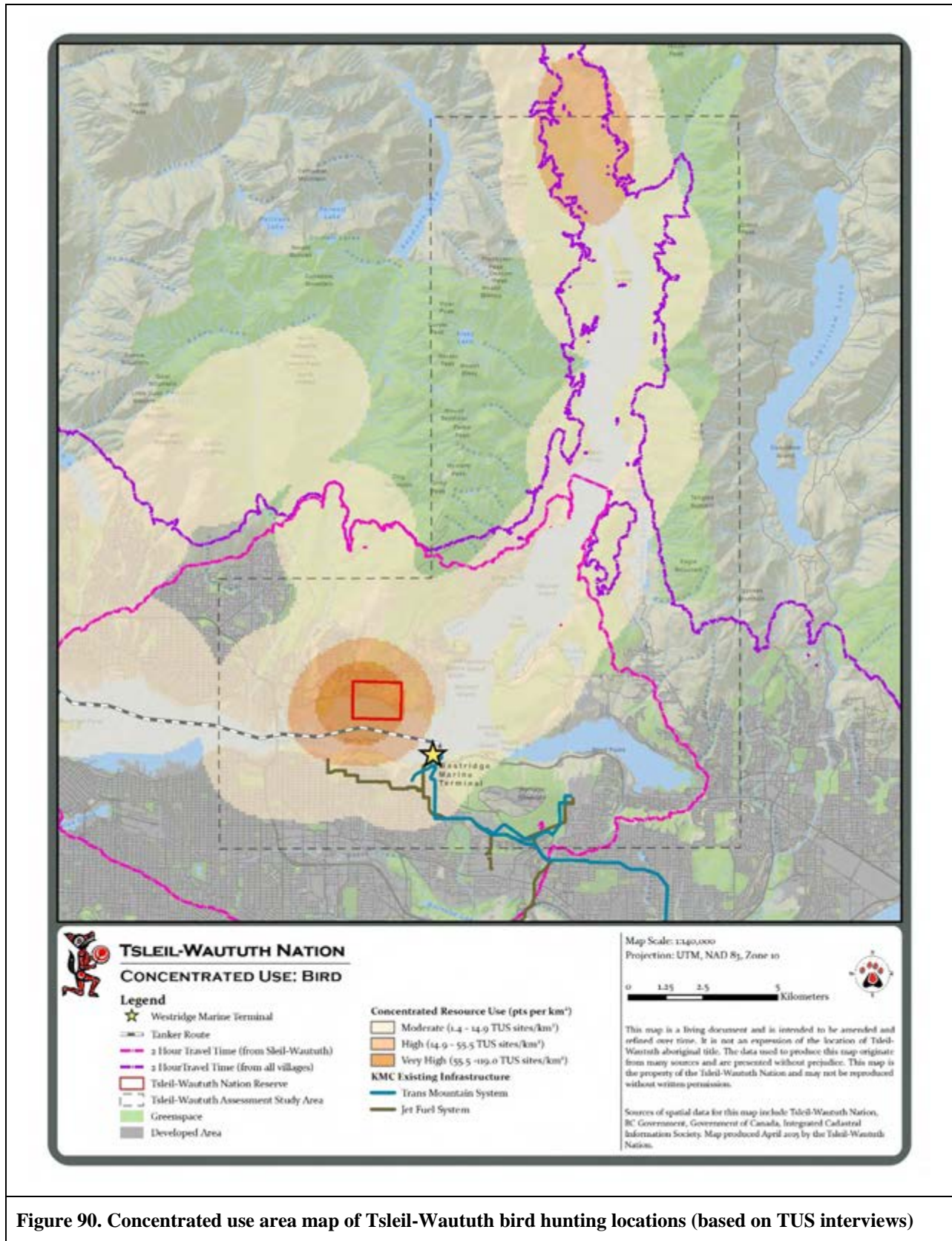


Figure 90. Concentrated use area map of Tsleil-Waututh bird hunting locations (based on TUS interviews)

Figure 91 has been redacted from this version of the report because it contains confidential information.

5.1.6 Pre-1792 Plant Harvesting

777. There is substantial evidence of Tsleil-Waututh plant harvesting prior to contact. As described in detail above, Tsleil-Waututh's traditional subsistence base was based on hunting, fishing, and gathering. Plants were gathered for food, medicine, and technological purposes (Barnett 1955:63–64; Turner 1995). Beyond subsistence and technology, obtaining fire wood as fuel would have been a near-daily concern in pre-contact times (Lepofsky et al. 2003). Houses, nets, ropes, fish lines, baskets, mats, snowshoes, clothes, hats, canoes, paddles, bailers, boxes, bows, digging sticks, arrows, spears, deadfall traps, fish weirs and the like were all made with plant products that were harvested in Tsleil-Waututh territory (Barnett 1955; Suttles 1951; Turner 1995). Tsleil-Waututh's TUS data describes a wide range of plant harvesting activities, both for food and medicinal purposes, from the foreshore to mountain valleys (Tsleil-Waututh 2000, 2011). It can safely be assumed that this modern aboriginal plant harvesting represents the modern development of an ancient practice. Plant harvesting would have occurred from shoreline to mountain top, depending on the season and the species.
778. Recall in Gabriel George's account of the Tsleil-Waututh origin story, wherein "the little birds would come and tell him when the berries were going to ripe high up in the mountain. The spá:th, the black bear, he taught my young grandfather how to fish, how to gather berries" (Gabriel George 2014:71, 2704). And, "[h]e would take the outer bark of the cedar tree and separate it and use the inside for the clothing. He took the beams and planks from the cedar tree and make a home just like this, rectangular post-and-beam home. (Speaking in native language). He was really grateful to the cedar tree for helping him, giving him shelter, helping him make the tools he needed, everything that he needed" (2014:72, 2706). An enormous range of species would have been used prior to contact, far more than ethnographic accounts indicate.
779. Direct evidence of pre-contact Tsleil-Waututh plant use is primarily derived from two archaeological sites—Say-umiton/DhRr 18 and Reed Point/DhRr 373. It should be noted that plant remains are preserved far less often at archaeological sites than shellfish, for example, and are thus less "archaeologically visible." Also, plant use had not been specifically investigated archaeologically in B.C., until the 1990s. For these reasons, archaeologically plant remains are massively underrepresented compared to their importance in living cultures.
780. At Say-umiton, seeds from elderberry, salal, lily of the valley, and *Rubus* (e.g., salmon berry, raspberry, blackberry) were all recovered (Lepofsky et al. 2007:208–209). Only the *Rubus* seeds were recovered in large enough quantities to indicate that they were processed at this site in quantities (Lepofsky et al. 2007:208–209). Charcoal samples from Say-umiton were also analyzed to identify species. Douglas fir, cottonwood/willow and western red cedar were all identified here (Lepofsky et al. 2007:209). These excavations at Say-umiton have been well-dated to AD 726–1634 (**Table 10**).

781. As has been mentioned several times above, DhRr 373 was excavated and interpreted to be a red elderberry processing camp, where large numbers of red elderberries were cooked and stored for future use (Ham and Yip 1992). In this case, these elderberries were probably harvested within the 2-hour LCC from Reed Point (i.e., the Burnaby Mountain/Coquitlam/Port Moody area). This site has been radiocarbon dated to about 361 BC to AD 532, and AD 1524-1953 (Ham and Yip 1992, **Table 16**).
782. As described above, pre-contact active plant management, including habitat enhancement and cultivation, have been identified among Coast Salish and other coastal First Nations (Deur and Turner 2005), and should be anticipated to have been similarly practiced by Tsleil-Waututh prior to contact in the Study Area. Tsleil-Waututh plant resource management should be anticipated to vary from lineage ownership of specific resource patches, to tribal ownership of very large areas of plant resources within Tsleil-Waututh territory. Specifically, productive and culturally managed plant resource patches, especially areas that were regularly burnt to maintain open areas and limit tree growth should be expected to have been owned by lineages (Lepofsky et al. 2005; Turner 1991, 1999).
783. Overall, plant harvesting for subsistence, medicinal, and technological purposes must be understood as an integral cultural practice to Tsleil-Waututh culture. *Plants provided practically all of the material used in house and canoe construction, were made into the tools with which virtually all food was harvested, were an important source of food themselves, were a source of medicine, and were the source of fuel that was used to cook all foods and heat houses.* While plant foods and products were probably not as important in potlatches and other economic exchanges as shellfish, fish and animals, they were a critical part of Tsleil-Waututh technology and an important part of pre-contact Tsleil-Waututh subsistence. Because plant technology and food articulated with practically all of Tsleil-Waututh culture, and specifically, comprised the technology with which all food was obtained, plant harvesting activities must be understood to have contributed to the distinctiveness of Tsleil-Waututh culture and society.
784. Plant gathering continues to this day with modern Tsleil-Waututh people. The most recent Tsleil-Waututh TUS information primarily describes gathering berries for food (salmon berry and “dokka/dockle berry”/salal), and plants for medicinal purposes (cascara, licorice root, devil’s club) (Tsleil-Waututh 2000, 2011). Casual conversation with many Tsleil-Waututh people indicates that such practices are very widespread. Tsleil-Waututh interest in traditional plant medicines may, perhaps, even be increasing at present. Trees are still harvested or obtained through trade, and are being carved into canoes and poles at Sleil-Waututh the time of writing (March 2015). Again, to me, this appears to be an increase, a rejuvenation, of traditional Tsleil-Waututh woodworking (i.e., plant working) practice.
785. The Tsleil-Waututh TUS data also describes a general decrease in the use of plant foods/medicines over the 20th century. A large part of this trend is no-doubt a substitution of wild plant foods for domesticated store-bought plant foods. But another

part of this has to do with habitat loss. More specifically, the local ecology of the Maplewoods Mud Flats area, immediately southwest from Sleil-Waututh/IR No.3 is described to have transformed dramatically over the 20th century (Tsleil-Waututh 2000, 2011). The intertidal area here was described as being much greener, with a variety of reeds and intertidal grasses, including edible species. As was the case with shellfish harvesting here, this exceedingly rich local plant environment transformed into an environment of much lower biological diversity and productivity. Loss of the inter-tidal plant ecology here has impaired the cultural transmission of a whole array skills and knowledge regarding the use of these plants. Recall, in the Tsleil-Waututh TUS data (2000, 2011) the reasons for the pollution and environmental degradation of the beach/mud flats area were 1) the oil refinery on the opposite shore, and 2) the storm drains emptying on to the beach here.

5.1.7 Pre-1792 Protocols of Access: Permission Seeking

786. As described in detail above (*Coast Salish Kinship, Ownership, and Tsleil-Waututh Resource Ownership, Rules of Access to Resources*), Coast Salish tribes, villages and lineages have a hierarchically nested set of resource ownership rights. Tsleil-Waututh's pre-contact system of resource ownership followed these lines. Based on kinship and group membership, one would have the rights to access specific lineage-owned, village-owned, and tribally-owned tracts of land/water and associated resources. At birth, one was a member of a lineage, household or corporate descent group. If this group was relatively high status, they would have owned particular, usually the most productive, resource patches (Barnett 1955:250–251, Jenness 1955:22–23, 26–27; Snyder 1964:66–67, Suttles 1951:56–69, 212–218). To access resources outside of areas where one had defined resource rights, one would first request the permission of the appropriate “owner” or lineage head with rights to those resources. The head of this household or corporate group would generally act as the manager or steward of such a resource patch. If people from outside this group wanted to harvest resources from such an owned location, they would have to request permission from the household head to do so (Jenness 1955:22, 27; Suttles 1951:221). To harvest resources without seeking permission would be a serious transgression (Barnett 1955:252). In Tsleil-Waututh terms, their chiefs or *si?ems* would have been responsible for taking care of the land/water to ensure that the Tsleil-Waututh people would have access to the resources that come from it.
787. These examples were described above. There is no reason to think that this general Coast Salish model of defined resource rights and permission seeking behavior did not extend well back to pre-contact times. The long-term continuity in resource abundance as reflected in many of the shell midden sites above offers strong evidence that the cultural means of regulating resource access in the Study Area (whatever they were) were successful in maintaining resource abundance.

788. Tsleil-Waututh's current Stewardship Policy¹⁰ is a modern extension of these traditional cultural practices of regulating access to Tsleil-Waututh territory. The Tsleil-Waututh Stewardship Policy outlines the consultation process required for all developments within Tsleil-Waututh's Consultation Area (**Figure 2**) that have a potential to impact Tsleil-Waututh's aboriginal interests (i.e., the referrals process). This referrals and consultation process is undertaken by Tsleil-Waututh's Treaty, Lands and Resources Department.

5.1.8 Pre-1792 Regulation of Access: Military Force

789. Regulation of access to Tsleil-Waututh territory by means of military force was a pre-1792 practice. Above (see *Warfare*), I described a cohesive Tsleil-Waututh defensive network composed of lookouts, beacons, and four fortified village sites, and a series of battles (see also Gabriel George 2014). These battles all likely occurred in post-1792 times, largely between about 1800–1860. Given this array of evidence of immediately post-contact military defense of Tsleil-Waututh territory, in all probability, this practice extended back to pre-contact times (Johnson 1911, provides a somewhat dubious account of a pre-contact battle near First Narrows). Anglebeck (2009) describes the pre-contact history of many Coast Salish defensive features and sites, and Schaepe (2006) provides a clear pre-contact case of Coast Salish defensive features and a defensive network of sites. While in post-contact times, warfare was perhaps more intense and deadly, there is substantial evidence for pre-contact warfare in the Coast Salish world. This evidence consists of defensive networks, fortifications, weapons, and defensive injuries on human remains (Angelbeck 2009; Schaepe 2006). There is every reason to think that prior to 1792, Tsleil-Waututh also used military means to regulate access to their territory.

5.1.9 Pre-1792 Cultural Practices

790. Many other cultural practices were distinctive and integral aspects of pre-contact Tsleil-Waututh society, far more than could be exhaustively listed. There are several types of Tsleil-Waututh cultural practice that articulate closely with the local environment that are thus particularly relevant. Four of these—Spirit Questing, Spiritual Relationship Maintenance, Trade and Exchange, and Travel/Canoeing are discussed in detail below.

5.1.9.1 Spirit Questing

791. Coast Salish people have a cultural and religious practice called *smilə*, *Seone*, *syəwən*, *syulu* society, or “spirit dancing” (Barnet 1955:140–149; Jilek 1974; Suttles 1990:467). This is perhaps the most important traditional Coast Salish cultural/religious practice. The members of this group, similar to a secret society, had acquired a “spirit song” they had learned to dance (Suttles 1990:467). These “spirit songs” were gained by periods of prolonged seclusion and fasting beginning at puberty (Barnett 1955:143–145). Elsewhere, Arnett and myself argue that these rock art locations in Indian Arm were probably used by people training to become *shxwla:m* “Indian Doctors”, gaining power from the power of the place there (Arnett and Morin n.d., see McHalsie 2007).

¹⁰ 2009, <http://www.twnation.ca/en/About%20TWN/~media/Files/Stewardship%20January%202009.ashx>.

792. There are first hand 19th century observations of this practice. For example, in 1881, while canoeing up the inlet, Dr. Walkem described:

Thirty three years ago I had to go to the head of the north arm to see a sick logger. I had hired Big footed George of Seymour Creek to take me there. As we approached the shoreline beneath Temenwos Lake, now called Lake Beautiful, one of these howlers broke out in her dismal lament. George would go no further. He was afraid of the spirits of the lake above. He turned the canoe, notwithstanding my protests, and fled swiftly towards his home on Seymour Creek. I had to engage a white man to take me up next day (Walkem 1914:67).

793. Walkem (1914:67) explains that the individual training to be an Indian Doctor "...is to take to the woods and find some isolated lonely spot, either on some mountain top or by the waters of some lake, where his cries to his 'temen-wos' will not be heard by human ears." The word 'Walkem' used for what is now called Buntzen Lake, "Temenwos" is *tamanos* being Chinook jargon for *syulu* (guardian spirit power) (Shaw 1909:24; Walkem 1914:67).
794. This spirit questing requires people to be at a powerful location, like the home of a *st'aleqem* (the serpent) on small ledges along Indian Arm, and to fast and bathe in cold water, to gain a spirit vision and song (McHalsie 2007; Peterson 1990:119; Suttles 1987:75–76; Van Eijk 2004). Serpents were the most powerful spirits in the Coast Salish world—"there was a gradation from this monster to the weaker common spirits" (Barnett 1955:145). As described repeatedly above, the serpent of Indian Arm was located near this location (also see Gabriel George 2014, **Figure 12**). A Tsleil-Waututh TUS interview specifically indicates that (now deceased) Tsleil-Waututh elder, Paddy George, used to "swim" where the serpent was known to pass because it was "sacred" (Tsleil-Waututh 2000). Also recall that cold water bathing was specifically described by Tsleil-Waututh *shxwla:m*, Gabriel George, in his sworn evidence to the NEB (2014:93, 2894). It was also specifically described in the Tsleil-Waututh origin story (i.e., jumping off the cliff, swimming down) (Gabriel George 2014:73). I have been told by Tsleil-Waututh people that cold water bathing is also used for other cultural/ritual purposes.
795. Seclusion and access to clean water at specific locations (power places with spirits to obtain), such as Indian Arm is a central part of the Coast Salish religious/ceremonial practices often called guardian spirit questing/dancing. Given the widespread nature of these practices across the Coast Salish world (e.g., Barnett 1955; Suttles 1990), and the deeply-embedded nature of these concepts in Coast Salish culture, they appear to be part of an ancient practice.

5.1.9.2 Ritual Bathing

796. Ritual bathing activities are an important part of Coast Salish spiritual practices (Barnett 1955:104, 168, 219, 232, 234; Duff 1952b:98–99; Suttles 1951:332). Ritual bathing in cold water is a Coast Salish cultural activity that is often undertaken in private contexts

where powerful spirits are thought to dwell (Barnett 1955:144; Walkem 1914). In some cases, ritual bathing is undertaken in conjunction with fasting to obtain a guardian spirit or spirit power. Tsleil-Waututh TUS interviews specify ritual bathing in Indian Arm and Buntzen Lake by individuals to gain power from the presence of the two-headed serpent there (Tsleil-Waututh 2000). I have been told by and have observed Tsleil-Waututh people ritually bathing in Indian River and several of the creeks draining therein. Ritual bathing in specific bodies of water is a pre-contact Coast Salish cultural practice undertaken in part as a form of training and a part of gaining spiritual contact.

5.1.9.3 Burnings—Spiritual Relationship Maintenance

797. A prominent and central Coast Salish spiritual or ritual obligation is to “take care of one’s ancestors” (Hill-Tout 1900:478; Kew 1970:210–230; McHalsie 2007:118–120; McKay 2002:45, 85, 89, 99). This involves providing food and blankets that one’s ancestors need. Such ceremonies appear to have very ancient roots in Coast Salish culture (see Carlson and Hobler 1993:45; Carlson 1996:221; McKay 2002). In the relatively recent past, this involved replacing the burial wrappings/blankets of one’s ancestors, and burning the clothes and tools of the recently deceased (Castile 1985:345; Kew 1970:213, 229–230). Presently, such care for the ancestors is primarily undertaken by *shxwla:m* or “Indian Doctors” (Kew 1970:125, 212). According to Kew (1970:125):

He is a person who has very strong powers conferred upon him and is capable of divining and communicating with supernatural things. He is believed to be able to ‘see the dead’ and to speak with them; he may be able to find and return lost souls, or to steal souls or the breath of individuals and also harm them by shooting illness into them. He is a specialist in manipulating the relationships between the individual human and the supernatural.

798. Coast Salish people conceive of the afterlife rather differently than in the Western Christian tradition. Some of this epistemology must be described in order to understand Coast Salish people’s obligations towards their ancestors. Again, following Kew (1970:211):

The dead were thought to enter a life like that of the present world where they would have largely the same emotions and desires and live much as they had. The world of the dead was not in another place but right here: ‘it’s like going through a curtain – we can’t see the other side but they say that they can’. The dead and their world, for all the avowed similarity, are mysterious. They can be dangerous and malicious at times, but they are not universally or invariably so. One’s own dead kin remain in the family – and are thought of being essentially kindly.

799. In order to take care of one’s ancestors, a ritual/ceremony called a ‘burning’ is led by a *shxwla:m* or Indian Doctor. In this ritual, specially prepared food is burnt in a fire and accompanied by prayer (McHalsie 2007:118–120). Food and clothes are transmitted to

the world of the dead by burning them (Kew 1970:229–235). Some details of this ritual are described in the account provided below:

A burning itself is a way of providing for our people who have passed on. It is a belief ...[that] we take care of one another. It is kind of understood that once the people get to the spirit world there are different things they do - but they don't have means to feed and clothe themselves. They don't have the material means, but because they are used to these things, they still need them. So, it is our job here on the earth to set the table and call them. So we have the food that is there, the water, the tea, the juice that they used to drink... We prepare it, we cook it, we cut up the fruit, take the candies out of the wrappers. When everything is ready we have the fire. Once it goes into the fire and you see the smoke going up from the fire, that means that a part of that food and anything else that goes into the fire, once you see the smoke going up that means the spiritual part goes to the spirit world so the spirits there can partake in the meal.... It is like any other meal with your family. (Helen Joe cited in McKay 2002:89)

800. And the following account was provided by a Tsleil-Waututh person in a 1999 TUS interview (Tsleil-Waututh 2000): “A burning is to help feed the spirits that come to help consul, to help take care of people already. And to pay them something, you feed them so that their spirits are happy and... the things they miss, they get when they come here. They like to visit.” Several burnings a year occur at least among the Tsleil-Waututh community and at other ancestral Tsleil-Waututh village sites (personal observation). From my observation of several burnings in Tsleil-Waututh territory, burnings are also undertaken to take care of non-human spirits such as the double-headed serpent and wolves as well as the ancestors. I have heard from numerous people that a burning, or series of them, was undertaken to placate the ghosts of the northern raiders who were widely-known to haunt one portion of IR No.3. I have been told that since this (or these) burnings have been undertaken, these ghosts no longer bother community members.
801. The specific requirements of particular foods required for this ceremony were a central part of Jack and Charlie v. The Queen (1985) wherein procuring fresh foods for burnings was asserted as an aboriginal right. For Tsleil-Waututh burnings (i.e., ceremonial transmission of foods and clothes to the ancestors), salmon, crabs, and shellfish are the primary foods offered to the ancestors. In burnings I have attended, I have been told by the *shxwla:m* that the ancestors and non-human spirits want local traditional foods. Most notably, sea foods for the ancestors and serpent and elk meat for the wolves. At such burnings, the *shxwla:m* has carried messages of thanks from the ancestors and non-human spirits for the foods, and a clear desire for more local traditional foods.
802. Besides burning ceremonies, Coast Salish people also take care of their ancestors by feeding them in other contexts. Kew (1970:235–239) describes large memorial dinners and private family dinners wherein it is understood that the ancestors partake in the meal with the living.

Tsleil-Waututh families variably (depending on their religious orientation) undertake these more regular practices of caring for their ancestors.

803. As will be discussed below, it is important that traditional local foods are used in burnings, because those are the only foods the ancestors know, and the only foods they really want.

5.1.9.4 Trade and Exchange

804. Prior to contact, Coast Salish people in general (Barnett 1955; Carlson 1996; Smith 1940; Snyder 1964; Suttles 1951, 1987, 1990), and ancestral Tsleil-Waututh people in particular (Lepofsky et al. 2007; Morin 2012; Ritchie 2014), were involved in systems of trade and exchange with and beyond neighboring groups. Such trade and exchanged involved foods and valuables. Examples of valuables exchanged into Tsleil-Waututh territory include nephrite/jade tools made around Hope, Lytton, and Lillooet (Lepofsky et al. 2007; Morin 2012, 2015), and dentalia shells from the west coast of Vancouver Island (Lepofsky et al. 2007). These valuables were exchanged for mountain goat hides and horns, and dressed elk skins. Examples of exchanged foods could include dried clams to the interior or up the Fraser River (NEB 2014:101, 2955), for perhaps wind-dried sockeye salmon. Barnett (1955:68) specified that Fraser River groups liked clams and “were eager to gather them and trade for them when they could.”
805. Coast Salish people were involved in multiple formal and informal exchange/trade systems including: potlatches, parent-in-law exchange, reciprocal exchange between kin, and market exchange between strangers (Barnett 1955; Carlson 1996; Morin 2012, 2015a; Smith 1940; Snyder 1964; Suttles 1951, 1987, 1990). Pre-contact Tsleil-Waututh people were involved in such types of exchange and intertwined within the broader Coast and Interior Salish exchange network. Access to sufficient quantities of resources, foods or valuables, is necessary to maintain such culturally proscribed systems of exchange.

5.1.9.5 Travel/Canoeing

806. Travel around the landscape, especially travel by canoe is a central Tsleil-Waututh cultural practice. Traditional Coast Salish economy was predicated on the dugout canoe (see discussion above). Canoes were the means by which most of Tsleil-Waututh subsistence was obtained (i.e., fishing). Tsleil-Waututh villages were located where many canoes could be hauled up on the beach. With regards to Tsleil-Waututh, the economy was especially predicated on using canoes to travel the waters of Burrard Inlet and surrounding regions, to harvest resources from those waters, and to transport those resources back to the primary villages of Burrard Inlet. Canoes allowed for transport of large volumes of goods from around Burrard Inlet back to Tsleil-Waututh villages, far more than could be transported by foot. Pre-contact Tsleil-Waututh's daily work cycle would have been structured largely by the tides and their relevance to canoe travel. In the past there were professional canoe makers who obtained their nephrite/jade woodworking tools from hundreds of kilometers away (Morin 2012).

807. Tsleil-Waututh's canoeing traditions have continued into the modern era in the forms of competitive canoe racing, long-distance (ocean going) canoeing, and cultural tourism (see also Kew 1970). Dugout canoe construction is taking place behind the Tsleil-Waututh community gym at the time of writing (March 2015). Tsleil-Waututh has a very rich tradition of success in competitive canoeing, and hosts an inter-tribal competitive canoe festival at Whey-ah-wichen (Cates Park) every summer. I have heard that many Tsleil-Waututh people train for canoeing in Burrard Inlet year-round. I have heard from the Tsleil-Waututh operators of the business that Tsleil-Waututh's cultural tourism business (largely predicated on cultural canoe tours of eastern Burrard Inlet) employs several Tsleil-Waututh people and makes an overall profit that benefits the Tsleil-Waututh Nation as a whole.
808. Travel by canoe or small boat is required to access most of the marine and intertidal resources of Burrard Inlet. In this way, the cultural practice of canoe/boat travel is intrinsically linked to the Tsleil-Waututh fish, shellfish, animal, and bird harvesting activities described above. And, the context of canoeing to and from resource harvesting sites is a primary place of cultural transmission (e.g., storytelling, information about the local environment, weather or tides). Based on the presence of the heavy woodworking technology to make them, dugout canoes are hypothesized to have been present in the Coast Salish area since about at least 3500 BP (about 1500 BC) and specialist canoe makers since about 2500 BP (about 500 BC) (Morin 2015b). Travel by canoe or small boat in and around the Study Area should be considered an integral cultural practice for Tsleil-Waututh.

5.1.9.6 Cultural Transmission

809. It needs to be emphasized here that all of the harvesting practices and activities described above were the primary contexts for Tsleil-Waututh cultural transmission. In traditional societies people learn skills and knowledge through participating in such activities. This would have included all of the traditional ecological knowledge regarding where/when/how to harvest specific resources, the skills required to make the tools for such resource harvesting (e.g., canoes, nets), and all of the oral history information and mythology that was associated with the landscape/seascape of the Study Area. Emphatically, people are not born with a mental map that allows them to spontaneously develop sophisticated new technologies and to interpret ecological conditions. Such knowledge is accrued through hundreds and thousands of years of cumulative experience and transmitted from generation to generation.
810. Similarly, culture (such as myths, legends, songs and epistemology) does not spontaneously arise. Meaning, history and explanation are inextricably linked to the specific contexts people live in. These cultural concepts are not regularly and spontaneously discussed and shared in a modern environment (e.g., working inside in an office). *These concepts are remembered and shared when groups of people are partaking in specific activities on the land/water.*

811. From a Coast Salish perspective, the specific skills required to excel at a particular occupation, such as a hunter, fisher, or carver, were derived from spiritual encounters (Barnett 1955:79, 93). A young individual with certain aptitudes would likely be tutored by a father, uncle etc. in the skills required of an occupation, but the basis of those skills held by professionals was believed to be supernatural in origin (see *Spirit Questing* above). *Pre-contact Coast Salish culture held a vast repository of knowledge and abilities that only could be transmitted through close relationships with the environment and tutoring by elders.*

5.2 Summary of Tsleil-Waututh's Harvesting, Governance, Stewardship, and Cultural Practices

812. For millennia to, and at AD 1792, Tsleil-Waututh ancestors practiced a complex set of resource harvesting and management techniques that ensured the health of the local ecology and the future availability of desired resources. These practices were predicated on thousands of years worth of accumulated local ecological knowledge, a sophisticated technology, and cultural rules of access and regulation. All evidence supports the conclusion that these practices were successful at maintaining a large healthy population for thousands of years prior to contact.
813. Tsleil-Waututh had a sophisticated technology that allowed them to mass harvest and preserve resources in periods of their peak abundance. The most important examples of this are: drying/smoking salmon, herring, eulachon, clams, and berries. Because of Tsleil-Waututh's intensive reliance on marine, riverine, and intertidal resources, ocean waters (that is, Burrard Inlet), low-gradient intertidal areas, and streams and rivers were exceedingly important environments. Storage and transport of these resources back to Tsleil-Waututh villages (e.g., winter villages) allowed large populations here to reside together during the relatively lean winter months, and to partake in extensive potlatch cycles (competitive feasts and gift distributions) that integrated chiefly Tsleil-Waututh lineages socially and economically with their more distant Coast Salish neighbors.
814. Speaking generally, all of the Study Area was Tsleil-Waututh territory by birthright, and non-Tsleil-Waututh people could only harvest resources from this territory by asking permission from the appropriate Tsleil-Waututh owner/steward (e.g., a chief). More specifically, individual resource patches, such as clam beds, fish weirs, and berry patches, were property owned by specific lineages or villages. Such properties were inherited property, and invariably, the most productive resource patches were the property of the leading chiefly (*si?em*) lineages. Tsleil-Waututh culture emphasizes a very strong sense of stewardship of the resources of their territory. That is to say, while the resources of Tsleil-Waututh territory are viewed as a birthright, with that birthright comes the stewardship responsibility to ensure the health and abundance of those resources for both one's ancestors and descendants.
815. Tsleil-Waututh had several concurrent chiefs/*si?em* of individual villages or lineages, but the leading or highest ranked chief/*si?em* was the most economically successful in

potlatching. Tsleil-Waututh chiefs did not have the power to coerce people to do their will. Instead, they were recognized leaders with the skills in managing human and economic affairs who ostensibly worked towards the greater good of the village or tribal collective. Generally speaking, when a non-Tsleil-Waututh person wanted to visit Tsleil-Waututh territory and harvest resources there, they would seek permission from the appropriate Tsleil-Waututh chief or owner before doing so. Tsleil-Waututh's current line of hereditary chiefs/*si?em* stretches back to about AD 1750.

816. Tsleil-Waututh had/have a diverse array of cultural practices that linked them to other people, their ancestors, and their environment. Some of these spiritual/ceremonial practices include: ensuring the dead are returned to and buried at home, anchoring the living at home by burying afterbirth under a tree, potlatching, cold-water bathing in secluded areas, spirit questing in secluded areas, and burnings (feeding the ancestors). Among other things, these cultural practices link living Tsleil-Waututh people to their ancestors, whom Tsleil-Waututh people view as coexisting with them in their territory. Part of Tsleil-Waututh's stewardship responsibility including taking care of one's ancestors, whom Tsleil-Waututh people view as taking care of the living Tsleil-Waututh community. Tsleil-Waututh's relationship to their territory is intrinsically tied to their identity, their links to their ancestors, and their obligations to their future generations.

6.0 Potential Impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, customs and traditions

817. In this section, I describe how the proposed TMX Project has the potential to impact Tsleil-Waututh territory, practices, customs and traditions. Specifically:

Does the TMX Project, including Crown regulatory and decision-making processes in relation to the Project, have the potential to adversely affect Tsleil-Waututh lands, waters, and resources in the Study Area or its practices, customs and traditions you described in sections 4.0 and 5.0, respectively? If so, please describe the location, nature, and extent of such impacts.

818. In order to assess these impacts, I have relied on the conclusions reached by other expert reports describing the biophysical impacts of the TMX Project, and assumed those conclusions to be accurate (i.e., DeCola et al. 2015; Galt 2015; Gunton and Broadbent 2015; Levelton 2015; Short 2015).

819. I have found that several aspects of the proposed TMX Project were identified as having potential impacts on Tsleil-Waututh's lands, resources and cultural practices. These include:

- Negative impacts to fish populations (especially salmon), further precluding Tsleil-Waututh's ability to harvest these resources, for subsistence and exchange, and negating Tsleil-Waututh's environmental remediation programs aimed at restoring these resources and other now scarce fish (especially herring and eulachon).
- Negative impacts to shellfish populations (especially clams), further precluding Tsleil-Waututh's ability to harvest these resources, for subsistence and exchange, and negating Tsleil-Waututh's environmental remediation programs aimed at restoring these resources. This includes the exchange of clams for other resources.
- Negative impacts to marine bird populations (especially duck species), further precluding Tsleil-Waututh's ability to harvest these resources and negating Tsleil-Waututh's environmental remediation programs aimed at restoring these resources.
- Negative impacts to travel in small vessels in relation to subsistence travel, such as physical infringement of the harvesting of traditional foods, especially crabs.
- Negative impacts to Tsleil-Waututh cultural and ceremonial activities through the reduction of traditional foods (salmon, clams, herring and birds) that are central to such activities.

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- Negative impacts to the availability of traditional local foods would in turn effect Tsleil-Waututh cultural transmission, because the harvesting and preparing of traditional foods is the primary context for such cultural transmission.
 - Negative impacts (pollution and lack of privacy) to the local environment limiting/precluding traditional ceremonial bathing activities in Burrard Inlet.
 - Negative impacts to the local environment limiting/precluding traditional canoeing activities, including resource harvesting and large social events (inter-tribal canoe races).
 - Potential contamination of ancient Tsleil-Waututh village sites and cemeteries that are considered sacrosanct to current Tsleil-Waututh people.
820. All of the impacts described above affect central or integral aspects of Tsleil-Waututh culture, including their subsistence, economy, social activities, ceremonial activities, cultural transmission, and water based travel. The lack of traditional foods limits Tsleil-Waututh's ability to: 1) take care of their ancestors (burnings); 2) host large social/ceremonial events (feasts or potlatches); 3) exchange subsistence goods for other food resources not available in their territory; 4) exchange subsistence goods for profit, and 5) take care of themselves and their families with healthy, abundant and low-cost foods that have sustained their ancestors for millennia. So there is no single potential effect from the TMX Project to Tsleil-Waututh culture, but instead a number of inter-related effects and spin-off effects. Practically all of these effects (e.g., negative impacts to salmon and shellfish) (Short 2015) are attributes that Tsleil-Waututh is already actively trying to restore in Burrard Inlet, and among their people.
821. Limiting harvesting activities and canoe travel, in turn impairs Tsleil-Waututh's cultural transmission, as such activities are the primary context for cultural teaching. They are also a primary context for healthy exercise, and impairment of these activities would reduce the quantity of healthy outdoor activities undertaken by Tsleil-Waututh people. Tsleil-Waututh's annual inter-tribal canoe races held at Whey-ah-wichen, a major venue for cultural and social interaction among Coast Salish people would be compromised. This could cause a breakdown in social and political relationships between Tsleil-Waututh and other Coast Salish peoples.
822. Tsleil-Waututh's spiritual and ceremonial practices are inextricably linked to their relationships to the lands and waters of their territory and the ancestors and spiritual beings that they understand to inhabit their territory with them. Further pollution and decreased privacy for undertaking cultural practices such as ritual bathing limits Tsleil-Waututh's abilities to maintain these practices and is a negative impact to their central spiritual beliefs and practices.

6.0 Potential Impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, customs and traditions

6.1 Impacts to Tsleil-Waututh's Practices, Customs, or Traditions

823. For millennia prior to contact, Coast Salish and Tsleil-Waututh's subsistence and economy was predicated on harvesting and preserving the resources of their territory. Tsleil-Waututh's subsistence and economy, like every other Coast Salish group, was strongly oriented towards marine and or riverine resources. The archaeological (e.g., Lepofsky et al. 2007; Matson and Coupland 1995; Pierson 2011; Trost 2005), ethnographic (Suttles 1951; 1968; 1990), and oral history (e.g., Jenness 1955; Suttles 1951) records are in complete agreement on this basis. As described in sections above, Tsleil-Waututh maintained high population densities by both making intensive use of a wide range of local species (Pierson 2011; Trost 2005; Williams 1974), and participating in a seasonal round to harvest seasonally hyper-abundant species at locations more distant from their primary village sites (see Barnett 1955:25; Suttles 1951; Tsleil-Waututh 2001). Prior to contact, a population of up to several thousand Tsleil-Waututh people were living within eastern Burrard Inlet by actively and expertly managing the rich natural resources of Burrard Inlet and surrounding areas. Indeed, the entire Coast Salish cultural pattern of living in large houses and large villages could only be supported by such a pattern of regular intensive use (e.g., Matson and Coupland 1995; Suttles 1968). And recall, this essentially Coast Salish pattern of dense settlement and corresponding intensive regular resource use has been well-demonstrated to have been established for the last 2500 years or so (at least) for Coast Salish ancestors generally (Burley 1980; Clark 2013; Grier 2003; Matson and Coupland 1995), and Tsleil-Waututh ancestors specifically (Charlton 1974; 1980; Chisholm 1986; Lepofsky et al. 2007; Morin 2014).
824. In the following sections, I summarize several types of Tsleil-Waututh resource harvesting activities that were of central importance to their pre-contact culture and economy. The structure of this discussion focuses primarily on groups or classes of intensively harvested species that may be impacted by the TMX Project, it does not emphasize discussion on the extensively harvested range of species that also contributed to traditional diets. These subsistence activities include fishing, shellfish harvesting, and marine bird hunting. And, in summary, I discuss the central importance of these traditional food species to Tsleil-Waututh culture.

6.1.1 Fishing—Salmon, herring, anchovy and eulachon

825. If an oil spill related to the TMX Project were to occur as described in Gunton and Broadbent (2015), depending on the location, extent and timing of this spill (Galt 2015), it could have major impacts on Tsleil-Waututh's practice and custom of relying on salmon for subsistence. Sockeye and spring salmon primarily migrate towards the Fraser River from the Strait of Juan de Fuca (Suttles 1951), through the Gulf and San Juan islands, approximating the marine shipping routes which would transport the oil from Westridge Marine Terminal from the TMX. Also, the current Trans Mountain pipeline crosses the Fraser River from Surrey to Coquitlam, and the TMX Project expansion will likely cross the Fraser River near that location.

6.0 Potential Impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, customs and traditions

826. Gunton and Broadbent (2015:108–110) indicate that there is a 79–87% chance of a spill from the TMX Project at the Westridge Marine Terminal or in Burrard Inlet over a 50 year period. Additionally, Gunton and Broadbent (2015:108–110) indicate a reasonable worst-case spill (100,000 barrels) has a 29% chance of occurring along the entire marine shipping route over a 50 year period. If these spills were to occur in or around Burrard Inlet or the Fraser River, this would have a profoundly negative effect on the resources that Tsleil-Waututh harvest (i.e., sockeye) or have aspirations of harvesting (i.e., clams).
827. Short (2015:6, 14) highlights the specific danger of diluted bitumen (hereafter dilbit) rapidly submerging in the Fraser River estuary. Any oil spilled in the Fraser River near where the TMX crosses could have profound negative impacts on all species of salmon and eulachon migrating up the Fraser (Short 2015). Specifically:
- Oil submergence makes tracking the movement of the oil and clean-up operations much more challenging, and opens a host of new pathways for oil exposure to organisms that inhabit the water column, seafloor and intertidal reaches of shorelines. Suspension-feeding organisms such as clams, mussels, barnacles, gelatinous zooplankton, and fish occupying these habitats may ingest oil submerged in the water column. These organisms would then provide an indirect oil exposure pathway for species such as seabirds and marine mammals that consume them. Along with the invisible dispersion of submerged oil itself, this indirect pathway increases uncertainty regarding the extent, duration, and toxicity of oiled species and habitats. This increased uncertainty can by itself be a major adverse effect of an oil spill by dissuading peoples from continuing traditional subsistence harvests for fear of encountering cryptically-contaminated subsistence foods, by causing larger and more prolonged commercial fishery closures because of uncertainty regarding contamination of harvest species, and by reducing tourism because of concerns regarding the safety or ecological integrity of habitats frequented by tourists. (Short 2015:82–83).
828. Short (2015: 65, 77, 79–80) describes three major ways in which dilbit could harm (i.e., kill) fish: 1) direct ingestion of suspended dilbit droplets; 2) consumption of zooplankton that had ingested/bioaccumulated dilbit; and 3) exposure to PAH by juvenile fish. Additionally, Short (2015:22) notes that even very small (non-lethal) amounts of dilbit contamination of fish could render such species unpalatable. Finally, Short (2015:77) describes how submerged or entrained dilbit (in the water column) could harm juvenile and adult salmon in the Fraser River and Burrard Inlet.
829. Pink and chum also migrate from across the North Pacific Ocean, into the Salish Sea, and from there on to a very large number of spawning rivers and streams. Of particular importance to Tsleil-Waututh, these two species enter Burrard Inlet, *and pass within a few hundred meters of the Westridge Marine Terminal, before ascending Indian Arm and then Indian River. And conversely juvenile salmon leaving Indian River returning to the Pacific Ocean pass within a few hundred meters of the Westridge Marine Terminal.*

6.0 Potential Impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, customs and traditions

830. If an oil spill resulting from the TMX Project was to occur as described in Gunton and Broadbent (2015:8, 12, 108–110) (i.e., a 79–87% chance of a combined spill over a 50 year period with Burrard Inlet), and spread around Burrard Inlet as described by Galt (2015) and could not be cleaned up within 72 hours as described in DeCola et al. (2015), then I assume the negative effects on fish described in Short (2015) would occur. *This would then have severe effects on Tsleil-Waututh's aboriginal practice of harvesting fish.* More specifically, a dilbit spill in Burrard Inlet could negatively affect juvenile chum or pink salmon populations migrating from the Indian River by killing them, and thus reducing returning adult populations and compromising Tsleil-Waututh's ability to harvest those fish for subsistence, trade and ceremony.
831. A dilbit spill in the Fraser River or in the vicinity of the Fraser River estuary would similarly negatively affect Tsleil-Waututh's ability to harvest sockeye and spring/chinook salmon by killing juvenile or adult salmon. Recall that Tsleil-Waututh's primary aboriginal fish allocation is Fraser River sockeye. *If Tsleil-Waututh were deprived of Fraser River sockeye, they would then have access to virtually no safe marine foods within their territory. Traditional foods, like sockeye, are a central aspect of every community gathering, meal, funeral, celebration, and burning that I have ever witnessed. Depriving Tsleil-Waututh of access to salmon is to impinge on a central facet of Tsleil-Waututh subsistence and culture. A loss of this source of traditional food would possibly sever the remaining link of Tsleil-Waututh to their traditional subsistence economy.*
832. Given the intensive industrialization and urbanization of Tsleil-Waututh's territory, there are very few alternative substantial sources of salmon besides the Fraser River Indian River, and Squamish River within Tsleil-Waututh's territory. This means that, in the event of a dilbit spill with impacts to salmon fisheries within their territory, it would be very difficult for Tsleil-Waututh to maintain access to salmon in any quantities from within their territory.
833. Similar comments apply to the potential effects of an oil spill resulting from the TMX Project on small fish (herring, smelt, eulachon) within Tsleil-Waututh's territory. These species, even more so than salmon, have already been drastically reduced in number (see McKechnie 2014; Moody and Pitcher 2010). Tsleil-Waututh has and continues to initiate habitat enhancement measures to increase stocks of species such as these. *Assuming that a dilbit spill resulting from the TMX Project were to occur in, for example, Burrard Inlet (DeCola 2015; Galt 2015; Gunton and Broadbent 2015), and this further reduced stocks of these species (as described in Short 2015), then Tsleil-Waututh would be precluded from harvesting these small fish in Burrard Inlet.* Further, this would negate any habitat enhancement measures invested by Tsleil-Waututh in Burrard Inlet to increase stocks of these species. Overall, such an oil spill could ensure these small fish could not be harvested by Tsleil-Waututh in their territory for an unknown length of time.

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6.1.2 Shellfish Harvesting—Clams, mussels, oysters and crabs

834. If an oil spill resulting from the TMX Project were to occur (Gunton and Broadbent 2015) and spread around Burrard Inlet (Galt 2015), all of this dilbit could not be cleaned within 72 hours (DeCola 2015), this would negatively affect shellfish populations within the impact zone (Short 2015). This process has already been well documented resulting from the 2007 land-based oil spill from the Kinder Morgan pipeline in north Burnaby (Stantec 2012). Short (2015:64–65) describes that:

Suspension-feeding intertidal organisms including mussels, barnacles, and many clams often inhabit rocky shorelines and can ingest small diluted bitumen droplets entrained in the water column during tidal submergence. These organisms can also absorb oil-derived compounds that dissolve into the water column. Oil compounds accumulated by these organisms can impair their growth and increase their susceptibility to disease. Also, the accumulated body burden of oil by these organisms can be transferred to their predators, including marine shorebirds. Accumulation of even traces of oil can taint shellfish and other biota harvested for subsistence consumption by humans, rendering them unpalatable.

835. Thus, clams, a preferred traditional food for Tsleil-Waututh, and a food that Tsleil-Waututh has taken habitat enhancement measures to restore healthy populations of, would be negatively affected by a spill resulting from the TMX Project. Tsleil-Waututh cannot harvest and eat local clams because they are presently too contaminated. Additional contamination from spilled dilbit (Short 2015) could only prolong Tsleil-Waututh's alienation from one of their preferred traditional foods, and a food their ancestors had eaten for millennia—clams.

836. Additionally, the vastly increased volume of tanker traffic (and associated tugs) associated with the proposed TMX Project would likely even further impede Tsleil-Waututh travel around the inlet in small boats or canoes in the course of resource harvesting activities (see section below *Subsistence Travel*). With regards to crab harvesting, the increased shipping traffic would likely impinge upon Tsleil-Waututh people's ability to travel around the inlet to recover crabs from their set traps.

6.1.3 Marine Bird Hunting—Ducks, geese, grebes etc.

837. As described in Gunton and Broadbent (2015), if an oil spill in Burrard Inlet has a high probability of occurring over a 50 year lifespan of the TMX Project, and disperse around Burrard Inlet as described by Galt (2015), and could not be contained and cleaned within 72 hours (DeCola et al. 2015), then the resulting oil slick could have profoundly negative affects to sea birds (Short 2015). More specifically, Short (2015:8) describes that “[i]mmediately following initial discharge and depending on the volume spilled, rapid evaporation of the gas condensate components of diluted bitumen may create inhalation hazards for wildlife such as seabirds and marine mammals in the immediate vicinity” and “[o]il remaining on the sea surface will pose a contact hazard for seabirds and marine

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mammals.” And further, “[t]his trapped oil can also pose a contact hazard for shorebirds that prey on intertidal snails, worms, and other animals that inhabit the interstices of *Fucus* and mussel beds” (Short 2015:57, 64). These specific effects are described by Short (2015:69–70) thusly:

Seabirds and shorebirds are particularly sensitive to both internal and external oil exposure, and their foraging habits, preening behavior and resting requirements lead to frequent contact with surface oil. Petroleum exposure alters feather microstructure,⁸⁶ compressing plumage so that it loses its buoyancy, insulating function, and flight capability. Physiological health of birds is further impaired by oil-induced diseases, including hemolytic anemia, ulcerations, cachexia, and aspergillosis. Birds contaminated at sea thereby succumb from drowning, hypothermia, starvation, or dehydration. In cold-waters such as the Salish Sea it is usually assumed that any contact with surface oil will be mortal or will at least increase morbidity. Narcosis from inhalation of hydrocarbon fumes above oil slicks may also cause injury, although loss of consciousness above an oil slick would often result in direct oiling following loss of flight capability, and the subsequent oiling would confound inhalation as the attributed cause of death. Whereas proximate exposure, cause-of-death, and pathologies for individual birds can be directly examined, population-level effects must be approximated indirectly.

Marine oil spills establish effective killing zones for seabirds and shorebirds when oil becomes stranded on intertidal reaches of beaches. The numbers of birds killed by contact with floating or stranded oil depends on the area density of birds (i.e., the number of birds per unit area in the region), the rate at which killed birds are replaced through influx from the surrounding area or through migratory movements, the rate at which new birds are exposed because of oil slick movement, and the proportion of exposed birds that die as a result of contact with oil.

838. Thus, a dilbit spill in the Fraser River or anywhere in the Salish Sea could have a strong negative effect on sea birds by killing them. Short's (2015) description of a potential mass death of marine birds in the Fraser Delta (outside the Study Area) would also limit Tsleil-Waututh's potential to harvest them. As with shellfish and salmon, this impact will not be on a relatively healthy baseline population, but rather on a population that has already been severely stressed through a century of environmental degradation and habitat loss.

6.1.4 Cultural Transmission

839. As described above (see *Cultural Transmission*), the primary context for the transmission of Coast Salish and Tsleil-Waututh culture is resource harvesting/processing activities on the land. This is how older generations teach younger ones the corpus of traditional ecological knowledge of the environment, and the associated culture rules, songs, and oral histories associated with that environment. *Any impacts to Tsleil-Waututh's ability to*

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harvest traditional foods is also an impact to Tsleil-Waututh's ability to transmit their culture.

840. If the TMX Project has a high probability of a large bitumen spill in Burrard Inlet (Guntton and Broadbent 2015:108–110), that spill would disperse throughout much of Burrard Inlet (Galt 2015), and all of this dilbit could not be cleaned within 72 hours (DeCola 2015), then there would be corresponding severe negative impacts to the species Tsleil-Waututh relies on as traditional sources of food (e.g., shellfish, birds, salmon) (Short 2015). *If Tsleil-Waututh's traditional foods sources are negatively affected, then so is Tsleil-Waututh's ability to harvest them, and hence Tsleil-Waututh's primary context for cultural transmission is also negatively impacted.*

6.1.5 The Role of Traditional Foods in Modern Tsleil-Waututh Culture

841. Beyond day-to-day subsistence, traditional foods (salmon, shellfish, small fish, etc.) are still central to Tsleil-Waututh culture. Traditional foods are served at large dinners or feasts associated with all important cultural events and funerals. For example, a large meal focused on traditional foods always follows a funeral (Kew 1970:224). Indeed, I don't think I have ever been to a single Coast Salish cultural event in the Halkomelem-speaking area where either spring or sockeye salmon was not served in one form or another. While people are usually not particularly hungry following an emotional event like a funeral, I have been told by Tsleil-Waututh people that one has an obligation to partake in a meal of traditional foods to restore or heal oneself, and to re-confirm one's broad connections to one's relatives and the community.
842. Because many local foods are no longer edible or available (e.g., clams, herring), Tsleil-Waututh can no longer feed their ancestors, or other spirits properly. Tsleil-Waututh people and their ancestors can distinguish local foods from the Inlet or Indian River from other places. According to Paddy George, Tsleil-Waututh people "didn't like fish from Capilano or Seymour River because it tasted different than the Indian River fish" (George 1990:6). Similarly phrased themes of the distinctive taste of local foods were recorded in the 2011 Tsleil-Waututh TUS (Tsleil-Waututh 2011), and have been described to me by Tsleil-Waututh people on several occasions. If Tsleil-Waututh people can distinguish the differences in foods from local places, then presumably their ancestors can as well. Non-local foods do not suffice in these ritual obligations to feed one's ancestors. I have heard of accounts wherein at a burning ceremony, the ritualist has been told by the ancestors that non-local substitute foods do not suffice. I have also attended burnings where the ritualist had been told by non-human spirits that they wanted or appreciated local traditional foods. It have been told by Tsleil-Waututh and other Coast Salish people that the ancestors or non-human spirits want local traditional foods because that is what they have always eaten.
843. As described in a 1999 Tsleil-Waututh TUS interview (Tsleil-Waututh 2000):

A burning food to please the spirits that come around to sacred sites to help people take care of stuff...A burning is to help feed the spirits that

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come to help consul, to help take care of people already. And to pay them something, you feed them so that their spirits are happy and... the things they miss, they get when they come here. They like to visit.

844. In *Jack and Charlie v. The Queen* (1985), the specific requirements of particular foods, in this case deer, required for this ceremony were a central part of the asserted aboriginal practice (a burning). *I should note here that this type of information is considered highly sensitive and not generally available.* Tsleil-Waututh ritualists are the experts on these matters, and are far better positioned to speak to these issues than I.
845. Ceremonies related to feeding the dead appear to have very ancient roots in Coast Salish culture (see Carlson and Hobler 1993:45; R. Carlson 1996:221; McKay 2002). For example, burials on Pender Island that are more than 3,000 years old with elaborate goat horn spoons placed at their mouths have been interpreted as feeding the dead in the afterlife (Carlson and Hobler 1993:45).
846. Burnings are closely tied to the Coast Salish concept of stewardship, wherein one is obligated to care for the lands and waters of their territory, to ensure that their ancestors, living relatives, and future relatives can sustain themselves from the land (McHalsie 2007:118). This is a central concept in terms of how Coast Salish people generally, and Tsleil-Waututh people specifically, view their relationship to their territory.
847. Additionally, the practice of harvesting and preparing traditional foods is central to cultural transmission among Tsleil-Waututh people. That is to say, the situational context of harvesting clams on the beach at Sleil-Waututh was traditionally the place for younger individuals to learn about harvesting and maintaining healthy populations of this resource. It would also be the context for recounting events and storytelling. Analogous situations would occur for fishing, duck hunting, and mammal hunting. If traditional foods such as clams are not available for harvesting, the transmission of Tsleil-Waututh culture, customs, practices, and traditional ecological knowledge (TEK) is impeded, because people are not out on the land or water for long periods of time observing their surroundings talking to each other. Numerous Tsleil-Waututh people have lamented this chain of events on several occasions, and it is also well-represented in Tsleil-Waututh TUS interviews. For example, one Tsleil-Waututh elder commented:

One thing I would like to say, you could pass it on or do whatever you want with it. I feel very bad that none of the younger generation can have at least a little bit of the experience that I had. All these very limited joys that we did have in my early days. You know I never, I just took it for granted at that time but today I am missing it, I am missing it more because the younger generation is not doing this. I mean you cant, I mean its too polluted. I mean you could go anywhere and do what you want, get in a canoe and go and have your own little experiences you know. It made you feel, like you say you're becoming a man. When you're 16 and 17 you go out on your own and you do these things. That's what our children are missing today. They got too much time on their

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hands, they have nowhere to do these things that the native has, it's in him to do these things that needs to be done. (Tsleil-Waututh 1999)

848. I have heard from Tsleil-Waututh employees that Tsleil-Waututh explicitly wants to rehabilitate the shellfish beds around Burrard Inlet (especially at Sleil-Waututh) to re-establish these traditional subsistence practices and the cultural transmission and learning that goes hand-in-hand with them.

6.1.6 Ritual Bathing

849. Ritual bathing activities are an important part of Coast Salish spiritual practices (Barnett 1955:104, 168, 219, 232, 234; Duff 1952b:98–99; Suttles 1951:332). Tsleil-Waututh ritual bathing occurs in various creeks, rivers and Burrard Inlet (Gabriel George 2014; Tsleil-Waututh 1999, 2000, 2011). I do not know if the specific location for bathing is as significant as the condition of the waters there. I have been told by Tsleil-Waututh people that such bathing is to occur in isolation in clean water. Specific sacred places, e.g., where the serpent was, were described as special bathing places used by elders (Tsleil-Waututh 2000).
850. Most, if not all streams in North Vancouver are presently far too polluted for such bathing practices, and Burrard Inlet is typically too busy. As described by Gabriel George (2014:109, 3026–3027): “(w)e have streams in our community that just 15, 20 years ago, I was doing spiritual bathing in those streams, and they're dead now, and they're toxic. It's recommended I don't go bath regularly in the saltwater, but I do because it's part of our *snoiish* (ph).” (“*snoiish*”, ‘law’, ‘cultural teachings’).
851. If the TMX Project will increase the number of tankers and tugs in the vicinity of Tsleil-Waututh IR. No.3 (Westridge Terminal is about 2 km distant), this will further preclude Tsleil-Waututh people from partaking in this spiritual practice in their territory and modern home. An oil spill/release of any substantial amount in Burrard Inlet would (e.g., Gunton and Broadbent (2015)), according to Galt (2015), be circulated by wind and current throughout the Inlet, and, if it could not be cleaned up within 72 hours (DeCola et al. 2015), *would preclude Tsleil-Waututh people from traditional ritual bathing in the vicinity of their community*. Tsleil-Waututh people who practice these activities would be much better placed to speak to this issue in detail.
852. *Levelton (2015) indicates that acute health effects from the evaporated components of dilbit could occur to over a million inhabitants of the Lower Mainland area if a spill were to occur east of First Narrows. I would estimate floating dilbit and evaporating hydrocarbons (Levelton 2015; Short 2015) in an area would make it an exceedingly undesirable, if not extremely dangerous place to undertake these practices. That is to say, the TMX Project has the potential to make it even more difficult or dangerous for Tsleil-Waututh people to practices their traditional ritual/cultural practices, i.e., cold water bathing, in Burrard Inlet.*

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6.1.7 Canoeing

853. Tsleil-Waututh people already cannot travel much of their territorial waters by canoe. The entire area between First and Second Narrows, for example, is off limits for non-motorized vessels (i.e., canoes). Tsleil-Waututh people presently practice/train in canoes in the waters of Burrard Inlet, Tsleil-Waututh owns a cultural tourism company (Takaya Tours, <http://takayatours.com/canoe-tours/>) that offers canoe tours and kayak rentals in eastern Burrard Inlet, and Tsleil-Waututh hosts a Coast Salish canoe race festival at Whey-ah-whichen every summer that is attended by hundreds of people.
854. Given that the number of large shipping vessels passing the narrow waters of eastern Burrard Inlet, is already very high and already precludes the free travel of Tsleil-Waututh people in their territorial waters by canoe, any increase in vessel traffic would only further preclude canoe travel here. Further, if an oil spill of any magnitude were to occur (Gunton and Broadbent 2015), the dilbit would be rapidly distributed through the inlet (Galt 2015), and would be unlikely to be cleaned up within 72 hours (DeCola et al. 2015). *In this circumstance, I would estimate that floating bitumen and evaporating benzene (Levelton 2015) in an area would make it an exceedingly undesirable if not dangerous place to train for canoeing, to host a regional canoeing event, or for tourists to travel to.*

6.1.8 Subsistence Travel

855. Tsleil-Waututh people still travel around the inlet in small boats for the purposes of resource harvesting. While quite recently such travel used to include fishing, hunting, and shellfishing activities, most of this local (within Burrard Inlet) subsistence travel is now associated with crab harvesting. *Aside from impacts to ecology and species abundance, the increased shipping associated with the proposed project could physically curtail Tsleil-Waututh people's ability to travel around the inlet in small vessels for resource harvesting activities.* The large shipping vessels physically occupy a large areas, they need to be avoided and given right of way when travelling, and they and the tugs associated with them create large wakes that is very disruptive to small vessels. Thus, even the presence of these large vessels could have a direct impact on Tsleil-Waututh peoples' ability to travel around their territory by water for resource harvesting activities.

6.1.9 Bitumen on Shell Middens

856. If a substantial volume of bitumen were to be released into Burrard Inlet (Gunton and Broadbent 2015), that material would be circulated throughout the Inlet via wind and currents (Galt 2015), and probably could not be cleaned up within 72 hours (DeCola et al. 2015). In high tides and stormy conditions, some of this bitumen could be deposited in the exposed shell midden at DhRr 20, DhRr 15, DhRr 8, or DhRr 18 for example. This is undesirable for both scientific and cultural reasons.
857. First, from a scientific perspective, if bitumen were to adhere to or penetrate shell middens, it would likely prevent specific types of analyses such as radiocarbon dating.

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While in some cases petroleum products can be chemically removed from samples (Beta Analytic, pers. Comm. Jesse Morin 2011), it is presently unknown if the variety of bitumen to be shipped through the TWX Project could be chemically removed from samples. *This type of pollution would permanently preclude accurately determining the age of these contaminated deposits through radiocarbon dating.* It should also go without saying that it is undesirable to have bitumen coating artifacts or animal bones that can be studied in detail in other ways (isotopic or chemical analyses, DNA, etc.).

858. Second, from a cultural perspective, Tsleil-Waututh people essentially view these shell midden sites as sacred places (Tsleil-Waututh 2000, 2011). *They are viewed as sacred because they are important locations within Tsleil-Waututh territory, and they are the homes of their ancestors.* Tsleil-Waututh currently undertakes cultural ceremonies (burnings) at several of these village sites with the purpose of 'taking care of the ancestors.' *If bitumen from a spill were to wash onto any of these shell middens, Tsleil-Waututh people would probably view this as akin to a sacrilegious act. Especially so if the bitumen were to wash on to or adhere to the human remains that are well-known to exist in these sites.* Such pollution is at odds with the central concept of 'taking care of one's ancestors.'

6.2 Summary of Potential Impacts to Tsleil-Waututh Lands, Waters and Practices

859. In the sections above, I described the impacts of increased marine shipping and an accidental release of oil on major Tsleil-Waututh harvesting and cultural practices. There are two ways in which the TMX Project could negatively impact integral Tsleil-Waututh subsistence and ritual activities: 1) greatly increased shipping traffic and associated pollution and crowding, and 2) an accidental oil spill of some significance. Increased shipping and associated pollution and congestion on the water would further harm an already severely impacted local ecology, and further preclude Tsleil-Waututh fishing, bird hunting and shellfish harvesting activities.
860. Beyond the impact to local subsistence and Tsleil-Waututh environmental remediation programs, local traditional foods are integral to Tsleil-Waututh cultural and ceremonial activities, and the practice of harvesting and preparing traditional foods is integral to Tsleil-Waututh cultural transmission. Further, the increase in shipping associated with the TMX Project would likely also impact Tsleil-Waututh people's ability to ritually bathe in the waters of Burrard Inlet, further preclude Tsleil-Waututh people's ability to travel by canoe in their territory, and impair their ability to undertake subsistence pursuits in small vessels. The increased TMX Project related shipping would likely also have physical impacts Tsleil-Waututh's territory, current reserve, and archaeological sites.
861. Secondly, if a significant bitumen spill were to occur in eastern Burrard Inlet, this would be a severe impact to the entire local ecosystem and the specific resources Tsleil-Waututh has relied on for centuries. Migratory salmon headed to/from Indian River pass within a few hundred meters of the Westridge Terminal. Many shellfish beds lie within a few

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kilometers of Westridge. Numerous Tsleil-Waututh crab traps lie within 2 km of Westridge. A spill in Burrard Inlet would severely negatively affect the health of fish and shellfish (Short 2015) and Tsleil-Waututh's future ability to harvest them. Spills elsewhere in the Salish Sea would affect salmon populations. Salmon is perhaps the only traditional food that still can be harvested in large quantities in Tsleil-Waututh territory. *A bitumen spill, depending on its size, location, and timing would severely negatively impact the Fraser River sockeye and the Indian River chum populations (Short 2015) and hence Tsleil-Waututh's ability to harvest them.* As described above, traditional foods are central to Tsleil-Waututh cultural and ceremonial activities, and cultural transmission, in addition to daily subsistence.

862. These direct impacts and potential impacts must be understood in context. Burrard Inlet is by no means a pristine ecosystem and the Greater Vancouver area is no wilderness. Tsleil-Waututh's previous villages and resource gathering areas are largely overrun with urban sprawl. The marine resources of Burrard Inlet are, in most cases, not plentiful and/or too toxic to eat. Of all the traditional staples (salmon, herring, clams and birds), only migratory salmon are presently available to Tsleil-Waututh in notable quantities. The TMX Project, and especially the risks of spills associated with it could have a severe impact on Tsleil-Waututh's last well-maintained traditional staple, salmon. And a blow to local salmon, is a blow to Tsleil-Waututh's cultural, social and ceremonial activities.
863. *Thus the high probability of adverse impacts of the TMX Project on the local environment, including impacts to Tsleil-Waututh's traditional foods (Short 2015), and health impacts to Tsleil-Waututh people (Levelton 2015) within the Study Area has corresponding significantly adverse effects to Tsleil-Waututh's traditional aboriginal harvesting and cultural practices. Namely, the TMX Project has a high probability of negatively impacting Tsleil-Waututh's ability to harvest fish, shellfish, and birds from the Study Area. And, because of the extensive urban development and already massively disrupted local ecologies, Tsleil-Waututh would have few remaining options for obtaining traditional foods from their territory.*
864. From a Tsleil-Waututh perspective, the health of the Inlet and the health of the Tsleil-Waututh people have been linked since the beginning of time (Gabriel George 2014). Their subsistence and economy was predicated the natural abundance of the Inlet for millennia, and only in recent decades has become dislocated. Current Tsleil-Waututh people view a return to healthy, wild, local foods as a solution to many of the community's current health concerns, such as diabetes. Additional sources of pollution to the Inlet, such as shipping or spilled dilbit, are viewed by Tsleil-Waututh people as harming the Inlet and the health of the Tsleil-Waututh community. The Tsleil-Waututh community isn't trying to maintain the current health of the Inlet, they are trying improve it to what it once was. *From Tsleil-Waututh's perspective, the TMX Project will greatly impair their ability to restore the health of Burrard Inlet and the health of their community.*

6.0 Potential Impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, customs and traditions

865. The overall potential negative effect of the TMX Project to the Tsleil-Waututh Nation's culture as a whole is difficult to project, but it could, realistically severe the millennia-long tradition of Tsleil-Waututh's stewardship over the resources of Burrard Inlet. It could limit peoples' abilities to feed their families, including their ancestors. It could limit the contexts for Tsleil-Waututh cultural transmission (i.e., during harvesting activities). These impacts could disrupt the health of the community, the relationships between past, present and future generations, and sever the link to past Tsleil-Waututh culture. The lack of traditional foods would undermine Tsleil-Waututh's ability to host large gatherings and feed people traditional foods. The impacts to local ecology could preclude any possibility of Tsleil-Waututh gaining economic benefit from exchanging the resources of their territory (e.g., selling clams).

7.0 Conclusion

866. In the sections above I have presented an overview of the evidence that is relevant to answering four primary questions I have addressed in the four sections of this Report:
- 3.0 Who the Tsleil-Waututh are as a people historically and today; their origins, culture, language, traditions and connection to Eastern Burrard Inlet and the watersheds draining therein;
 - 4.0 The nature and extent of Tsleil-Waututh historic and current use and occupation in the Study Area;
 - 5.0 The nature and extent of Tsleil-Waututh harvesting, governance, stewardship, and cultural practices in the Study Area; and
 - 6.0 Potential impacts of the Kinder Morgan Trans Mountain Expansion Project on Tsleil-Waututh lands, waters, practices, customs or traditions identified in 3.0–5.0.
867. In addressing these questions, I have presented a broad array of archaeological, linguistic, place name, oral history, historical, TUS, and ethnographic data each with their own strengths and weaknesses. Additionally, I have undertaken a considerable body of primary research to better understand the occupation history and traditional landscape/seascape use patterns of pre-contact Tsleil-Waututh people. In my opinion, reasonable assessments of Tsleil-Waututh’s history, culture, territory, and land use can be made after considering all such lines of information as described above.

7.1 Conclusions—The Tsleil-Waututh historically and today

868. The modern Tsleil-Waututh Nation are the descendants of a Down-River Halkomelem-speaking Coast Salish First Nation whose territory was centered on Burrard Inlet. Tsleil-Waututh is a distinct Coast Salish First Nation with deep ancestral connections to eastern Burrard Inlet. The time depth of their occupancy of this region extends back 1000 years at a minimum, and Tsleil-Waututh was exclusively occupying and using this region at AD 1792 and AD 1846. Tsleil-Waututh’s oral histories regarding their origins, their pre-contact history, their place names and their land use all locate Tsleil-Waututh ancestors in and around Burrard Inlet prior to contact and through AD 1792 and AD 1846. Tsleil-Waututh’s genealogy extends back to about AD 1750 and includes at least three named chiefs of three different villages, providing continuity between pre-contact and modern indigenous populations here.
869. After reviewing this body of evidence I reach the conclusion that at AD 1792 and AD 1846 Tsleil-Waututh was a distinct aboriginal group that occupied the Study Area. Tsleil-Waututh was clearly a Coast Salish group with close relationships with other neighbouring groups. Tsleil-Waututh was also a tribe, comprised of a cluster of affiliated villages. These neighbouring villages were:

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- linked socially and genetically through kinship connections, shared cultural practices and shared oral histories;
 - linked as a speech community whose identity was marked by a distinct dialect of Down-River Halkomelem;
 - linked economically and politically through participation in potlatches, and
 - linked politically for territorial defense.
870. There is archaeological evidence of this village cluster in the Study Area spanning several millennia into the past.
871. The modern Tsleil-Waututh Nation is the group of indigenous people descended from those encountered in the Study Area at contact and AD 1846. Perhaps most importantly, Tsleil-Waututh's recorded genealogy extends to the mid 18th century, and most of the modern Tsleil-Waututh Nation descends from a single common ancestor (Chief Wautsalk I) who lived prior to, as of, and after contact. At First Contact in 1792, indigenous people, and almost certainly Tsleil-Waututh people, were encountered in Burrard Inlet and Indian River, in close proximity to modern Tsleil-Waututh reserves. There is no evidence indicative of a sudden displacement or migration of people from anywhere. The archaeological record can be said to corroborate Tsleil-Waututh histories regarding their origin and continuous occupation of Burrard Inlet since ancient times. Tsleil-Waututh is a distinct Coast Salish First Nation with deep ancestral connections to eastern Burrard Inlet. The time depth of their occupancy of this region extends back 1,000 years at a minimum, and includes occupation here through AD 1792 and AD 1846.
872. While the late nineteenth and early twentieth century historical and ethnographic evidence is remarkably contradictory, there are many lines of evidence that suggest Tsleil-Waututh was a distinct group at AD 1792 and AD 1846. It should go without saying that Tsleil-Waututh oral histories always emphasize that they—Tsleil-Waututh, the People of the Inlet—are a distinct cultural group. Tsleil-Waututh occupied a naturally bound geographic area—Burrard Inlet. Prior to contact, and through AD 1846, most of Tsleil-Waututh people's daily interactions would have occurred within the Inlet and surrounding area and with other Tsleil-Waututh people.

7.2 Conclusions—Tsleil-Waututh land use and occupation in the Study Area

873. Based on all the available evidence, I conclude that prior to contact (AD 1792), Tsleil-Waututh occupied between 8 and 14 villages in the Study Area. Many of these villages are well-dated and represent three millennia of occupation. These villages were occupied by up to several thousand people in total. The areas surrounding these villages was found to have been especially intensively and regularly used for resource harvesting. At AD 1846 Tsleil-Waututh occupied at least 5 villages, most of which were fortified. At AD 1846 Tsleil-Waututh regularly and intensively made use of all the lands and waters in the

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Study Area. This area is described visually in **Figure 92**. The specific portions of the landscape/seascape that were identified as being regularly and intensively used for Tsleil-Waututh subsistence, technology and travel include:

- All of the marine waters were regularly and extensively used for resource harvesting; this includes fishing a myriad of species, hunting a variety of waterfowl, and hunting sea mammals and swimming terrestrial mammals.
- All of the marine waters were regularly and extensively used for canoe travel; this includes travel to and from other villages and camps, travel to Outer Burrard Inlet, and resource harvesting undertaken while travelling (e.g., trolling).
- All of the intertidal and foreshore environments were regularly and intensively used for harvesting activities; this includes harvesting shellfish and crabs, management of and harvesting resources from fish weirs and similar traps/facilities, near-shore fishing for a variety of species, harvesting fish roe, hunting birds, collecting seaweeds, landing canoes, and hunting sea mammals and terrestrial mammals.
- All of the near-shore (~1 km) terrestrial areas were variably used for places of habitation and places of regular resource harvesting. This includes many places of habitation (i.e., villages and camps), cemeteries, storage facilities, defensive constructions, places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- All of the terrestrial environments within about 8 km from well-documented villages or camps were regularly and extensively used for harvesting plants, hunting and trapping animals, and collecting materials for technological purposes. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles), places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places where trees were felled for making canoes and planks, places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.
- All of the terrestrial environments adjacent to sizable rivers, streams and lakes in North Shore Mountains immediately north of Burrard Inlet were regularly and intensively used for fishing, hunting, trapping, harvesting plant foods and technological materials. This includes places where the landscape was purposefully managed for desired plant species (e.g., crabapples, berries, nettles),

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places set with traps and facilities for passively harvesting fish and game (e.g., snares, deadfall traps, fish traps), places from which firewood was harvested, places where game was hunted, and all these places were connected by well-used trails. The only exceptions to the above statements are cliffs and similarly relatively inaccessible areas.

- Specific remote and steep environments including cliffs, rockshelters, and similarly relatively inaccessible areas, and/or in proximity to bodies of water or waterfalls (e.g., pictograph locations) were regularly used for spiritual/ceremonial purposes. This includes places of spiritual practice/training.
- High elevation areas were regularly used for hunting valuable game like mountain goat and other resources collected. This includes very steep and precipitous terrain such as cliffs.

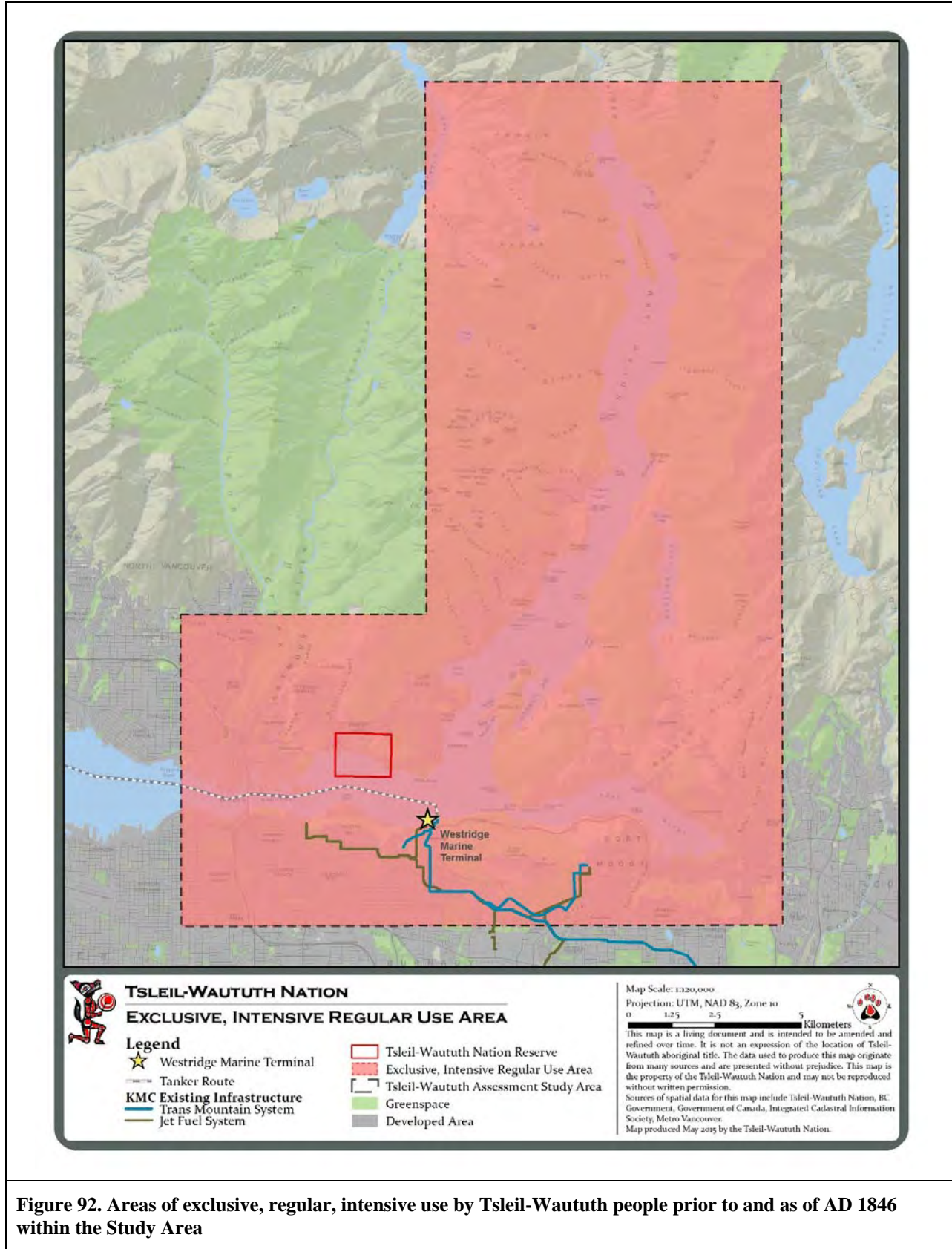


Figure 92. Areas of exclusive, regular, intensive use by Tsleil-Waututh people prior to and as of AD 1846 within the Study Area

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874. Considering the general framework of Coast Salish resource ownership, territoriality, and protocol, with the number of densely packed Tsleil-Waututh villages here, there was recognized ownership of local resources by the local inhabitants. Above, I described this system as a nested hierarchy of ownership rights, with the tribe being the highest or most inclusive level, and the lineage being the least inclusive level. Following Coast Salish protocols, visitors would request permission from the appropriate resource owners or stewards before harvesting from them. Usually, such permission-seeking would be predicated on marriage/kinship ties between parties. This permission requesting protocol is significant because it indicates that in the past, Coast Salish people had very clear concepts regarding what territories and areas belonged to whom.
875. Following Coast Salish concepts of land tenure, ownership, and territoriality, Tsleil-Waututh are the stewards of the lands, waters, and resources of their territory, including all of the Study Area. It is their birth right and obligation. Above, I provided numerous examples demonstrating that around the time of sovereignty Tsleil-Waututh actively defended their territory against raiders. No evidence of territorial loss or displacement of Tsleil-Waututh territory within the Study Area was identified.
876. I conclude that at AD 1846 Tsleil-Waututh did regulate access to their territory and resources. They had both the intention and capacity to exclude third parties. Around AD 1846, these third parties would often be large and well-armed Lekwiltok or Haida raiding parties. The defensive features, palisades and trench embankments, associated with most of their AD 1846 villages of indicates that they anticipated raids, and defended themselves and their territory rather than retreating or yielding territory. Several of the AD 1846 Tsleil-Waututh villages appear to have been linked in a defensive network. While many battles are described in Tsleil-Waututh oral histories, there is no evidence of territorial loss through warfare with other First Nations. *Based on all this evidence, around AD 1846 Tsleil-Waututh undertook a military-like defense of their territory and people, and succeeded in doing so.*
877. The evidence regarding access to resources in Tsleil-Waututh territory by third parties was also reviewed. Coast Salish conceptions of the nested levels of resource patch ownership, and protocols requesting access, form the baseline from which Tsleil-Waututh evidence of regulating access should be understood. In this framework, non-Tsleil-Waututh people would draw upon familial relationships with Tsleil-Waututh families to visit and request access to harvest resources with them. Several examples of this permission seeking behaviour were identified in TUS studies. All of the Study Area was regulated in this fashion by the sum of individual Tsleil-Waututh households (for household-owned resource patches) and all Tsleil-Waututh people (for tribally-owned resource patches).
878. The evidence regarding modern and on-going Tsleil-Waututh resource use in general depicts very active resource harvesting up until about the 1970s, then a sharp decline thereafter. This decline in traditional harvesting practices is explicitly associated with increased local pollution and the prohibition of firearms in Tsleil-Waututh TUS studies

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(Tsleil-Waututh 2000, 2011). Extensive urbanization throughout most of Tsleil-Waututh territory have encroached upon most terrestrial resource harvesting areas. Species that once were staples—clams, herring—are now rarities in the Tsleil-Waututh diet. Salmon is now the only traditional staple that comprises a notable contribution to most Tsleil-Waututh diets. Local crabs are still a component in Tsleil-Waututh diets, but they should probably now be considered a specialty rather than a staple.

879. Prior to and as of AD 1846, Tsleil-Waututh people regularly and intensively used all portions of their territory within the Study Area as depicted in **Figure 92**. At AD 1846 they lived in about five villages and undertook a seasonal round that moved them throughout and beyond the Study Area. They also regulated access to the Study Area through Coast Salish protocols of ownership and permission seeking, and through military defense. The modern Tsleil-Waututh Nation has descended from the Coast Salish people who occupied the Study Area in AD 1846. The modern Tsleil-Waututh IR No.3 contains such evidence of aboriginal occupation stretching back to 2100–2400 BC. *All lines of evidence overwhelmingly describe ancient, continuous occupation by the ancestors of the Tsleil-Waututh.*

7.3 Conclusions—Tsleil-Waututh harvesting, governance, stewardship, and cultural practices

880. All of the Study Area was Tsleil-Waututh territory by birthright, and non-Tsleil-Waututh people could only harvest resources from this territory by asking permission from the appropriate Tsleil-Waututh owner/steward (e.g., a chief). More specifically, individual resource patches, such as clam beds, fish weirs, and berry patches, were property owned by specific lineages or villages. Such properties were inherited property, and invariably, the most productive resource patches were the property of the leading chiefly (*si?em*) lineages. Tsleil-Waututh culture emphasizes a very strong sense of stewardship of the resources of their territory.
881. Tsleil-Waututh's pre-contact economy was predicated on fishing, shellfishing, hunting and gathering the resources of and beyond their territory. Tsleil-Waututh intensively fished the marine, near shore, and freshwater areas of the Study Area (and beyond). These resources (fish) were the basis of the pre-contact Tsleil-Waututh subsistence economy. Fish, harvested and preserved in surplus, were also likely used for trade/exchange for other goods, and to underwrite potlatches and other feasts. Fishing must be considered a practice that was integral to Tsleil-Waututh culture because fishing was the basis of their entire economy and way of life. Fishing structured the past Tsleil-Waututh seasonal round, their relationships with other First Nations. Fish play a central role in Tsleil-Waututh religious and ceremonial activities. For these reasons, fishing must be understood as a practice that made Tsleil-Waututh culture what it was. Feasts and potlatches were one of the primary means of alliance-building and social interactions between distant Coast Salish communities (Snyder 1964).

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882. The seasonal cycles of resource abundance structured Tsleil-Waututh's seasonal round and settlement patterns. It also structured marriage patterns between Tsleil-Waututh and other First Nations. Tsleil-Waututh peoples' daily work cycle was primarily structured by the tides and the currents. *In short, Tsleil-Waututh's subsistence economy structured virtually their entire way of life.*
883. Post-contact, and up to the middle of the 20th century, Tsleil-Waututh people maintained a high level of reliance on harvesting traditional foods, especially fishing, shellfish harvesting, and hunting birds and game. Fish and shellfish were also sold, to buy other necessities. The period of the 1960s-1970s is identified as a period when many traditional foods ceased to be harvested because of local pollution of the environment and firearms prohibitions.
884. Current Tsleil-Waututh fishing practices have been heavily curtailed, including the near-complete absence of herring and other small fish from Tsleil-Waututh diets. Almost all of Tsleil-Waututh's fish now comes from the Fraser River, outside of the Study Area. Harvesting fish was an integral pre-contact Tsleil-Waututh practice.
885. Tsleil-Waututh intensively harvested shellfish from the intertidal areas of, and beyond the Study Area. Shellfish were a major component of the Tsleil-Waututh subsistence economy. Shellfish were harvested in surplus and preserved, and likely used to underwrite potlatches/feasts, and for trade/exchange for other goods. Shellfish harvesting structured the past Tsleil-Waututh seasonal round, their relationships with other First Nations, and influenced the location of Tsleil-Waututh settlements. Shellfish play a central role in Tsleil-Waututh religious and ceremonial activities. For these reasons, harvesting shellfish must be understood as a practice that made Tsleil-Waututh culture what it was. Currently, very few Tsleil-Waututh people harvest shellfish in the Study Area because they are unsafe to eat. Harvesting shellfish was an integral pre-contact Tsleil-Waututh practice.
886. Tsleil-Waututh intensively hunted and trapped animals across the terrestrial and marine portions of, and beyond, the Study Area. While terrestrial animals were a relatively minor component of overall pre-contact diets, they also provided very important goods such as antler and bones for tool production, and hides and horns for exchange. Goat hides and horns would have been a particularly important trade good. Current Tsleil-Waututh hunting occurs in the Indian River, and areas well-beyond the Study Area. Harvesting animals was an integral pre-contact Tsleil-Waututh practice.
887. Tsleil-Waututh intensively hunted and trapped birds across the terrestrial and marine portions of, and beyond, the Study Area. Waterfowl were a notable component of the pre-contact Tsleil-Waututh subsistence economy. Waterfowl were important foods at feasts and potlatches, and their feathers were used in clothing and ritual paraphernalia. To my knowledge, Tsleil-Waututh no longer harvest waterfowl within the Study Area, but do hunt birds in association with other terrestrial hunting elsewhere. Harvesting birds was an

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integral pre-contact Tsleil-Waututh practice. These birds were used for subsistence (e.g., their meat) and their feathers were used for regalia and ritual purposes (e.g., eagle down).

888. Tsleil-Waututh intensively harvested plants from the terrestrial and intertidal portions of, and beyond, the Study Area. Plant foods (especially berries) were a notable component of the pre-contact Tsleil-Waututh subsistence economy. Plant products, that is, wood, bark and fiber, were the most important technological goods to pre-contact Tsleil-Waututh material culture. Plant based technology allowed for essentially all of the resource harvesting practices described above. Current Tsleil-Waututh terrestrial plant harvesting occurs on and around Sleil-Waututh/IR No.3, and to my knowledge, intertidal plant harvesting no longer occurs. Harvesting plants/plant products was an integral pre-contact Tsleil-Waututh practice.
889. Prior to 1792, regulation of access to the resources of the Study Area was defined by Coast Salish concepts of resource ownership and permission seeking behavior. Tsleil-Waututh lineage heads or *si?em* were responsible for regulating such access. That is to say, non-Tsleil-Waututh people would harvest resources from Tsleil-Waututh territory by seeking permission from the appropriate Tsleil-Waututh steward or owner of a particular resource patch. Raids or other violent incursions were regulated by coordinated military defense of Tsleil-Waututh territory. No loss of territory through conquest has been identified for Tsleil-Waututh.
890. Prior to 1792, there were many other integral Tsleil-Waututh cultural practices that articulated closely to the local environments of the Study Area. These include: spirit questing, spiritual relationship maintenance, trade and exchange, and travel/canoeing. Among other things, these cultural practices link living Tsleil-Waututh people to their ancestors, whom Tsleil-Waututh people view as coexisting with them in their territory.
891. Among other things, these cultural practices link living Tsleil-Waututh people to their ancestors, whom Tsleil-Waututh people view as coexisting with them in their territory. Part of Tsleil-Waututh's stewardship responsibility including taking care of one's ancestors, whom Tsleil-Waututh people view as taking care of the living Tsleil-Waututh community. Tsleil-Waututh's relationship to their territory is intrinsically tied to their identity, their links to their ancestors, and their obligations to their future generations. The links to their land and resources are embedded in the Tsleil-Waututh creation story (Gabriel George 2014). These were/are all integral cultural practices to Tsleil-Waututh that contributed to the distinctive Tsleil-Waututh culture.

7.4 Conclusions—Potential impacts of the TMX Project on Tsleil-Waututh lands, waters, practices, customs, and traditions

892. There are two ways in which the TMX Project could negatively impact integral Tsleil-Waututh subsistence and ritual activities: 1) increased shipping traffic and associated pollution and crowding, and 2) an accidental oil spill of some significance.

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893. Beyond the impact to local subsistence and Tsleil-Waututh environmental remediation programs, local traditional foods are integral to Tsleil-Waututh cultural and ceremonial activities, and the practice of harvesting and preparing traditional foods is integral to Tsleil-Waututh cultural transmission. Further, the increase in shipping associated with the TMX Project would likely also impact Tsleil-Waututh people's ability to ritually bathe in the waters of Burrard Inlet, further preclude Tsleil-Waututh people's ability to travel by canoe in their territory, and impair their ability to undertake subsistence pursuits in small vessels.
894. If a significant bitumen spill were to occur in eastern Burrard Inlet, this would be a severe impact to the entire local ecosystem and the specific resources that Tsleil-Waututh has relied on for centuries (salmon, herring, clams and birds). A spill in Burrard Inlet would severely negatively affect the health of fish and shellfish (Short 2015) and Tsleil-Waututh's future ability to harvest them. Spills elsewhere in the Salish Sea would affect salmon populations. Salmon is perhaps the only traditional food that still can be harvested in large quantities in Tsleil-Waututh territory. A bitumen spill, depending on its size, location and timing would severely negatively impact the Fraser River sockeye and the Indian River chum populations (Short 2015) and hence Tsleil-Waututh's ability to harvest them. Traditional foods are central to Tsleil-Waututh cultural and ceremonial activities, and cultural transmission, in addition to daily subsistence.
895. These direct impacts and potential impacts must be understood in context. Burrard Inlet is by no means a pristine ecosystem and the Greater Vancouver area is no wilderness. Tsleil-Waututh's previous villages and resource gathering areas are largely overrun with urban sprawl. The marine resources of Burrard Inlet are, in most cases, not plentiful and/or too toxic to eat. Of all the traditional staples (salmon, herring, clams and birds), only migratory salmon are presently available to Tsleil-Waututh in notable quantities. The TMX Project, and especially the risks of spills associated with it could have a severe impact on Tsleil-Waututh's last well-maintained traditional staple, salmon. And a blow to local salmon, is a blow to Tsleil-Waututh's cultural, social and ceremonial activities.
896. *Thus, the high probability of significant adverse environmental effects of the TMX Project on the local environment in Tsleil-Waututh territory (e.g., Short 2015) has corresponding significantly adverse effects to Tsleil-Waututh's traditional food resources. Such negative impacts would, in turn, negatively impact Tsleil-Waututh's ability to harvest those resources and deprive Tsleil-Waututh of their primary context of cultural transmission. Lack of access to traditional foods in turn, negatively effects Tsleil-Waututh's cultural, economic and ceremonial life. These negative effects include depriving present, future, and past generations of the benefits of Tsleil-Waututh territory that are their birthright.*

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Jesse Morin, PhD

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Appendix “A”—Oral History Details

Abraham, Tom (Old Abraham)—First Contact

Transmission

- Tom Abraham likely learned oral history from his parents (Siswhonaum (Tsleil-Waututh), leader of the village at Seymour Creek, (mother’s name unknown) and grandparents (Waut-salk I, Tsleil-Waututh’s hereditary chief, Whi-whyloat (Musqueam)). He also learned oral history from interacting with other Coast Salish people during his 110 year lifespan.

Method

- TA likely shared many of his oral histories with many TWN people, including Leonard George. The context of how TA shared this oral history with LG is unclear.

Attributes

- ~AD 1814-1924. Spoke Halkomelem and Squamish. Lived a traditional lifestyle. Because of his age and knowledge, TA was a star witness in the Stanley Park Squatters Trial in 1923.

Corroboration

- TA’s father - Siswhonaum – was alive at the time of contact and lived in Burrard Inlet, and could have actually met either the Spanish or British. Neither group of explorers indicated that they fired their cannons in Burrard Inlet, but they did fire muskets (Wagner 1933:pp).

Charlie, Dominic - x^wáyx^way Origins

Transmission

- DC was probably told account by his parents (Jericho Charlie (Squamish) and Sally Xwhaywhat (Penelukut or Musqueam?).

Method

- It is unknown how Dominic Charlie passed this oral history to Leonard George (i.e., formal or informal settings).

Attributes

- DC (b1866-d1972). Almost certainly spoke Squamish and Halkomelem. DC was widely recognized as knowledgeable regarding Squamish oral histories, he was interviewed by Oliver Wells (1966).

Corroboration

- Musqueam oral histories also describe a very similar version of DC's x^wáyx^way account.

George, Ambrosine/Alphonsine – Sleil-Waututh Village

Transmission

- Unknown, but AG was likely told the oral history of Sleil-Waututh always being a village from her parents (George Sla-holt and Annie George) or grandparents (James Sla-holt (Tsleil-Waututh Hereditary Chief), Marie Quall-tanaut (Squamish))

Method

- AG indicated that Sleil-Waututh was always a village to Randy Bouchard in an interview in 1983.

Attributes

- AG (b1895-199d6). AG seems to have been knowledgeable about TWN history and culture. AG spoke Squamish.

Corroboration

- Other unrecorded TWN oral histories indicate that the area from Sleil-Waututh to Say-umiton (past Dollarton) was nearly a contiguous village that was occupied at the same time as Tum-tumay-whueton. The archaeological record at Sleil-Waututh indicates four millennia of occupation here, including late prehistoric and early historic occupations.

George, Dan – The Serpent, Tum-tumay-whueton, Say-umiton, Tat-ose, and Whey-ah-wichen

Transmission

- It is unknown exactly how Dan George obtained his oral histories, but he likely learned them from his parents (George Sla-holt and Annie Harry) and grandparents (James Sla-holt – Tsleil-Waututh's hereditary chief, Marie Quall-tanautm, Squamish).

Method

- DG visited a number of archaeological sites around Burrard Inlet with Charles Borden, Jim Gardner, David Sanger, and Don Abbot around 1974 and provided them this information.
- DG was interviewed by Kathleen Alsop in 1968 on the beach in front of his house on IR No.3 and provided the name "Tat-ose" for the beach in that interview.

Attributes

- DG (b1899-d18981) spoke Squamish and understood Halkomelem.
- DG was involved with traditional Coast Salish dancing/singing ("Children of Takaya).
- DG was the elected chief of Tsleil-Waututh in the 1950s.

Corroboration

- Much of DG's oral histories regarding the serpent and the major Tsleil-Waututh village sites of eastern Burrard Inlet is common knowledge among the Tsleil-Waututh community.

George, Gabriel – Tsleil-Waututh Origins

Transmission

- GG indicated what he had learned about Tsleil-Waututh culture and history was from his aunts and uncles, parents, and older siblings (Gabriel George 2014).

Method

- GG presented the Tsleil-Waututh origin story to the NEB as part of Tsleil-Waututh's submission of traditional oral evidence.

Attributes

- GG is a Tsleil-Waututh band member and a shxwla:m "Indian Doctor". He has trained with other Coast Salish shxwla:m.
- GG is very involved in Coast Salish spirit dancing activities.
- GG is the son of former elected chief Leonard George.
- GG speaks Down-River Halkomelem.
- GG is currently a language and culture instructor for Tsleil-Waututh.

Corroboration

- GG's account of Tsleil-Waututh origins is very similar to that provided by Leonard George in Mathias (1997), and as recorded by Ignatius Sunrays George (1930).

George, Herbert (Paddy) – Tsleil-Waututh village at Kha-Nah-Moot/New Brighton Park

Transmission

- Unknown. He was probably told this oral history by his parents (George Sla-holt and Annie George) or his maternal grandmother (Marie Quall-tanaut).

Method.

- Unknown.

Attributes

- HG (b1906-d1994). HG lived a traditional lifestyle, he was a noted canoe maker, was very knowledgeable about Tsleil-Waututh history and culture (place names, genealogy etc). HG spoke Squamish and probably understood Hunq'imnum

Corroboration.

- Joseph Thomas also described a village here (Mathews 1955:441).

George, Ignatius Sun-rays – Tsleil-Waututh Origins II, Sisba-qo-Chatun the Port Moody Chief.

Transmission

- IG was probably told the TWN origin account by parents or grandparents (unknown). Parents: Annie George and Chief George-Sla-holt, the respected leaders of the TWN community. Paternal grandparents: James Sla-holt and Marie Quall-tanaut. Maternal Grandparents: James Sla-holt,

Method

- Unknown, likely communal story telling in any number of contexts.

Attributes

- Age (b1903-d1962). The TWN origin account was written down by IG in 1935 when he was about 32. IG was a noted oral historian among the TWN community. His two notebooks of historical and genealogical information are highly valued by the TWN community. IG spoke Squamish and understood Hunq'imnum. IG practiced a traditional lifestyle.

Corroboration

- Partial corroboration from LG's TWN Origins I. No known earlier recorded corroborating accounts. Corroboration from Carter's (1966) account of the Port Moody Chief (based on information from Tsleil-Waututh informants Dan George and Herbert George)

George, Leonard – Tsleil-Waututh Origins, x^wáyx^way Origins.

Transmission

- LG generally learned oral history from grandparents (Christine Jack, George Sla-holt, Sla-holt, Waut-salk). George Sla-holt and Annie George (paternal grandparents) were the respected leaders of the TWN community, they spoke the traditional languages Hunq'imnum and Squamish. LG also learned oral history from Dominic Charlie and Josephine Charlie (Squamish).
- LG learned the TWN Origins story from – Josephine Charlie (Squamish, deceased). Josephine Charlie insisted that the story was from his Tsleil-Waututh grandmother Christine Jack. Christine Jack was one of the last to convert to Christianity and was deeply involved in Seone (traditional winter spirit dancing).
- LG learned the Origins of the x^wáyx^way story from Dominic and Josephine Charlie.

Method

- Method of story (TWN Origins) transmission: Josephine Charlie told him.
- In the case of the origins of the x^wáyx^way, LG was told the story at DC's house and DC specifically indicated that the story recounted LG's Tsleil-Waututh ancestors.

Attributes

- LG (b1946-). I don't think LG speaks Hunq'imnum or Squamish fluently, but I think he does understand them.
- LG – Past elected chief, involved in Seone (traditional winter spirit dancing), has described his participation in traditional activities in a number of TUS interviews, acted as a lay witness on TWN oral history in Mathias v HMTQ, respected elder and leader of the community.

Corroboration

- Ignatius Sun-Rays (Ginny) George (1930:7) provides partial corroboration of LG's TWN Origins: TWN Transformed from wolf into person by Creator. Ignatius Sun-Rays George was the son of Chief George Sla-holt.
- Herbert (Paddy) George (1990:7) provide partial corroboration of LG's TWN Origins: TWN are closely related to wolves. Herbert George was the son of Chief George Sla-holt.

George Sla-holt – Death of Waut-salk

Transmission

- Likely learned oral history through his parents (James Sla-holt, Tsleil-Waututh's hereditary chief), Marie Quall-tanaut (Squamish) and grandparents (Sisyetseul (Squamish), Waut-salk II died before George was born).

Method

- Chief George Sla-holt described Waut-salk's (II) death to T.P.O. Menzies in 1934 (Menzies 1934). Presumably Menzies interviewed GS at one of his homes.

Attributes

- GS Born at Burrardview, 1863-1935. Hereditary chief of Tsleil-Waututh. Spoke Halkomelem and Squamish. Lived a traditional lifestyle. Maintained houses at Sleil-Waututh, Musqueam, Mission, and Inlailawatash.

Corroboration

- Joseph Thomas (aged 9 at the time) is said to have observed the reburial of Waut-salk and the accompanying whales. The Tsleil-Waututh village of Inlailawatash at Indian River, where Waut-salk (II) was killed in battle, appears to have been fortified (surrounded by a trench embankment), suggesting defense was a major concern there.

Moody, Tim – Slail-wit-tuth – Burrard Inlet

Transmission

- TM learned about indigenous place names from his family (genealogy unknown) and through interactions with other Coast Salish people throughout the 19th century.

Method

- TM indicated that the name for all of Burrard Inlet was Slail-wit-tuth in an interview with Major Mathews prior to 1936.

Attributes

- TM (b?-d1936). Spoke Squamish, perhaps spoke Halkomelem. TM was the last living Coast Salish person with a 'flattened head' (artificially deformed during infancy). TM appears to have been very knowledgeable about Squamish history and culture.

Corroboration

- Tsleil-Waututh's place name for Burrard Inlet is 'Tsleil-Waut', a close variant of 'Slail-wit-tuth'. Carter (1966:5) recorded the name "Tsleil-Wat" for Burrard Inlet. Paddy George (1990:2) indicated that "Selilwet" this was the name for Burrard Inlet.

Paul, Andrew – Sleil-Waututh as a Place Name

Transmission

- AP likely learned about Squamish place names from his parents (Dan Paull and Theresa Paull) or other Squamish chiefs (Khatsalano, Buffalo Mathias).

Method

- AP indicated to Major Mathews that "Slail-wit-tuth" was the name for Indian River only in an interview in (1930?).

Attributes

- AP Spoke Squamish and often acted as an interpreter. He was legally trained, and an activist for Squamish and other First Nations. He was a driving force behind the 1923 Squamish Amalgamation and acted as secretary for the Squamish Nation Council. He was also a leader of the Allied Tribes of British Columbia. He appears to have been very knowledgeable regarding Squamish history and culture. He also consistently downplayed Tsleil-Waututh's claims to their territory in Burrard Inlet, and provided oral histories of Squamish people in Burrard Inlet that contradict statements by knowledgeable Squamish elders.

Corroboration

- Suttles (1996a and b, 1990) also indicated that the name for Indian River was Selilwet. The 1878 reserve allocation for IR 4 (Inlailawatash) indicated the name for Indian River was "Tse-lail-a-wutursh" (Mohun 1878a), and apparent mix of 'Tsleil-Waututh' and 'Inlailawatash', and in a different notebook indicated Indian River as "Tselailwatua River" (Mohun 1878b). In 1881, Jemmet indicated the Indian River as the "Meslilloet River".

Tecatus – Sasamat: the indigenous name for Burrard Inlet

Transmission

- Unknown. But Tecatus was likely well-traveled throughout the Coast Salish world. As a leader or chief, he could very well have had kinship connections to Tsleil-Waututh families in Burrard Inlet.

Method

- Tecatus told officers of the Galiano and Valdez expedition (AD 1792) that the area they called 'Boca Del Floridablanca' was called 'Sasamat' in the indigenous language. Tecatus recognized the nautical charts the Spanish were reviewing and offered the name Sasamat and others for particular geographical features (Wagner 1933).

Attributes

- Esquimalt chief. Spoke Straits Salish, probably familiar with Halkomelem and other local languages.

Corroboration

- Say-mah-mit is the Tsleil-Waututh name for Port Moody.

Thomas, Joseph – Tsleil-Waututh Origins III (Khan-na-moot – To Appear)

Transmission

- JT was probably told account by parents or grandparents (unknown). Catherine Unsakaloat (Tsleil-Waututh) and Thomas Stareten (Squamish) – parents, Waut-salk (II) and Sisyetseul (Squamish) paternal grandparents.

Method

- JT told this oral history (Khan-na-moot TWN Origins) to Captain Cates at some time before 1951. Captain Cates related this information to Major Mathews in 1953 (Mathews 1955:441).

Attributes

- JT lived a traditional lifestyle – hunting and fishing, likely spoke the TWN dialect of Hunq'imnum and Squamish, evicted from IR No.6, relocates to IR No.3 with TWN family.

Corroboration

- This is the only known account of a First Person/Ancessor oral history located here. It is not, to my knowledge, corroborated in any other source or form. It is possible that this is not actually a First Person/Ancessor account, but some other form of oral history.

Thomas, Rose, Permission Seeking Behavior

Transmission

- RT either saw people ask permission from her grandfather (George Sla-holt) for permission to visit and fish at Inlailawatash, or she had it described here when she was young by her parents (Dan George and Amy Jack) or grandparents (Annie George and George Sla-holt, Henry Jack and Christine Thomas).

Method

- RT provided this information during an interview regarding her childhood experiences at Inlailawatash in the 1930s.

Attributes

- RT (b1928-) is currently the eldest Tsleil-Waututh band member. She did not go to school when very young and spent considerable time with her grandparents (Annie George and George Sla-holt). RT lived at Indian River in George Sla-holts longhouse.

Corroboration

- The permission seeking behavior described by RT is text-book example of Coast Salish protocol and recognition of appropriate territorial owners/stewards.

Appendix “B”—Jesse Morin CV

Jesse Morin
#10-2590 Austin Ave, Coquitlam BC, V3K 5X4
604 931 1722, thejdmorin@gmail.com

Employment History

- 2014-Present Independent heritage consultant: K’omoks First Nation Strength of Claim research.
- 2014 Expert Witness – Tsleil-Waututh Nation Use and Occupancy of Eastern Burrard Inlet. Gowling, Lafleur, Henderson LLP representing Tsleil-Waututh Nation in the National Energy Board (NEB) Facilities Application Hearing for Kinder Morgan’s proposed Transmountain Pipeline Expansion.
- 2011-Present Independent heritage consultant: Tsleil-Waututh Nation, and the Inlailawatash Forestry Limited Partnership in the role of archaeologist.
- 2008-2012 Research Assistant (under Prof. R.G. Matson), Department of Anthropology, University of British Columbia.
- 2011 Sessional Instructor, Department of Anthropology, University of British Columbia.
- 2009 Excavation Director, Department of Geography, Monash University (Australia).
- 2009 Head Surveyor (Research Assistant), Department of Anthropology, University of British Columbia.
- 2006-2007 Research Assistant (Prof. Mark Collard), Department of Anthropology, University of British Columbia.
- 2006 Laboratory and Field Instructor, Department of Archaeology, Simon Fraser University.
- 2006 Research Assistant (Prof. Dana Lepofsky), Department of Archaeology, Simon Fraser University.
- 2002-2010 Teaching Assistant, Department of Anthropology, University of British Columbia.
- 2003 Forensic Archaeologist, RCMP, Major Crimes Division, Surrey, B.C.
- 2001 Research Assistant (Prof. Dana Lepofsky), Department of Archaeology, Simon Fraser University.

Education

- 2012 Doctor of Philosophy (PhD)
Department of Anthropology, University of British Columbia.
Dissertation topic: The political economy of pre-contact exchange of stone celts in the Pacific Northwest: the Salish nephrite/jade industry.
- 2006 Master of Arts
Department of Anthropology and Sociology, University of British Columbia.
Thesis topic: Non-residential architecture in a large prehistoric complex hunter-gatherer village on the Canadian Plateau.
- 2002 Bachelor of Arts, First Class Honors
Department of Archaeology, Simon Fraser University.
Thesis topic: Variation in salmon processing technology on the prehistoric Northwest Coast.

Peer Reviewed Publications

- Morin, Jesse
2015 Near Infrared (NIR) Spectrometry Reveals Patterns of Celt Exchange in Pre-Contact British Columbia. *American Antiquity* in press.
- Morin, Jesse
2015 Classification and Typologies of Stone Celts in British Columbia. *Canadian Journal of Archaeology* in press.
- Morin, Jesse
2015 Understanding Variability in Lower Fraser River Celt Assemblages. In *The Archaeology of the Lower Fraser River*, edited by Roy Carlson and Michael Rousseau. SFU Archaeology Press. In press.
- Morin, Jesse, and R. G. Matson
2015 The Scars that Never Heal: Identifying Projectile Manufacturing Techniques from Flake Scar, A Case From Cedar Mesa, Utah. *Kiva*, in press.
- Morin, Jesse
2015 Nephrite/Jade: The Preeminent Celt Stone of the Pacific Northwest. In *Toolstone in Cascadia*, edited by Ron Adams and Terry Ozbun, pp12-28. SFU Archaeology Press, Burnaby.
- Buchanan, Briggs, Mark Collard, and Jesse Morin and Andre Costopoulos
2011 What Drives the Evolution of Hunter-Gatherer Subsistence Technology? A Reanalysis of the Risk Hypothesis with Data from the Pacific Northwest. *Philosophical Transactions of the Royal Society B: Biological Sciences* 366:1129 - 1138.
Reprinted in *Culture Evolves*, 2012 edited by Andrew Whiten, Robert A. Hinde, Christopher B. Stringer, and Kevin N. Laland, pp 341-359. Oxford University Press, Oxford.
- Morin, Jesse
2010 Ritual Architecture in Prehistoric Complex Hunter-Gatherer Communities: A Potential Example from Keatley Creek, On the Canadian Plateau. *American Antiquity* 75: 599-625.
- Sakaguchi, Takashi, Jesse Morin, and Ryan Dickie
2010 Defensibility of Large Prehistoric Sites in the Mid-Fraser Region on the Canadian Plateau. *Journal of Archaeological Science* 37: 1171-1185.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
Appendix "B"—Jesse Morin CV

Morin, Jesse, Ryan Dickie, Takashi Sakaguchi, and Jamie Hoskins

2008/9 Late Prehistoric Settlement Patterns and Population Dynamics in the Mid-Fraser Region. *B.C. Studies* 160: 9-35.

Lepofsky, Dana, Teresa Trost, and Jesse Morin

2007 Coast Salish Interaction: A View from the Inlets. *Canadian Journal of Archaeology* 31: 190-223.

Morin, Jesse

2004 Cutting Edges and Salmon Skin: Variation in Salmon Processing Technology on the Northwest Coast. *Canadian Journal of Archaeology* 28: 281-318.

Publications Submitted for Peer Review

Morin, Jesse

n.d. The Salish Nephrite/Jade Industry: Groundstone Celt Production in British Columbia, Canada. Submitted to *Lithic Technology*

Book Reviews

Morin, Jesse

2014 *Rewriting Marpole: The Path to Cultural Complexity in the Gulf of Georgia Region* by Terence N. Clark. Reviewed by Jesse Morin. *BC Studies* 182:218-22.

Non-Peer Reviewed Publications

Morin, Jesse

In Press Recent Research Directions at Keatley Creek (EeR1 7) and Secret Societies in the Pacific Northwest In *Sifting Through The Midden: A History of BC Archaeology through the Quarterly of the Archaeological Society of British Columbia*, edited by Bill Angelbeck, Marina La Salle, Eric McLay, Adrian Sanders, and Chris Ames. Archaeological Society of British Columbia Publications. Vancouver, B.C.

2012 The Political Economy of Stone Celt Exchange in Pre-Contact British Columbia: The Salish Nephrite/Jade Industry. Unpublished PhD dissertation, Department of Anthropology, University of British Columbia. University of British Columbia, Vancouver, B.C.

2013

2010 Calling All Celts: Exploring Pacific Northwest Exchange Relationships Through Stone Celts. *The Midden* 42:13-16.

2007 The Carrot, The Stick, and The *Tseka'ma*: The Political Ecology of Prehistoric Secret Societies at Keatley Creek. In *Humans: Anthropological Perspectives on Holism* 2007 UBC Anthropology Graduate Student Conference Proceedings, edited by Marina LaSalle, Vancouver.

2006a Non-domestic architecture in prehistoric complex hunter-gatherer communities: An example from Keatley Creek on the Canadian Plateau. Unpublished Masters thesis, Department of Anthropology and Sociology, University of British Columbia, Vancouver B.C.

2006b Recent Research Directions at Keatley Creek (EeR1 7) and Secret Societies in the Pacific Northwest. *The Midden* 38: 6-12.

2002 Cutting edges and salmon skin: An investigation of salmon processing technology on the Northwest Coast. Unpublished Honors thesis, Department of Archaeology, Simon Fraser University, Burnaby B.C.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
Appendix "B"—Jesse Morin CV

Morin, Jesse, Jonathan Sheppard, Ryan Sagabbaria, and Jamie Hoskins

- 2007 Crazy Dog Dancers and Chalcedony Core Knappers: The SFU 2006 Fieldschool at Keatley Creek. *The Midden* 39:9-17.

Reports

Morin, Jesse

- 2014 The Burrard Inlet Radiocarbon Dating Project: Documenting Pre-Contact Tsleil-Waututh Settlement Patterns. On file at Tsleil-Waututh Nation Treaty, Lands and Resources Department, North Vancouver.
- 2014 Whey-ah-wichen/Cates Park Midden Erosion: The Impact of High Winter Tides to Cultural Heritage at DhRr 8 (The Cates Park Site). Report on file with the B.C. Archaeology Branch, Victoria.
- 2006 Report on the 1997 – 2005 Excavations at Structure 106 at Keatley Creek (EeR1 7).
- 2002 A Report On the Lithic Artifacts Recovered from Site DhRr 18 During the 2000 Investigations: Appendix to site report: The Community Archaeology Project: Excavations at the Strathcona Park Site (DhRr 18) and , Survey of Tsleil-Waututh Reserve (I.R. No. 3) North Vancouver, B.C. by Lepofsky, D. and M. Karpiak. On file with Tsleil-Waututh First Nation, North Vancouver B.C. and the Archaeology Branch, Victoria, B.C.

Morin, Jesse (Inlailawatash)

- 2012 Mineralogical and typological analyses of artifacts from EaRj 65 (Kwoiek Creek). Report submitted to Dave Hall, Arrowstone Archaeological Consulting.
- 2012 Archaeological Overview Assessment of Civil Protective Works for Tower 523-01 on Circuit 5L45 (Indian River). Prepared for B.C. Hydro.
- 2012 Ellesmere Mainline Forestry Road Preliminary Field Reconnaissance. Prepared for Terminal Forest Products Ltd.

Morin, Jesse, and Allison Hunt

- 2014 Least Cost Catchments In Burrard Inlet: Modelling Traditional Tsleil-Waututh/Coast Salish Areas of Regular Intensive Resource Use Using GIS. On file at Tsleil-Waututh Nation Treaty, Lands and Resources Department, North Vancouver.

Hodgins, Amy, and Jesse Morin (Inlailawatash)

- 2012 Archaeological Overview Assessment of Port Metro Vancouver's Proposed South Shore Corridor Project Vancouver, B.C. Submitted to Port Metro Vancouver.

Hodgins, Amy, and Jesse Morin (Inlailawatash)

- 2012 Neptune Terminals Allison Coal Terminal Expansion Project, North Vancouver, B.C., Archaeological Overview Assessment. Report Submitted to Neptune Bulk Terminals (Canada). Ltd.

Lipe, William, R.G. Matson, and Jesse Morin

- 2012 Report on Survey Conducted in 2009 in San Juan County, Utah Under BLM Permit No. 085025. Submitted to the Monticello Field Office, Bureau of Land Management, Monticello, Utah.

Matson, R.G., and Jesse Morin

- 2012a The Stone Tool Typology from the Rock Island Site NR-C9-5, a Large Basketmaker II Village on Cedar Mesa, Utah. Submitted to the Monticello Field Office, Bureau of Land Management, Monticello, Utah.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
Appendix "B"—Jesse Morin CV

- 2012b Appendix A: The Stone Tool Typology. In Lipe, William D., R.G. Matson, and Jesse Morin. Report on Survey Conducted in 2009 in San Juan County, Utah, Under Bureau of Land Management Permit No. 085025. Submitted to the Monticello Field Office, Bureau of Land Management, Monticello, Utah.

Morin, Jesse, and Bob Muir

- 2013 Tsleil-Waututh/SFU Archaeology Admiralty Lease Lands Archaeological Inventory HCA Permit #2012-0130. On file with the B.C. Archaeology Branch, Victoria.

Morin, Jesse, and R.G. Matson

- 2012a Debitage Analysis from the Rock Island Site NR-C9-5, a Large Basketmaker II Village on Cedar Mesa, Utah. Submitted to the Monticello Field Office, Bureau of Land Management, Monticello, Utah.
- 2012b Appendix B: Debitage Analysis of the Et Al and Owen Site Surface Collected Assemblages (2009). In Lipe, William D., R.G. Matson, and Jesse Morin. Report on Survey Conducted in 2009 in San Juan County, Utah, Under Bureau of Land Management Permit No. 085025. Submitted to the Monticello Field Office, Bureau of Land Management, Monticello, Utah.

Conference Presentations

Morin, Jesse

- 2015 Modelling Hunter-Gatherer-Fisher Landscape Use and Territory with GIS: A Coast Salish Example. SFU Archaeology Symposium: Waterworlds – Rivers, Lakes, Oceans, and Islands in an Archaeological Perspective, Vancouver, British Columbia.
- 2014 The Prehistory of Indigenous Nephrite/Jade Celt Production and Exchange in British Columbia. World Jade Symposium, Vancouver, British Columbia.
- 2013 Patterns of Stone Celt Production and Exchange on the Lower Fraser River Region. Sto:lo - People of the River Conference. Chilliwack, British Columbia.
- 2013 Patterns of Stone Celt Production and Exchange on the Lower Fraser River Region. BC Studies Conference 2013, New Westminster, British Columbia.
- 2011 Nephrite/Jade: The Pre-eminent Celt Stone of the Pacific Northwest. Society for American Archaeology 76th Annual Meeting. Sacramento, California.
- 2011 Sourcing Nephrite/Jade Artifacts in the Pacific Northwest. 2011 UBC Anthropology Graduate Student Conference. Vancouver, B.C.
- 2010 Nephrite/Jade Celt Production in the Pacific Northwest. Society for American Archaeology 75th Annual Meeting. St. Louis, Missouri.
- 2010 Infrared Spectrometry and Material Authentication: Applications for Understanding the Prehistoric Exchange of Stone Celts in British Columbia. 2010 UBC Anthropology Graduate Student Conference. Vancouver, B.C.
- 2010 Infrared Spectrometry and Material Authentication: Applications for Understanding the Prehistoric Exchange of Stone Celts in British Columbia. 2010 UBC Anthropology Graduate Student Conference. Vancouver, B.C.
- 2009 The Trade and Exchange of Nephrite Celts on The Pacific Northwest. D.I.G. (Developing International Geoarchaeology) 2nd Conference. Hamilton, Ontario.

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
Appendix "B"—Jesse Morin CV

- 2007 The Carrot, The Stick, and The Tseka'ma: The Political Ecology of Prehistoric Secret Societies at Keatley Creek. 2007 UBC Anthropology Graduate Student Conference. Vancouver, B.C.
- 2006 Potential Ritual Structures at Keatley Creek on the Canadian Plateau. Northwest Anthropological Conference 59th Annual Meeting. Seattle, Washington.

Dickie, Ryan, Jesse Morin, Takashi Sakaguchi, and Jamie Hoskins

- 2008 Big Sites on the Big River: Late Prehistoric Settlement Patterns in the Mid-Fraser Region. 2008 UBC Anthropology Graduate Student Conference. Vancouver, B.C.
- 2008 Big Sites on the Big River: Late Prehistoric Settlement Patterns in the Mid-Fraser Region. Northwest Anthropological Conference 61st Annual Meeting. Victoria, B.C.

Konovsky, John, and Jesse Morin

2014. A First Nation History and Approach to Acidification in Burrard Inlet. 2014 Salish Sea Ecosystem Conference Presentation, Seattle.

Matson, R.G., and Jesse Morin

- 2010 The Scars that Never Heal: Identifying Projectile Manufacturing Techniques from Flake Scars. Society for American Archaeology 75th Annual Meeting. St. Louis, Missouri.

Morin, Jesse, and Jon Sheppard

- 2008 Potential Ritual Structures at Keatley Creek on the Canadian Plateau. Society for American Archaeology 73rd Annual Meeting. Vancouver, B.C.

Manuscripts under Preparation

Morin, Jesse, Allison Hunt and Michael Blake

- n.d. Least Cost Analysis of Marine Hunter-Gatherer-Fisher Territories: Two Coast Salish Examples. (analysis complete; manuscript in the late stages of preparation)

Morin, Jesse, Kevan Edinborough and, Dana Lepofsky

- n.d. A Regional Analysis of Coast Salish Settlement Patterns: The Occupation History of Burrard Inlet. (analysis complete; manuscript in the late stages of preparation)

Morin, Jesse

- n.d. Classifying Indigenous Nephrite/Jade Artifacts in British Columbia, Canada Using Near Infrared Spectroscopy and Chemometrics. (analysis complete; manuscript in the early stages of preparation)
- n.d. The Materialization of Power in Nephrite/Jade Celts in Pre-Contact British Columbia. (analysis complete; manuscript in the early stages of preparation)

Arnett, Chris, and Jesse Morin

- n.d. Xelas: Rock Paintings of the Tsleil-Waututh. (analysis complete; manuscript in the late stages of preparation)

Service to the Discipline

November 2014 Peer-Reviewer, *American Antiquity*

June 2013 External Examiner – Louise Williams MA (SFU Archaeology) *Revisiting the Locarno Beach Site (DhRt-6)*.

August 2013 Peer-Reviewer, *BC Studies*

December 2006 Peer-Reviewer, *Canadian Journal of Archaeology*

Professional Society Membership

Society for American Archaeology

Canadian Archaeological Society

Archaeological Society of British Columbia

Archaeological Research Experience

- 2013 – 2014 Tsleil-Waututh Research (Tsleil-Waututh First Nation)
Settlement pattern/occupation history research through submission of 60 new radiocarbon dates from known Tsleil-Waututh village sites (report and publication described above). Least cost analysis using GIS of traditional Tsleil-Waututh travel and transport technology (i.e., modelling foot and canoe travel) (report and publication described above).
- 2008 – 2012 Dissertation research
Department of Anthropology, UBC
Through a combination of spatial and geochemical methods, I conducted a study of the exchange of stone celts in the Pacific Northwest in order to model prehistoric trade relationships. This research primarily involved visiting and analyzing collections of celts made of nephrite jade and other rocks (n ~2,000) from the Pacific Northwest held in a number of institutions, and obtaining bedrock samples of nephrite jade from a number of source locations (n = 300). I used a portable non-destructive Near Infrared Spectrometer to identify the mineralogy of these artifacts and to attempt to source them. In addition, I collaborated with Dr. Yoshiyuki Iizuka from the Institute of Earth Sciences at the Academia Sinica in Taipei, Taiwan, to correlate nephrite artifacts to known source locations.
- 2008 – 2012 Research assistant for Prof. R.G. Matson
Department of Anthropology, UBC
Lithic analysis of artifacts recovered from the site NR 5 C9 (debitage and artifacts, n = 10, 000). This site is located on Cedar Mesa, in Utah, and dates to about A.D. 400 (Basketmaker II era). We have submitted a paper for publication (Morin and Matson, n.d.) based on this research. This research is a component of the Cedar Mesa Project directed by Bill Lipe and R.G. Matson from 1971 to present, funded by the NSF (National Science Foundation) and SSHRC (Social Science and Humanities Research Council).
- May 2008 Visiting scholar
Russian Academy of Sciences, Institute for the Study of the History of Material Culture, Traceology Laboratory (St. Petersburg, Russia)
I trained intensively in mastering use-wear analysis of stone tools at the Traceology Laboratory, with a particular focus on use-wear patterns of nephrite woodworking tools and the wear patterns produced by processing fish.
- 2006 – 2007 Research Assistant for Prof. Mark Collard
Department of Anthropology, UBC
I conducted library-based literature reviews of hunter-gatherer ethnographies from around the world. The focus of this research was to quantify the complexity and diversity of hunter-gatherer food-getting technologies and comparing such technologies on a global scale, while examining the relative influence of environment and history on hunter-gatherer toolkits. This research was funded by SSHRC. This research has resulted in the published (see Buchanan et al. 2011).
- 2001 & 2006 Research Assistant for Prof. Dana Lepofsky
Department of Archaeology, SFU

I conducted two semesters of lithic analysis for materials recovered from a shell midden (n = 850) and an adjacent intertidal zone (n = 3,000) for site DhRr-18, and a literature review of archaeological reports of other sites in the immediate vicinity. The site is located in Deep Cove, North Vancouver, and dates within the last 1,000 years (Gulf of Georgia Phase). This research has resulted in a report (see Morin 2002b) and a publication (see Lepofsky et al. 2007).

- 2002 – 2006 Masters Thesis Research
Department of Anthropology and Sociology, UBC
This research involved the analysis of the remains recovered from a housepit at the Keatley Creek site and quantitative comparison of this assemblage to those recovered from seven other housepits at the site. In this research I was working very closely with Prof. Brian Hayden (SFU). I analyzed all of the fauna (n = 5,000), debitage (n = 1,749) and artifacts (n = 272) recovered from this assemblage. My research on this material resulted in crafting my Masters Thesis (see Morin 2006a), an article in *American Antiquity* (see Morin 2010), two non peer reviewed publications (see Morin 2007 and 2006b), and a conference presentation.
- 2001 – 2002 Honors Thesis Research
Department of Archaeology, SFU
This research involved experimental replication of a number of stone and shell tools and using such tools to process/clean more than 100 salmon. The goal was to determine the relative efficiency of these technologies. This research was the basis of my Honors thesis (see Morin 2002) and resulted in one publication (see Morin 2004).

Scholarships

I have secured more than \$150,000 in scholarships and grants to support my academic research.

- 2010 – 2011 UBC, Charles and Alice Borden Fellowship for Archaeology, \$10,000
2009 – 2010 UBC, 4th Year PhD Fellowship, \$18,000
2007 – 2010 SSHRC award 767-2007-2014, Canada Doctoral Scholarship, \$105,000
2006 – 2010 UBC, PhD Tuition Fee Award, \$16,000
2006 – 2007 UBC, Charles and Alice Borden Fellowship for Archaeology, \$18,000
2000 – 2002 SFU, Open Scholarships, \$6,000

Engagement with Aboriginal Communities

- Cultural Heritage Consultant for the Tsleil-Waututh Nation.
- Cultural Heritage Consultant for the K'omoks First Nation.
- Working relationships maintained with Sto:Lo Tribal Council, Katzie First Nation, and Tseshaht First Nation regarding access to band-held archaeological materials and reciprocating the results of the analyses of such materials.
- Involvement with Lytton First Nation 'Community Heritage Day' events, namely mineralogical identification of community held artifacts.
- Working relationships maintained with the Lillooet Tribal Council and Xaxli'p (Fountain) and Ts'qw'aylaxw (Pavillion) First Nations regarding excavations carried out at the Keatley Creek site (near Lillooet, B.C.).
- Participant observation / experience in salmon processing with band members from the Tsleil-Waututh First Nation.
- Experience working on field projects with Indigenous Peoples on three continents (North America, Asia, and Australia-Papua New Guinea).

Engagement with Museums/Repositories holding First Nations Material Culture

- Royal British Columbia Museum (Victoria, B.C.) – Research Associate 2009 – 2011, currently developing an exhibit on pre-contact jade exchange in B.C. with Grant Keddie (Archaeology Curator)
- Canadian Museum of Civilizations (Ottawa, Ontario)
- Burke Museum (Seattle, WA)
- American Museum of Natural History (New York, NY)
- University of British Columbia (Vancouver, B.C.)
- Simon Fraser University (Burnaby, B.C.)
- Vancouver City Museum (Vancouver, B.C.)
- Penticton Museum (Penticton, B.C.)
- Maple Ridge Museum (Maple Ridge B.C.)
- Sto:Lo Tribal Council Cultural Archives (Chilliwack, B.C.)
- Katzie First Nation (Maple Ridge, B.C.)

Archaeological Field Experience: Overview

Supervising: Five field seasons of supervisory experience for crews ranging up to 10 students excavating housepits (semi-subterranean domestic dwellings) on the Canadian Plateau. Recently, I also conducted one short season of field work in Papua New Guinea supervising a small crew excavating a coastal Melanesian shell midden site.

Excavating: Eight field seasons of experience excavating sites in a wide range of environments and cultural contexts. Much of this experience is in detailed household excavations on the Canadian Plateau, but I have also excavated masonry roomblocks (Neolithic Jordan) and large exploratory trenches (Lower Paleolithic Mongolia) where our focus was on exposing broad areas. I have also excavated a number of feature types including shell middens, housepits, storage pits, earth ovens, and lithic scatters.

Surveying/Mapping: I have conducted a variety of surveying and mapping projects, including pedestrian surveys, surface collections, 'chain and compass' mapping, and high resolution digital mapping using a total station. I was the primary surveyor and produced high resolution maps of Keatley Creek, a large housepit village site on the Canadian Plateau, and three Puebloan sites in Utah, in the American Southwest. I also conducted pedestrian surveying of very broad land tracts looking for cultural materials in locations such as the Northwest Coast, the Canadian Plateau, and the Mongolian steppe. The spatial analysis aspect of my dissertation used GIS software to map the distribution of various artifact types across British Columbia.

Archaeological Field Experience: Details

- May/June 2012 Director / Permit holder
Tsleil-Waututh Nation / Department of Archaeology, SFU
In conjunction with an SFU Archaeology field techniques class (instructed by Dr. Bob Muir), I planned and implemented an archaeological survey of a large park in Belcarra for Tsleil-Waututh Nation.
- Dec 2009 Excavation director
Department of Geography, Monash University (South Wales, Australia)
I led a small crew of three in excavating a coastal Melanesian shell midden site just west of Port Moresby in Papua New Guinea.
- Aug 2009 Head surveyor
Department of Anthropology, UBC
I was the head surveyor for high resolution digital mapping three Puebloan sites on Cedar Mesa in Utah, using a total station.
- July 2007 Excavator and surveyor
Department of Anthropology, UBC Okanagan
I volunteered on a research project involving pedestrian surveys and excavating a number of large earth ovens and lithic scatters in the Upper Hat Creek Valley of British Columbia.
- June 2007 Excavator and surveyor
Department of Archaeology and Prehistory, Russian Academy of Science (Novosibirsk, Russia). I excavated and surveyed in eastern Mongolia with a team of Russian and Mongolian archaeologists exploring potential Lower Paleolithic sites.
- Summer 2006 Excavation supervisor
Department of Archaeology, SFU
I supervised a crew of ten students and directed the excavations of a housepit and several external structures for the SFU Archaeological Field School at Keatley Creek, British Columbia.
- Apr 2002 to '05 Excavation supervisor
Department of Anthropology and Sociology, UBC, and Department of Archaeology, SFU
Each April, I supervised a small crew in the excavation of a single housepit at the Keatley Creek site in British Columbia. This project provided excavated materials for my Masters thesis.
- Summer 2003 Forensic archaeologist
RCMP, Major Crimes Division, Surrey, B.C.
I excavated with a team of 80 archaeologists in the Pickton forensic investigation (the largest serial killer investigation in Canadian history), under the direction of the Royal Canadian Mounted Police (RCMP), Major Crimes Division.
- Summer 2000 Student excavator
Department of Archaeology, SFU

Tsleil-Waututh Nation's History, Culture and Aboriginal Interests in Eastern Burrard Inlet
Appendix "B"—Jesse Morin CV

As a student of the SFU Archaeological Field School, I excavated a Late Period shell midden in Deep Cove, North Vancouver, B.C.. This field work also included conducting inland pedestrian surveys and major surface collections of an intertidal lithic scatter.

Summer 1999 Student excavator

Department of Arts, North Island College (Courtenay, B.C.)

As a student of the North Island College Archaeology Field School (working in conjunction with the University of California, San Diego, and the University of Bristol) near Jebel Hamat, in southwest Jordan, I excavated a large Neolithic village site.

Appendix “C”—Certificate of Experts’ Duty

I, Dr. Jesse Morin, of Coquitlam, B.C., have been engaged on behalf of Tsleil-Waututh Nation to provide evidence in relation to Trans Mountain Pipeline ULC’s Trans Mountain Expansion Project application currently before the National Energy Board.

In providing evidence in relation to the above-noted proceeding, I acknowledge that it is my duty to provide evidence as follows:

1. to provide evidence that is fair, objective, and non-partisan;
2. to provide evidence that is related only to matters within my area of expertise; and
3. to provide such additional assistance as the tribunal may reasonably require to determine a matter in issue.

I acknowledge that my duty is to assist the tribunal, not act as an advocate for any particular party. This duty to the tribunal prevails over any obligation I may owe any other party, including the parties on whose behalf I am engaged.

Date: May 20 2015 Signature: 