



REPORT

WesPac Tilbury Marine Jetty Project

Marine Shipping Assessment

Submitted to:

BC Environmental Assessment Office

Submitted by:

WesPac Midstream-Vancouver LLC

Suite 210 - 2355 Main Street, Irvine, CA, USA 92614



4.2 CURRENT USE OF LAND AND RESOURCES FOR TRADITIONAL PURPOSES AND ABORIGINAL AND TREATY RIGHTS ASSESSMENTS

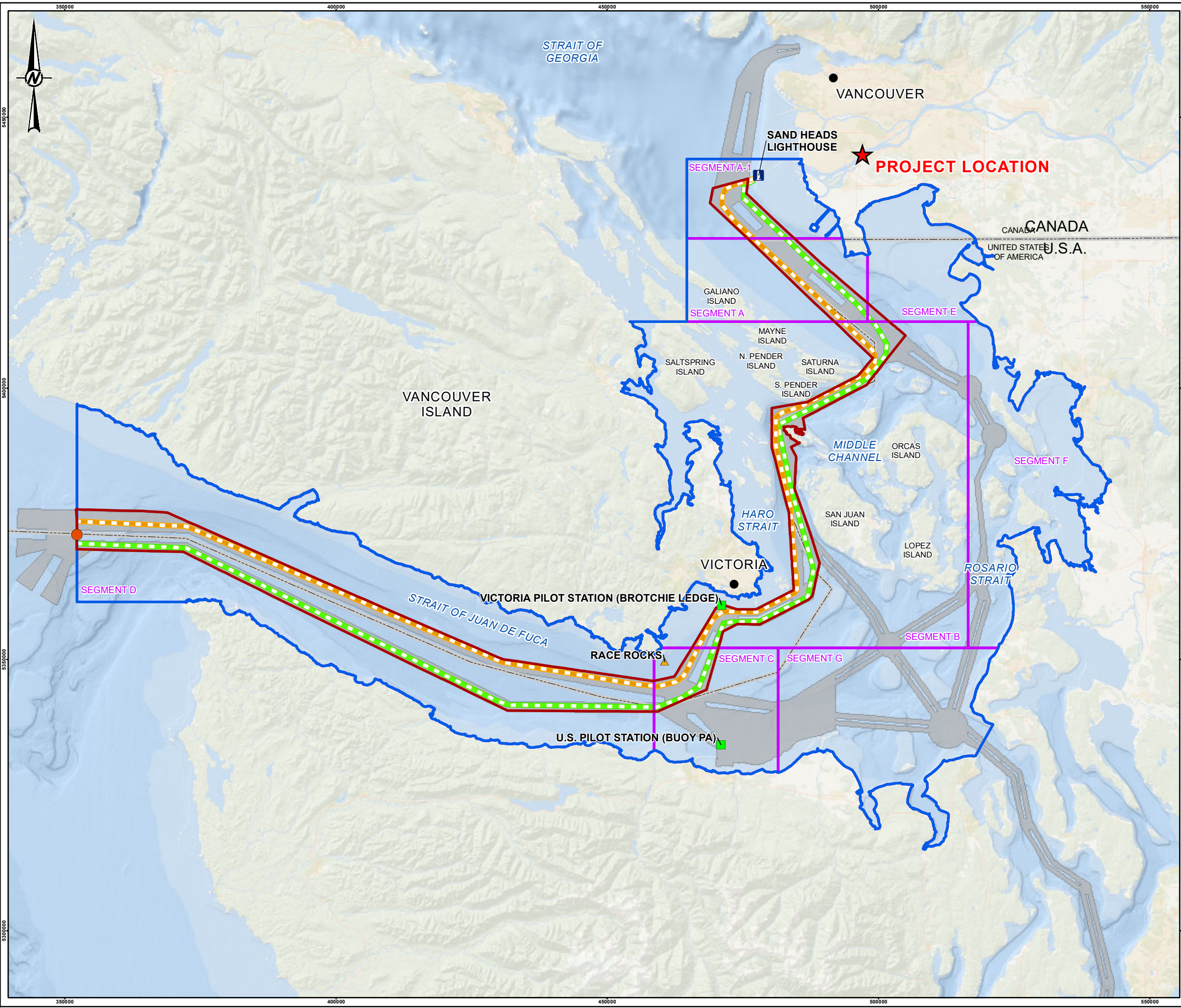
This section presents the existing conditions and results of the potential effects of marine shipping associated with the Project from the Sand Heads lighthouse to the 12-nautical mile limit. The rationale for the selection of Current Use of Lands and Resources as a Valued Component (VC) to be included in the Marine Shipping Assessment (MSA) are described in Section 4.2.1. The MSA for the Current Use of Lands and Resources for Traditional Purposes presents an effects assessment (Section 4.2.5). Assessment findings, including identification of Project interactions and effects, consideration of mitigation, characterization of residual Project and cumulative effects, and determination of significance are presented. Consideration of monitoring and follow-up programs to be conducted with respect to the Current Use of Lands and Resources for Traditional Purposes (Section 8.0) are also described.

The Current Use of Lands and Resources for Traditional Purposes assessment is linked to:

- Fish and Fish Habitat VC - related to potential effects on the quality and availability of fish species for Aboriginal group harvesting;
- Marine Mammals VC - related to potential effects on the quality and availability of certain species for Aboriginal group harvesting and species of cultural concern;
- Marine Birds VC – related to potential effects on the quality and availability of certain species for Aboriginal group harvesting and species of cultural concern;
- Visual Quality VC - related to potential effects to Aboriginal group receptors while engaging in resource use or aesthetic qualities that are culturally relevant such as sense of place;
- Heritage Resources VC - related to potential effects to places that are of cultural and spiritual concern and that may affect cultural continuity;
- Human Health VC- related to potential effects on the health Aboriginal groups who are engaged in harvesting in the MSA; and
- Vessel Wake PC - related to the effects on navigation or effects or changes in access to traditional land and resource use sites.

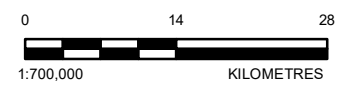
4.2.1 Context

This section presents the effects assessment for the Current Use of Lands and Resources for Traditional Purposes (Current Use) and potential impacts to the exercise of asserted or established Aboriginal and treaty rights that may result from marine shipping between Sand Heads and the 12-nautical mile limit associated with the Project (Figure 4.2-1).



LEGEND

- MARINE SHIPPING ASSESSMENT AREA (MSAA AREA)
- MARINE ASSESSMENT AREA
- SEGMENT BOUNDARY
- INTERNATIONAL SHIPPING LANE
- ★ PROJECT LOCATION
- PILOT STATION
- ▲ RACE ROCKS
- 12 NAUTICAL MILE LIMIT
- SAND HEADS LIGHTHOUSE
- INBOUND SHIPPING ROUTE
- OUTBOUND SHIPPING ROUTE
- CANADA/USA BORDER



REFERENCE(S)

1. INTERNATIONAL SHIPPING LANES AND SHIPPING TRAFFIC SEPARATION ZONES OBTAINED FROM NOAA (<https://data.noaa.gov/dataset/dataset/noaa-electronic-navigational-charts-enc>).
2. CANADA/USA BORDER PUBLISHED BY AND OBTAINED FROM THE MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT.
3. FRASER RIVER SHIPPING CHANNEL AND PMV NAVIGATIONAL JURISDICTION OBTAINED FROM PORT METRO VANCOUVER (PMV).
4. BASE IMAGERY SOURCE: ESRI, GEBCO, NOAA, NATIONAL GEOGRAPHIC, GARMIN AND OTHER CONTRIBUTORS.

DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM - VANCOUVER LLC

PROJECT
**TILBURY MARINE JETTY
 DELTA, B.C.**

TITLE
CURRENT USE ASSESSMENT AREAS

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	DESIGNED	KM
	PREPARED	JP
	REVIEWED	SW
	APPROVED	RS

PROJECT NO. 1314220049	CONTROL 36000	REV. 0	FIGURE 4.2-1
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Current Use is a factor identified under subsection 5(i)(c)(iii) of CEAA 2012. Project components and activities have the potential to adversely affect the current and future use of locations and resources that support traditional diets, economies, social and spiritual life, governance, and cultural transmission (e.g., transfer of traditional language, laws, stories, and beliefs associated with places and sites on the landscape, sites of historical significance, harvesting of resources, and formation and maintenance of cultural identity). Potential Project-related effects to the current use of lands and resources for traditional purposes may also extend to the exercise of Aboriginal Interests that may be associated with that use. Aboriginal Interests, which are defined as asserted or determined Aboriginal Rights (as recognized and affirmed in Section 35 of the *Constitution Act, 1982*), including Aboriginal Title, and Treaty Rights, this section will assess potential impacts to Aboriginal rights separately from Current Use. The effects assessment will consider Traditional Ecological Knowledge (TEK) and Traditional Use (TU) information available through public sources or as otherwise supplied by Aboriginal groups.

CEAA 2012 Sections 5(1)(c)(i), (ii), and (iii) are relevant to Current Use as potential changes to the current use of lands is linked to the health and socio-economic conditions, physical and cultural heritage, and the current use of lands and resources for traditional purposes of Aboriginal peoples. This includes potential project-related changes to the land and its resources, which have the potential to impact the health and economic conditions of Aboriginal people who utilize fish as a source of food and/or income.

Several environmental assessments have been conducted recently for projects in southern BC that include an assessment of project effects to Current Use from marine shipping in the Salish Sea and Juan de Fuca Strait, including the TransMountain Pipeline Expansion Project (TMX) and Robert's Bank Terminal Two Project (RBT2). These projects provide substantial baseline information on the fishing, cultural practices, and sites of importance to Aboriginal groups. Existing and available information will be used to assess impacts from the Project. Where provided, additional information supplied by Aboriginal groups potentially affected will be considered.

Potential impacts of marine shipping associated with the Project on the exercise of potential or established Aboriginal or treaty rights, as well as factors under subsection 5(1)(c), including Current Use are to be assessed for the Aboriginal groups identified in the Section 13 Order dated 6 August 2019, directs WesPac to include an assessment of potential impacts of the Proposed Project pursuant to CEAA 2012 (Section 13. 4.1). The Schedule D Aboriginal Groups included in this Order are:

- Ditidaht First Nation
- Pacheedaht First Nation
- Maa-nulth First Nations
 - Huu-ay-aht First Nations
 - Ka:yu:kth/Che:k:tlles7eth First Nations
 - Toquaht First Nation
 - Uchucklesaht Tribe
 - Ucluelet First Nation

- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip Indian Band
- Malahat First Nation
- Tseycum Indian Band
- Esquimalt Nation
- Songhees Nation
- Scia'new (Beecher Bay) First Nation
- T'sou-ke (Sooke First Nation)

The Section 11 Order (BCEAO, 2015) and Section 13 Orders (BCEAO, 2015) (EAO 2016) list the Aboriginal Groups identified for consultation on the Project as follows:

Schedule B:

- Cowichan Tribes;
- Halalt First Nation;
- Kwantlen First Nation;
- Lake Cowichan First Nation;
- Lyackson First Nation;
- Musqueam Indian Band;
- Penelakut Tribe;
- Semiahmoo First Nation;
- Squamish Nation;
- Stz'uminus First Nation;
- Tsawwassen First Nation; and
- Tseil-Waututh Nation.

Treaty rights are established through formal agreements that have been negotiated between the Crown and Aboriginal groups. The Project lies within areas subject to the Tsawwassen First Nation Final Agreement (Canada et al, 2009, 2010) and the Maa-nulth Final Agreement was negotiated by the Government of Canada, the Government of British Columbia and the Maa-nulth First Nations. The five Maa-nulth First Nations are Ucluelet First

Nation, Huu-ay-aht First Nations, Toquaht Nation, Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations, and Uchucklesaht Tribe (Maa-nulth First Nations 2011a, 2011b).

4.2.1.1 Valued Components

Valued Components and Pathway Components were identified based on:

- PC/VCs presented in the Tilbury Marine Jetty EAC Application;
- Working Group comments provided during the EAC Application review;
- Working Group comments provided on the MSA Scope; and
- Predicted interactions between shipping activities and the marine and human environments.

The Current Use VC was considered in the RBT2 Marine Shipping Assessment as there is potential for interaction with the current use of lands and resources for traditional purposes (marine use) where Project vessel movements interfere with traditional harvesting activities and may affect the exercise of Aboriginal and Treaty rights.

4.2.1.2 Subcomponents

The Subcomponent(s) chosen for Current Use VC and the rationale(s) for their/its selection are presented in Table 4.2-1. The subcomponents were selected because of their importance to Aboriginal groups and the potential effects on the exercise of potential or established Aboriginal or treaty rights, as well as factors under subsection 5(1) (c).

Project components and activities have the potential to adversely affect current Aboriginal use of locations and resources that support traditional diets, economies, social and spiritual life, governance, and cultural transmission (e.g., transfer of traditional language, laws, stories, and beliefs associated with places and sites on the landscape, harvesting of resources, and formation and maintenance of cultural identity).

Table 4.2-1: Subcomponents for Current Use of Lands and Resources for Traditional Purposes

Subcomponent	Rationale for Selection
Food, Social and Ceremonial (FSC) marine and land resource use	Aboriginal groups ability to harvest resources (e.g., salmon, eulachon, and other marine species) are integral to Aboriginal groups in the maintenance of their culture and are related to the exercise of asserted or established Aboriginal and treaty rights.
Intangible Cultural Heritage	Changes to other cultural practices tied to current use locations and resources (e.g., gathering places) and the expression of cultural values or ways of knowing (e.g., traditional knowledge, language, laws, stories, spiritual beliefs) that are important to the maintenance of Aboriginal culture.

4.2.1.3 Indicators

Indicators and measurable parameters provide a means of determining a Project-related change to a VC. The Indicators and measurable parameters and the rationale for their selection are presented in Table 4.2-2.

Table 4.2-2: Indicators for Current Use of Lands and Resources for Traditional Purposes

Indicator	VC/Subcomponent	Measurable Parameters	Rationale for Selection
Access to preferred Current Use locations	Food, Social and Ceremonial (FSC) marine and land resource use	Changes in the ability to access preferred locations (e.g., exclusion of an area, reduced frequency)	Project-related marine shipping has the potential to disrupt or exclude access to locations used for harvesting
Availability of preferred Current Use resources	FSC marine and land resource use	Considers changes in the presence, absence, or distribution of resources in the LSA linked to biophysical VCs (e.g., marine fish; marine birds)	Project-related marine shipping has the potential to affect species that are used by Aboriginal groups.
Quality of preferred Current Use resources	FSC marine and land resource use	Considers changes in the real or perceived quality of Current Use resources; linked to VC that consider effects that may affect quality (e.g., water quality; air quality)	Project-related shipping and shipping related activities have the potential to affect the real or perceived quality of marine resources used by Aboriginal people. Changes in quality can result in reduced use.
Quality of Current Use experience	Intangible Cultural Heritage	Changes to other cultural practices tied to current use locations and resources, including intangible heritage resources (e.g., gathering places) and the expression of cultural values or ways of knowing (e.g., TEK, language, laws, stories, spiritual beliefs).	Shipping and shipping related activities (e.g., noise, air emissions) could result in a change in Current Use that affects culture and cultural use.

4.2.2 Assessment Boundaries

This section describes the methods used in identifying spatial, temporal, administrative and technical boundaries for the assessment of the Current Use VC.

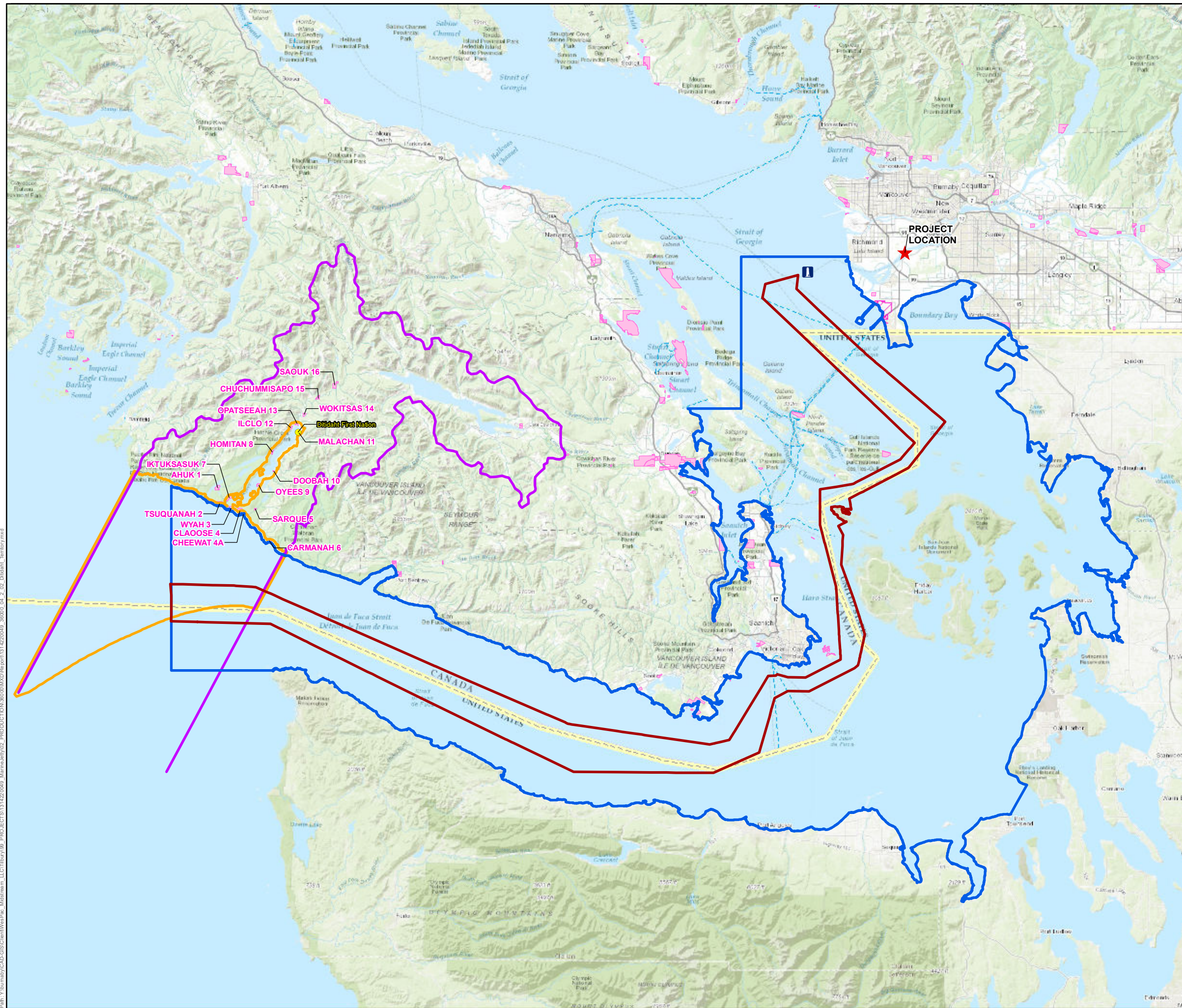
4.2.2.1 Spatial Boundaries

The spatial boundaries of the Current Use MSA considers Project-related shipping that occurs between the Sand Heads Lighthouse and the 12-nautical mile of Canada's territorial limit within the inbound and outbound shipping channels (i.e., the marine shipping spatial area). The spatial boundary of the MSA is not an extension of the spatial boundary described in the EAC Application but is considered a separate and additional study area.

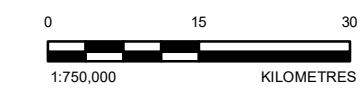
The Local Study Area (LSA) is the area of overlap between each Aboriginal group's asserted or established traditional territory, or otherwise defined areas of use, with the MSA. Within this area of overlap, the LSAs for PCs and VCs linked to Current Use will be used to inform the assessment of potential effects to Current Use when relevant.

The Regional Study Area (RSA) is each Aboriginal group's asserted or established traditional territory or otherwise defined areas of use, including areas outside the MSA.

The LSA and RSA, as it pertains to each Aboriginal group's traditional territory (where publicly available or provided by Aboriginal groups), or otherwise defined area of use are presented in Figure 4.2-2 to Figure 4.2-13.



- LEGEND**
- ▭ MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
 - ▭ MARINE ASSESSMENT AREA
 - ▭ DITIDAHT FIRST NATION TMUOS TRADITIONAL TERRITORY
 - ▭ DITIDAHT FIRST NATION TMUOS REGIONAL STUDY AREA (RSA)
 - ▭ INDIAN RESERVE
 - ▨ TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - Ⓜ SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - FERRY ROUTE
 - CANADA - U.S.A BORDER



REFERENCE(S)
 1. DITIDAHT FIRST NATION TRADITIONAL TERRITORY AND REGIONAL STUDY AREA DIGITIZED FROM DITIDAHT FIRST NATION TRADITIONAL MARINE USE AND OCCUPANCY STUDY (TMUOS), NOVEMBER 2014.
 2. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
 3. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.
 PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

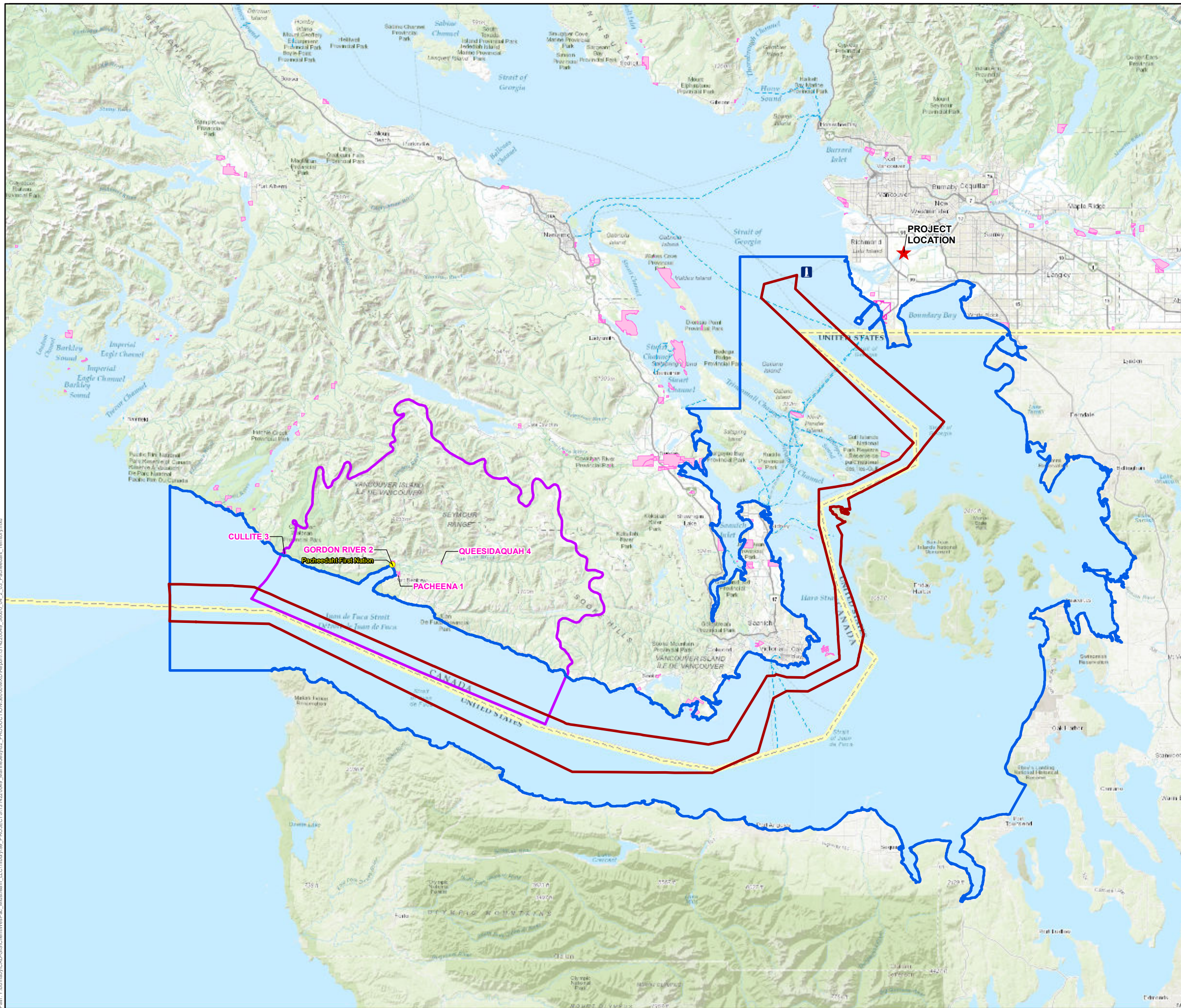
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DITIDAHT FIRST NATION TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

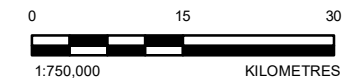
PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-2**

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- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSAA AREA)
 - MARINE ASSESSMENT AREA
 - PACHEEDAHT FIRST NATION TRADITIONAL TERRITORY
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - ⓘ SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - FERRY ROUTE
 - CANADA - U.S.A BORDER



REFERENCE(S)
 1. PACHEEDAHT TRADITIONAL TERRITORY, INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
 2. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.
 PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

TITLE
PACHEEDAHT TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

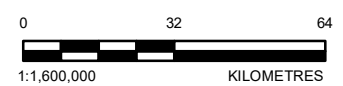
PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-3**

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- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
 - MARINE ASSESSMENT AREA
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - 🗼 SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - FERRY ROUTE
 - CANADA - U.S.A BORDER
- MAA-NULTH FIRST NATION TREATY AREAS**
- HUU-AY-AHT FIRST NATIONS
 - KA:'YU:'K'TH/'CHE:K'TLES7ET'H' FIRST NATIONS
 - TOQUAHT NATION
 - UCHUCKLESAHT TRIBE
 - UCLUELET FIRST NATION
 - DOMESTIC FISHING AREA
 - MIGRATORY BIRDS HARVEST AREA
 - FORMER INDIAN RESERVE
 - FORMER PROVINCIAL CROWN LAND
 - LANDS ACQUIRED FROM A THIRD PARTY



REFERENCE(S)

- MAA-NULTH FIRST NATION TREATY AREAS, INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
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DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
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PROJECT
TILBURY MARINE JETTY

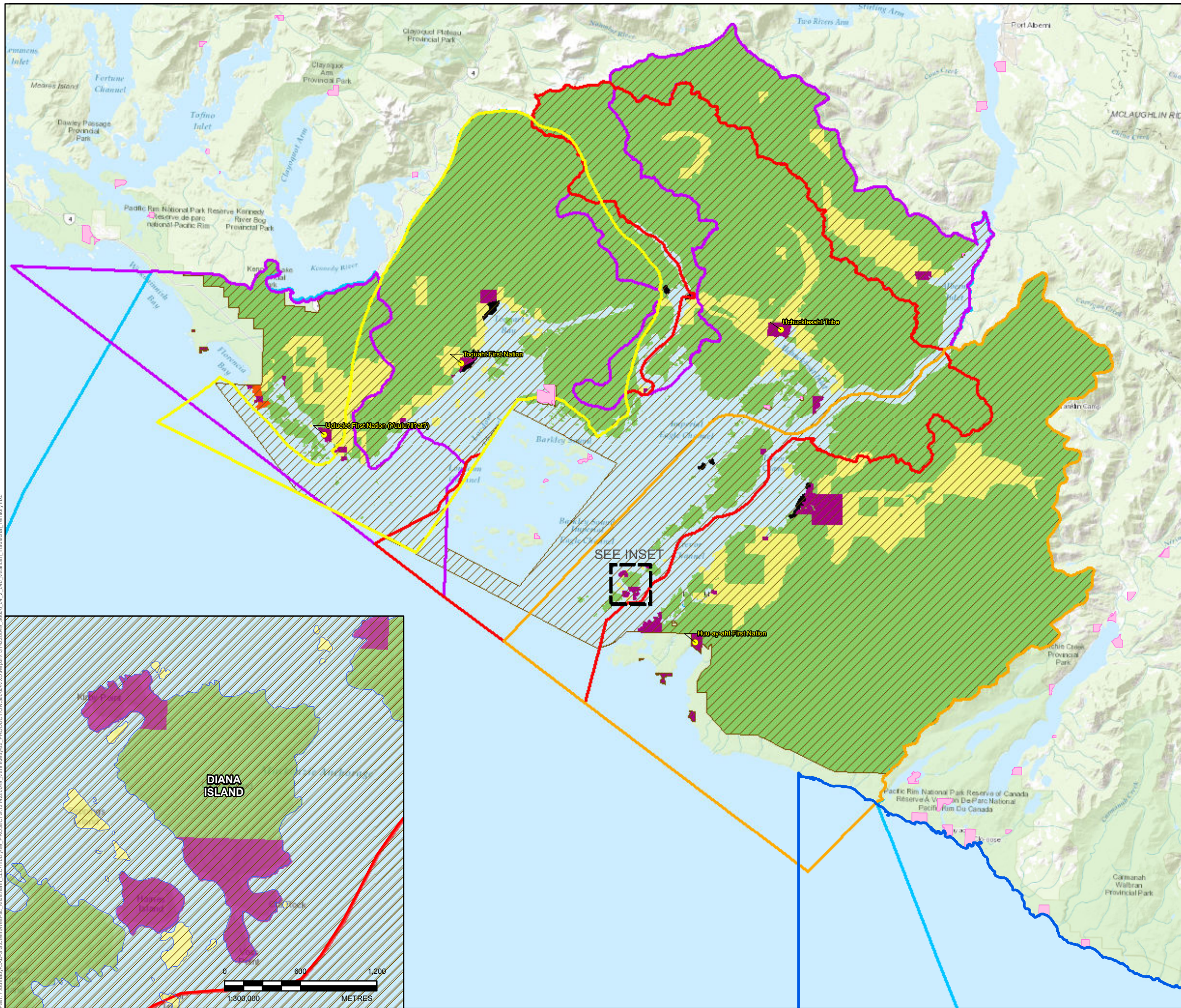
TITLE
MAA-NULTH FIRST NATION TREATY AREAS

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 FIGURE 4.2-4A

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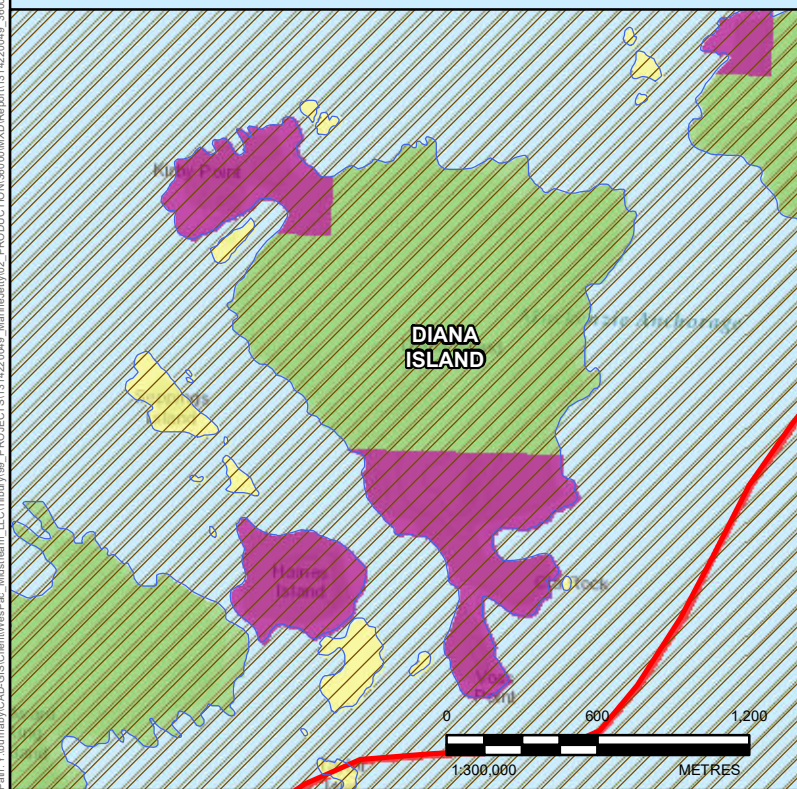
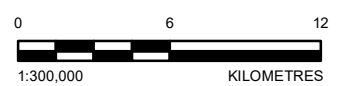


LEGEND

- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
- MARINE ASSESSMENT AREA
- INDIAN RESERVE
- TSAWWASSEN LANDS
- ★ PROJECT LOCATION
- SAND HEADS LIGHTHOUSE
- ABORIGINAL COMMUNITY
- FERRY ROUTE
- CANADA - U.S.A BORDER

MAA-NULTH FIRST NATION TREATY AREAS

- HUU-AY-AHT FIRST NATIONS
- KA:'YU:'K'TH'/CHE:'K'TLES7ETH' FIRST NATIONS
- TOQUAHT NATION
- UCHUCKLESAHT TRIBE
- UCLUELET FIRST NATION
- DOMESTIC FISHING AREA
- MIGRATORY BIRDS HARVEST AREA
- FORMER INDIAN RESERVE
- FORMER PROVINCIAL CROWN LAND
- LANDS ACQUIRED FROM A THIRD PARTY



REFERENCE(S)

1. MAA-NULTH FIRST NATION TREATY AREAS, INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
2. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.

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CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

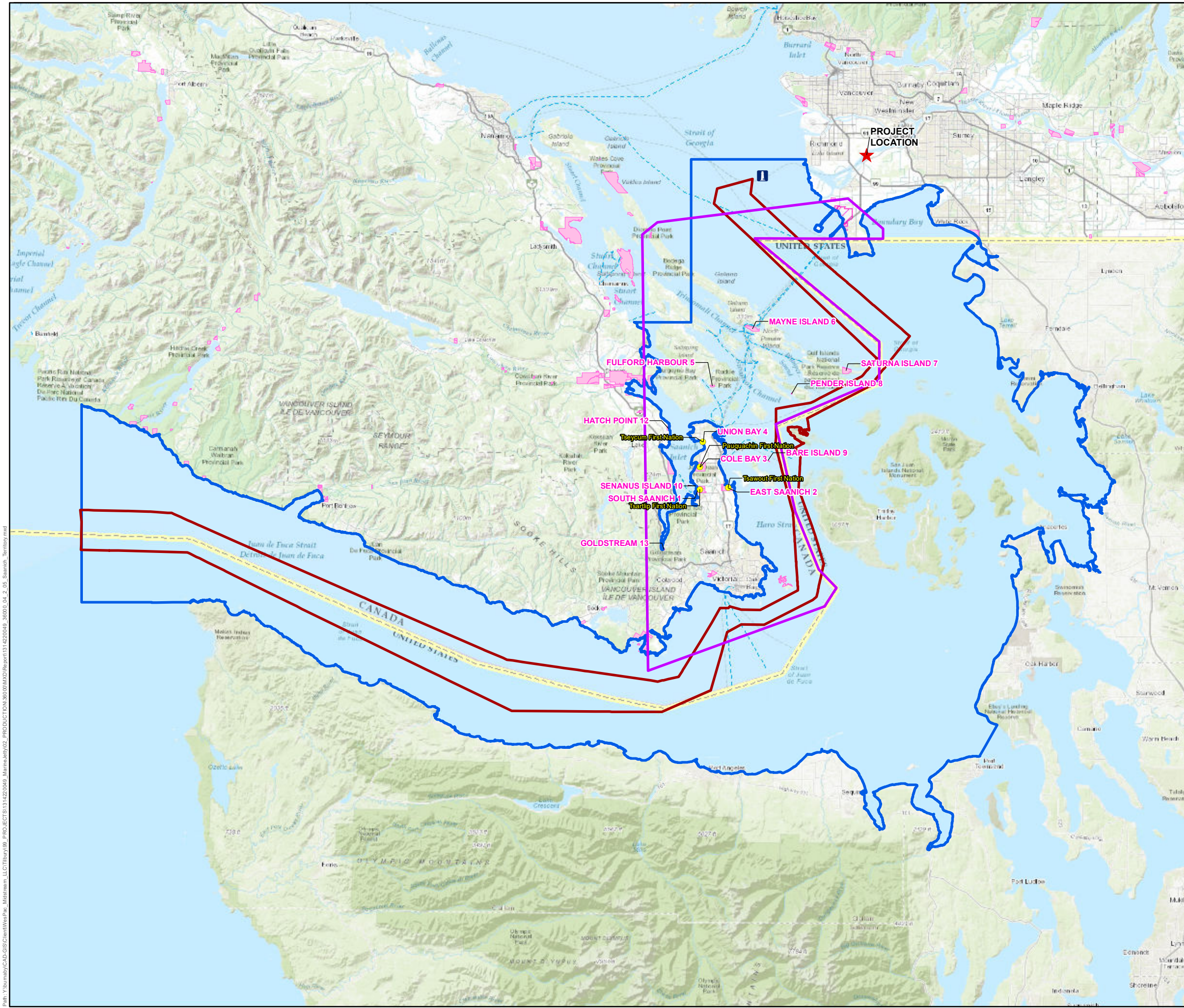
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MAA-NULTH FIRST NATION TREATY AREAS

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PREPARED	JP	
DESIGN	SW	
REVIEW	SW	
APPROVED	RS	

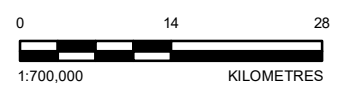
PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 FIGURE 4.2-4B

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- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
 - MARINE ASSESSMENT AREA
 - W̱SÁNEČ FIRST NATIONS TRADITIONAL TERRITORY
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - ⓘ SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - FERRY ROUTE
 - CANADA - U.S.A BORDER



NOTE(S)
 1. TRADITIONAL TERRITORIES OF THE SAANICH FIRST NATION INCLUDES THE FOLLOWING FIRST NATIONS: PAUQUACHIN FIRST NATION, TSARTLIP FIRST NATION, TSAWOUT FIRST NATION, TSEYCU M FIRST NATION.

REFERENCE(S)
 1. SAANICH FIRST NATIONS TRADITIONAL TERRITORY OBTAINED FROM GOVERNMENT OF CANADA: ABORIGINAL LAND AND TREATY RIGHTS INFORMATION SYSTEM. 2019. SAANICH NATION WRIT OF SUMMONS. AVAILABLE AT: http://sdat-atris.aadnc-aandc.gc.ca/ATRS_ONLINE/Content/Search.aspx. ACCESSED NOVEMBER 20, 2019.
 2. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
 3. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.
 PROJECTION: UTM ZONE 10; DATUM: NAD 83

CLIENT
 WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
 TILBURY MARINE JETTY

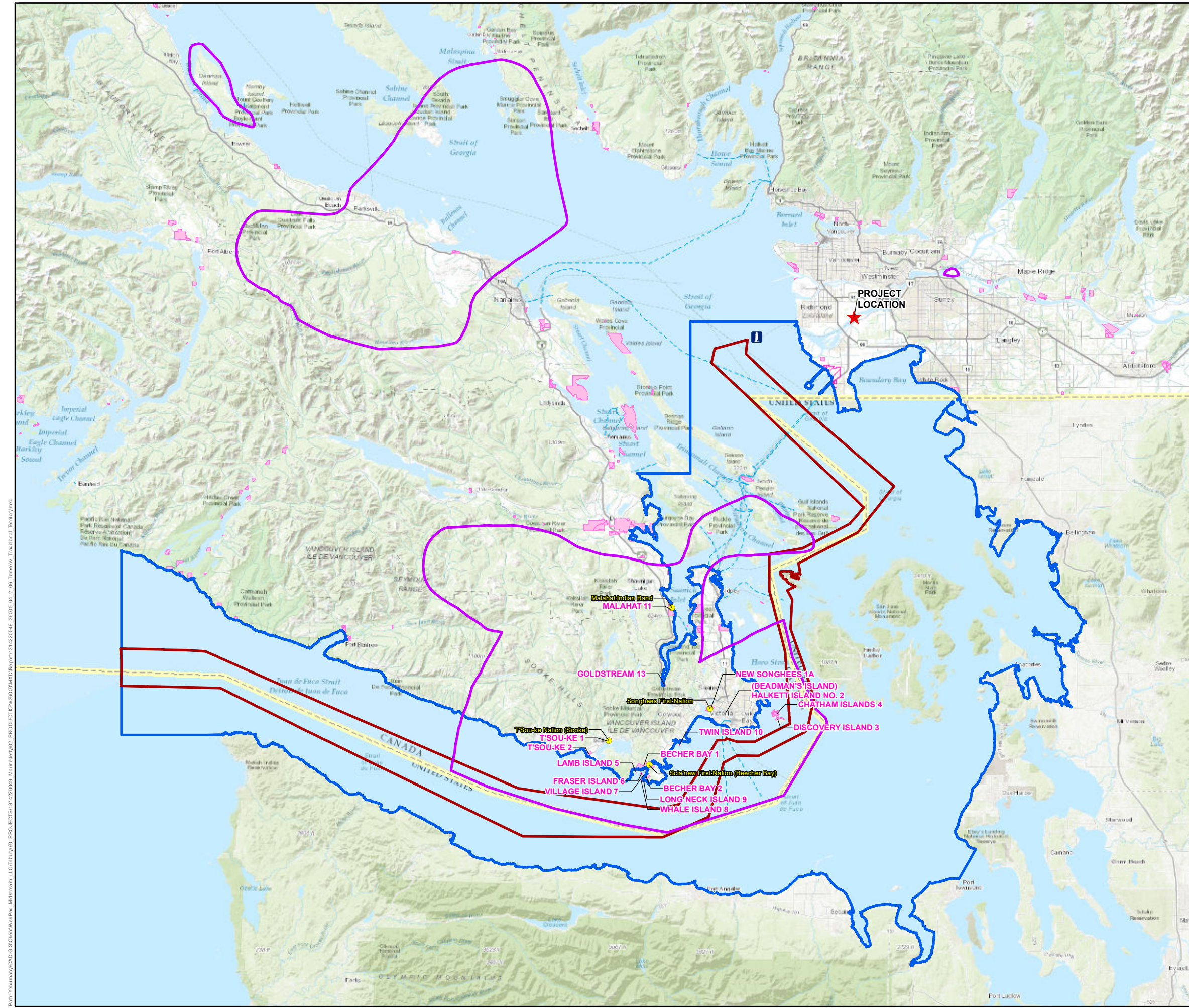
TITLE
W̱SÁNEČ FIRST NATIONS TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
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	APPROVED	RS

PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 FIGURE 4.2-5

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LEGEND

- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
- MARINE ASSESSMENT AREA
- TE'MEXW TREATY GROUP TRADITIONAL TERRITORY
- INDIAN RESERVE
- TSAWWASSEN LANDS
- ★ PROJECT LOCATION
- ⓘ SAND HEADS LIGHTHOUSE
- ABORIGINAL COMMUNITY
- FERRY ROUTE
- CANADA - U.S.A BORDER



NOTE(S)

- TE'MEXW TREATY GROUP TRADITIONAL TERRITORY INCLUDES SCIA'NEW (BEECHER BAY) FIRST NATIONS, MALAHAT FIRST NATIONS, SNAW-NAW-AS (NANOOSE) FIRST NATIONS, SONGHEES FIRST NATIONS AND T'SOU-KE (SOOKE) FIRST NATIONS.
- SNAW-NAW-AS (NANOOSE) FIRST NATIONS IS NOT BEING CONSULTED ON THE MSA.

REFERENCE(S)

- TE'MEXW TREATY ASSOCIATION. STATEMENT OF INTENT. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
- IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.

PROJECTION: UTM ZONE 10; DATUM: NAD 83
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CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

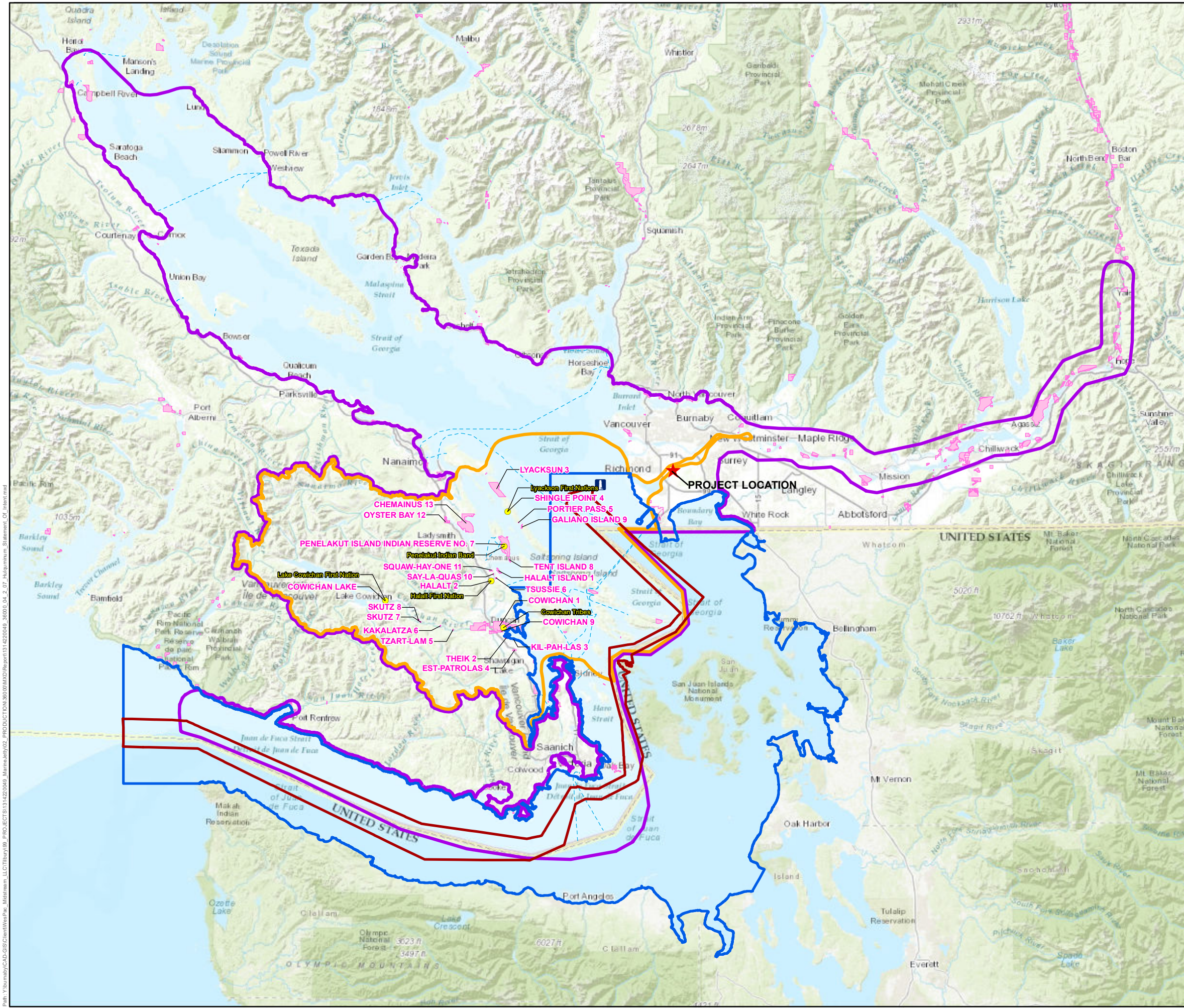
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TE'MEXW TREATY ASSOCIATION STATEMENT OF INTENT/TRADITIONAL TERRITORY BOUNDARY

CONSULTANT	YYYY-MM-DD	2019-11-28
	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-6**

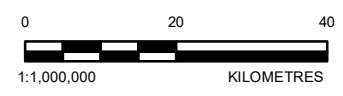
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIS 26mm



LEGEND

- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
- MARINE ASSESSMENT AREA
- HUL'QUM'NUM TREATY GROUP TRADITIONAL TERRITORY (CORE)
- HUL'QUM'NUM TREATY GROUP TRADITIONAL TERRITORY (MARINE)
- INDIAN RESERVE
- TSAWWASSEN LANDS
- ★ PROJECT LOCATION
- SAND HEADS LIGHTHOUSE
- ABORIGINAL COMMUNITY
- FERRY ROUTE
- CANADA - U.S.A BORDER



NOTE(S)
 1. THE HUL'QUM'NUM TREATY GROUP: COWICHAN TRIBES, HALALT FIRST NATION, LAKE COWICHAN FIRST NATION, LYACKSON FIRST NATION, PENELAKUT TRIBE AND ST'ZIMUNIS FIRST NATION.

REFERENCE(S)
 1. HUL'QUM'NUM TREATY GROUP TRADITIONAL TERRITORIES AND INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
 2. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.
 PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
 WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
 TILBURY MARINE JETTY

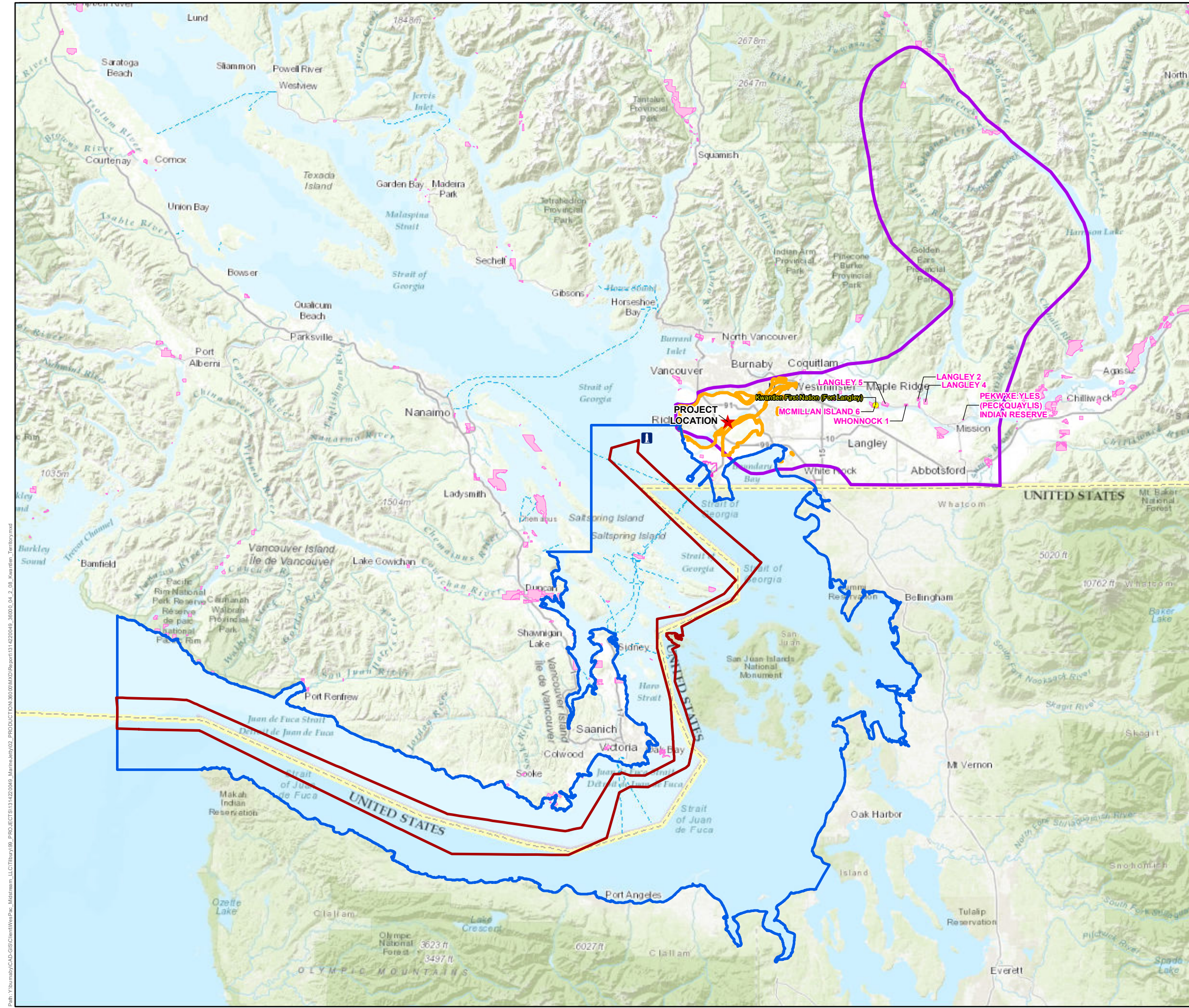
TITLE
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CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

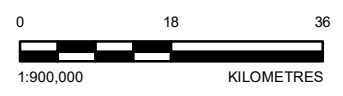
PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-7**

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIS 26mm



- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
 - MARINE ASSESSMENT AREA
 - KWANTLEN FIRST NATION TRADITIONAL TERRITORY
 - REGIONAL AND LOCAL ASSESSMENT AREA
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - FERRY ROUTE
 - CANADA - U.S.A BORDER



REFERENCE(S)

1. KWANTLEN FIRST NATION TRADITIONAL TERRITORY DIGITIZED FROM KWANTLEN FIRST NATION INFORMATION REQUEST NO. 1 TO TRANS MOUNTAIN PIPELINE ULC. 2013-03-02.
2. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
3. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.

PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

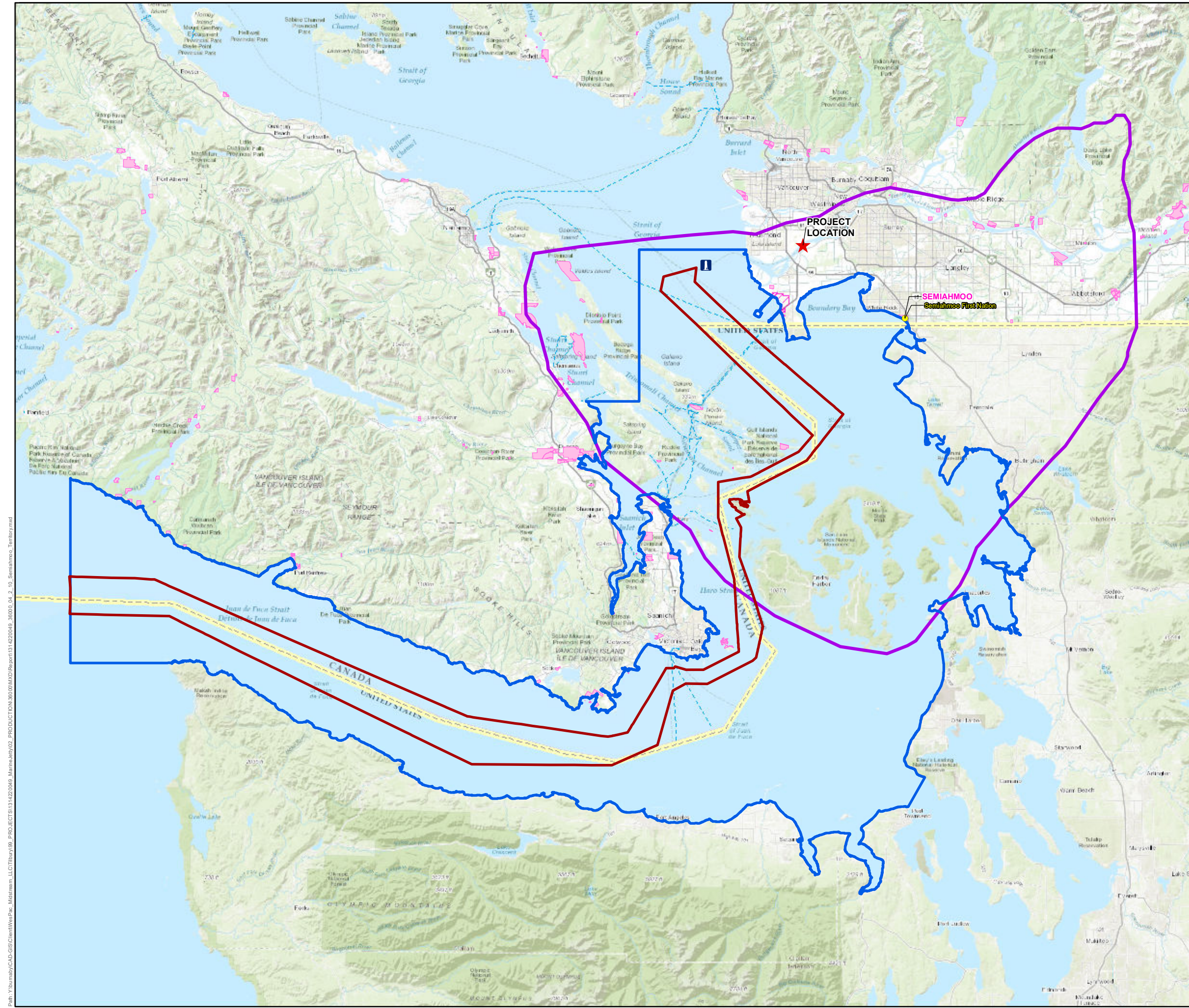
TITLE
KWANTLEN FIRST NATION TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
PREPARED	JP	
DESIGN	SW	
REVIEW	SW	
APPROVED	RS	

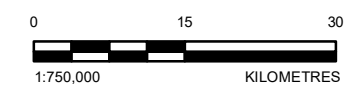
PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-8**

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB 26mm



- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
 - MARINE ASSESSMENT AREA
 - SEMIAHMOO FIRST NATION TRADITIONAL TERRITORY
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - - - FERRY ROUTE
 - CANADA - U.S.A BORDER



REFERENCE(S)

1. SEMIAHMOO FIRST NATION TRADITIONAL TERRITORY DIGITIZED FROM PORT METRO VANCOUVER.
2. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
3. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.

PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

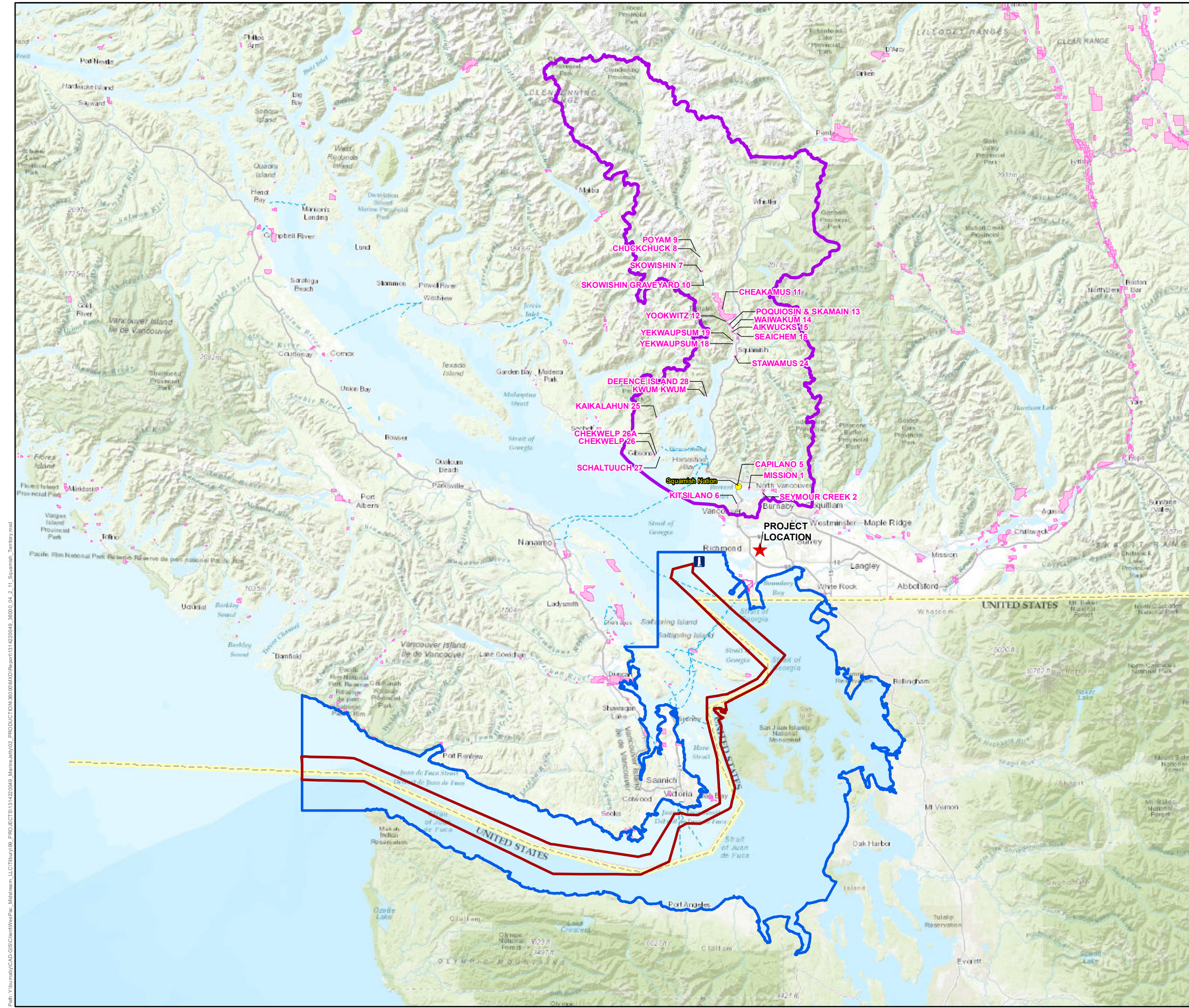
TITLE
SEMIAHMOO FIRST NATION TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

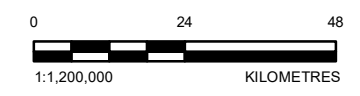
PROJECT NO. 13-1422-0049 CONTROL 32000 Rev. 0 **FIGURE 4.2-10**

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIS 26mm



- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSA AREA)
 - MARINE ASSESSMENT AREA
 - SQUAMISH NATION TRADITIONAL TERRITORY
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - FERRY ROUTE
 - CANADA - U.S.A BORDER



REFERENCE(S)

1. SQUAMISH NATION TRADITIONAL TERRITORY AND INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
2. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
3. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.

PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

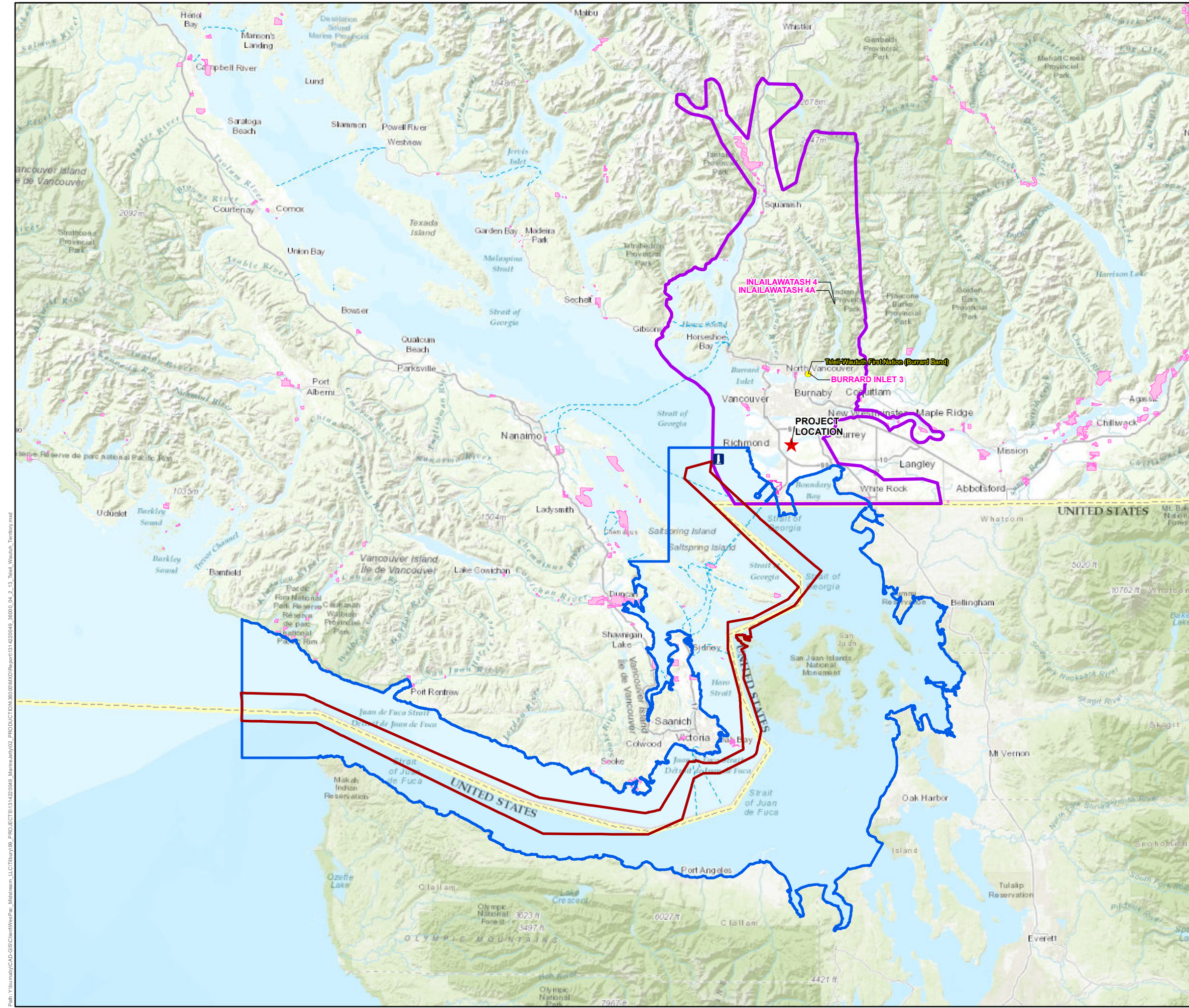
TITLE
SQUAMISH NATION TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

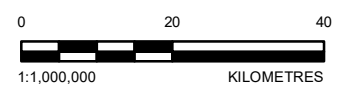
PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-11**

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB 24mm



- LEGEND**
- MARINE SHIPPING ASSESSMENT AREA (MSAA AREA)
 - MARINE ASSESSMENT AREA
 - TSLEIL-WAUTUTH NATION CONSULTATION AREA
 - INDIAN RESERVE
 - TSAWWASSEN LANDS
 - ★ PROJECT LOCATION
 - ⓘ SAND HEADS LIGHTHOUSE
 - ABORIGINAL COMMUNITY
 - - - FERRY ROUTE
 - CANADA - U.S.A BORDER



REFERENCE(S)

1. TSLEIL-WAUTUTH NATION CONSULTATION AREA DIGITIZED FROM TSLEIL-WAUTUTH NATION.
2. INDIAN RESERVES OBTAINED FROM B.C. MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS.
3. IMAGERY OBTAINED FROM TOPO BASEMAP © ESRI AND ITS LICENSORS. ALL RIGHTS RESERVED.

PROJECTION: UTM ZONE 10; DATUM: NAD 83
 DATUM: CSRS NAD 83 PROJECTION: UTM ZONE 10

CLIENT
WESPAC MIDSTREAM-VANCOUVER LLC.

PROJECT
TILBURY MARINE JETTY

TITLE
TSLEIL-WAUTUTH NATION TRADITIONAL TERRITORY

CONSULTANT	YYYY-MM-DD	2019-11-28
GOLDER	PREPARED	JP
	DESIGN	SW
	REVIEW	SW
	APPROVED	RS

PROJECT NO. 13-1422-0049 CONTROL 36000 Rev. 0 **FIGURE 4.2-13**

Path: Y:\bunbury\CAD-GIS\Clients\Wespac_Midstream_LLC\Tilbury\180_PROJECTS\131422\0049_Marine\1802_PRODUCT\103360\000\MSAA\Report\1314220049_36000_04_2_13_Tilbury_Waututh_Territory.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB 26mm

4.2.2.2 Temporal Boundaries

The temporal bound of the MSA consists of the Operational period identified in the Tilbury Marine Jetty EAC Application extending to 2053. Existing conditions of Current Use generally reflect a time frame of 2014 to 2019, based on available information sources reviewed for the assessment.

4.2.2.3 Administrative Boundaries

The assessment of Current Use is constrained by the administrative limitations identified for the VC assessments linked to the assessment of Current Use (see relevant VCs identified in Section 4.2 above).

4.2.2.4 Technical Boundaries

The assessment of the Current Use VC is constrained by the technical limitations identified for the linked VC assessments as well as the data collection and reporting methodologies employed in existing information sources and Project-specific studies.

The Current Use assessment relies on the use of existing information and publicly available information from previous studies such as TMX and RBT2 (where permission to use such information has been obtained) or studies provided for the Tilbury EAC. Aboriginal groups have stated that the information provided for TMX and RBT2 is not comprehensive and that it is not appropriate to assume that information developed in the context of other Projects effects is applicable to the MSA for subsequent studies such as the Tilbury MSA.

4.2.3 Existing Conditions

4.2.3.1 Information Sources

For the Current Use assessment, existing information and studies were reviewed. Previous studies and information used to support the characterisation of existing and future conditions of Current Use included the following sources:

A review of existing information was conducted to support the characterization of existing conditions for Current Use, these included the following sources:

- Reports prepared for the Trans Mountain Pipeline OLC for the Trans Mountain Expansion Project relating to marine resource use in or near international shipping lanes transiting the MSA, as follows:
 - Traditional Marine Resource Use – Marine Transportation Technical Report for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project (December 2013);
 - Supplemental Traditional Marine Resource Use – Marine Transportation Technical Report for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project (December 2014)
 - Applications to Participate, Oral Aboriginal Traditional Evidence, and Notices of Motion filed by Aboriginal groups pursuant to national Energy Board Hearing Order OH-001-2014 for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project (2014); and

- Written Evidence filed by Aboriginal groups pursuant to the National Energy Board Hearing Order OH-00102014 for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project (2015).
- Roberts Bank Terminal 2 Environmental Impact Statement
- Roberts Bank Terminal 2 Marine Supplemental Report and Appendix 9.0, (2018);
- Public Hearing Transcripts for Roberts Bank Terminal 2 Project (2019);
- Submissions made for the Public Hearing Closing Remarks from Aboriginal groups for Roberts Bank Terminal 2 Project (2019);
- Roberts Bank Terminal 2 Project, Additional Information to the Marine Shipping Addendum – Musqueam First Nation and Tsleil-Waututh Nation (2016)
- Studies from Aboriginal groups submitted for the Tilbury Marine Jetty Environmental Assessment Certificate Application
- Tsawwassen First Nation Final Agreement (2009) and Maa-nulth First Nations Final Agreement (2011)
- Records of consultation with Aboriginal groups

4.2.3.2 Description of Existing Conditions

This section describes the existing conditions of the Current Use VC, as well as the surrounding environment and factors influencing Current Use. A community profile is provided for each Aboriginal group identified in Section 4.2.1 (Context). Each Aboriginal group's asserted or established rights, where they have been characterised by Aboriginal groups are described. The existing conditions are provided based on the sources identified in Section 4.2.3.1.

The existing conditions provides information on marine resource use and other cultural sites and practices that have been identified in previous projects. Additional information from consultation undertaken by the BC EAO and Aboriginal groups that have been identified in Schedule D of the Section 13 order dated August 6, 2019 for marine shipping but that were not identified in the Section 13 dated February 14, 2018 for the EAC Application are discussed in Sections 4.2.3.2.1 through 4.2.3.2.12. Existing information for Aboriginal groups that were identified for consultation for the Project and marine shipping associated with the Project is presented in Sections 4.2.3.2.13 through 4.2.3.2.22.

Information presented in these sections was primarily obtained from publicly available documents from projects with marine shipping components also within the identified Project MSA. Consultation with Aboriginal groups is ongoing and additional information will be considered as it becomes available.

4.2.3.2.1 Ditidaht First Nation

The Ditidaht First Nation has 17 reserves, located on southwest Vancouver Island, many of which are within the Pacific National Park Reserve. As of September 2019, the population of Ditidaht is 780 members, with 181 living on reserves. Malachan 11 is located on the east shore of Nitinat Lake and is the reserve where most of the on-

reserve community resides. The other 16 reserves are: Doobah 10, Homitan 8, Iktusasuk 7, Ilclo 12, Opatseeah, 13, Oyees 9, and Wyah 3 (Whyac) on Nitinat Lake; Tsuquanah 2, one mile west of the entrance to Nitinat Lake; Saouk 16 and Wokitsas 14 on the north bank of the Nitinat River; Chuchummisapo 15 on the south bank of the Nitinat River; Cheewat 4A (a burial ground) at the mouth of the Cheewhat River; Claoose 4 (Clo-oose) at the westerly entrance to the Cheewat River; Sarque 5 on the north bank of the Cheewhat River; Ahuk 1 on the south shore of Tsusalt Lake; and Carmanah 6, approximately 1 km north of the mouth of Carmanah Creek (AANDC 2019, CEAA 2019a).

The Ditidaht are members of the Nuu-chah-nulth cultural group whose territories extend along the majority of the west coast of Vancouver Island and across the strait of Juan de Fuca to the western tip of the Olympic Peninsula (CEAA 2019a). Their language is one of three related west coast languages from the southern branch of the Wakashan language family. Specifically, they speak *Diitid?aatx* language.

Indicative of their strong maritime orientation, Ditidaht First Nation villages stretched along the marine coastline stretching from Bonilla Point to Pacheena Point (CEAA 2019a). Their territory is inclusive of the lands and waters of the Carmanah, Cheewaht, Klanawa, and Darling River systems, Nitinaht Lake and Nitinat, Caycuse, and Hobarton River systems. The territory extends along Cowichan Lake, its tributary rivers, extending down the Cowichan River to Skutz Falls. Their territory includes Swiftsure Bank, a significant offshore fishing and harvesting area that is intersected by the international shipping lanes (Ditidaht 2019 a,b). The intersection of Ditidaht First Nation's traditional territory and the Marine Shipping Area is presented in Figure 4.2-2.

The summary of Ditidaht First Nation Current Use relies on the material submitted for the Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2 projects, including submissions made to the review panel for the Robert's Bank Terminal 2 public hearings. Materials include the *Traditional Marine Use and Occupancy Study (TMOUS) Final Report* dated 2014 and prepared for the Trans Mountain Expansion Project and the update provided in 2015 (CEAA 2019 a-e).

The Ditidaht First Nation has identified a Regional Study Area and a more specific Vessel Traffic Route Area in their TMOUS to identify resources and resource activities that may be affected and includes travel routes outside of Ditidaht First Nation territory. The Ditidaht First Nation has stated that their use and occupancy of these areas, and throughout their traditional territory, is the area in which they exercise rights, title and culture (CEAA 2019a and, CEAA 2019c) The Current Use LSA/RSA encompasses this area and overlaps with the traditional harvesting and cultural practices of the Ditidaht First Nation.

The Ditidaht First Nation emphasize that the TMOUS establishes their consistent and extensive use of their territory and that they maintain an active and spiritual connection to their lands and marine territory (CEAA 2019b). The TMOUS also documents the effects that colonization has had on the way in which they exercise our rights and practice their culture. The Ditidaht First Nation note there are constraints on the assessment of effects and that a Current Use assessment does not consider self-governance or stewardship, nor does it consider that the current use of resources has been limited by the effects of colonialism and government restricting decisions (CEAA 2019b).

4.2.3.2.1.1 Marine Resource Use

Ditidaht First Nation has stated that cumulative effects of developments within their traditional territory have altered the way they presently occupy and use their marine territory and its resources to support traditional diets and

economies, which have always depended on the ocean (CEAA 2019b, CEAAc). The Ditidaht First Nation notes that Ditidaht territory remains a cultural landscape populated by place names and that these sites, regardless of whether they are currently being used retain deep significance to the Ditidaht (CEAA 2019c).

Within the RSA, Ditidaht First Nation has identified more than 738 traditional marine use and occupancy sites (Ditidaht First Nation 2014). The TMOUS tables include information relating to a range of plant, tree, bird, mammal, seafood, and fish species found near or in Ditidaht marine territory. Many of these species remain critical food and trade resources (CEAA 2019 a and c). Species were and continue to be commonly harvested for a wide range of applications (e.g., food, medicine, shelter, clothing, ceremonial, and others). Species were harvested based on Ditidaht First Nations in-depth knowledge of the environment and where species were known to be abundant, easy to access, or have special qualities (CEAA 2019c).

Marine Fish and Fish Habitat

Marine Vegetation

The Ditidaht First Nation harvest seaweeds, intertidal plants, and subtidal plants within the RSA. Species identified include bull kelp, eelgrass, bladderwrack, short kelp, and sea palm. Bull kelp had a range of uses that included storing oils, a vessel for cooking and as floats. Bull kelp beds remain as important navigational aids and as habitat for fish species. Eelgrass was a food source and provided habitat for crabs and other species. Red laver was gathered in the 20th century for sale to residents of Victoria (CEAA 2019d).

Marine Invertebrates

Ditidaht First Nation reports harvesting a large number of marine invertebrates in the RSA for food, trade and everyday uses. Food species include butter, Pacific littleneck, Pacific razor, horse and mya clams, California and blue mussels, gooseneck, acorn, and giant barnacles, black katy chitons, abalone, and giant red, purple, sea urchins. Ditidaht First Nation reports having clam gardens, a form of mariculture, where First Nations improve conditions on a beach to encourage clam production. Dungeness and red rock crab were consumed but prawns were not a traditional part of the diet. Ditidaht First Nation members now harvest crab near Limestone Bluffs. Sea cucumber and Pacific Octopus were harvested for food in the past but only octopus are now harvested for bait. Pile worms similarly are harvested by children for fishing bait for shiners, perch and bullheads. Whelks shells were harvested and used as decoration on regalia. Mussel shells were traditional used as blades in whaling harpoons and horse clams could serve as vessels (CEAA, 2019d).

Ditidaht First Nation state that shellfish are an important part of the traditional diet and that they are perceived as healthier (CEAA 2019a,d). They are harvested less often due since the community's move inland to Malachan. Shellfish were harvested less often due to the distance from the traditional harvesting sites on the outer coast (CEAA 2019d). Shellfish aquaculture is an area of economic development for the community (CEAA 2019c, e).

Marine Fish

Ditidaht First Nation identified numerous fish species for harvest within the RSA including sockeye, coho, pink, chum and Chinook salmon, steelhead, coastal cutthroat trout, herring and herring spawn, sole, greenling

(tommycod), lingcod, yelloweye rockfish, black bass, sturgeon, dogfish, surf and night smelt, shiner and red tailed perch, and halibut.

Ditidaht First Nation has documented traditional fishing grounds throughout the RSA, including important areas in the waters off the seaward margin of their land-based territory (CEAA 2019d). Important traditional fishing grounds that overlap the shipping lanes such as Swiftsure Bank, a “critical offshore harvesting base” for the Ditidaht, as well as others that lie close to the international shipping lanes, such as offshore of Carmanah Point and Bonilla Point. Ditidaht First Nation fish for halibut, lingcod, yelloweye red snapper, rockfish, and sockeye, coho, pink, and Chinook salmon at these locations (CEAA 2019e).

Swiftsure Bank was a popular commercial fishing location due to it being rich in species. As early as 1938, there were reports of declines in fish stocks due to overfishing (CEAA 2019b). While an area was subsequently closed to commercial and recreational fin fishing, it remains open to Aboriginal food, social, and ceremonial fishing. Ditidaht First Nation shares this area with Pacheedaht First Nation and the now American Makah Tribe from Neah Bay on the Olympic Peninsula under established protocols (CEAA 2019d).

Despite the decline in fish stocks, fish remains a substantial part of their diet and well-being Ditidaht First Nation (CEAA 2019d). Salmon is a staple and are traded. Halibut is also regularly consumed (CEAA 2019g). Ditidaht First Nation reports that since they moved to Malachan, the distance to preferred harvesting areas has become challenging, especially for species such as sockeye at Cheewat (CEAA 2019d).

Ditidaht First Nation also reports that the Aboriginal right recognized for five Nuu-chah-nulth First Nations west of Ditidaht applies to them. In *Ahousaht Nation et al. v. Canada (Ahousaht)* the Aboriginal right to fish and sell fish in the commercial marketplace was determined and that right applies to the Ditidaht, who were considered a Nuu-chah-nulth First Nation for the purposes of the *Ahousaht* case (CEAA 2019d).

Marine Mammals

Sea mammals identified as traditionally harvested in the RSA by Ditidaht First nation include harbour seal, northern fur seal, and sea otter. Until sea otter and fur seal hunts were banned in 1911, the Ditidaht pursued these species. Harbour seals continue to be hunted in the fall and winter. Sea otters are extinct from Ditidaht traditional territory and they no longer hunt fur seals (CEAA 2019d).

Whaling was an activity that held “tremendous spiritual and ceremonial significance for the Ditidaht” (CEAA 2019d). Whales were typically hunted in the early part of the summer with humpback and grey whales as preferred species but northern right whales were also taken (CEAA 2019d). Orcas held special significance to the Ditidaht. As “guardians of the ocean”, they were spiritually and physically revered as sacred beings (CEAA 2019d). They were hunted for training purposes to develop agility and speed (CEAA 2019d).

Ditidaht whaling ceased as result of the commercial whaling industry, which decimated whale populations by the late nineteenth century (CEAA 2019d). Ditidaht First Nation would like to resume whale hunting, should whale population recover sufficiently. Whale is a traditional food that Ditidaht would like to reintroduce to reinvigorate Ditidaht’s important whaling culture and improve health outcomes (CEAA 2019d).

Marine Birds

Marine bird species identified by Ditidaht First Nation as harvested for traditional purposes in the RSA include mallard duck and other intertidal birds, surf scoter, common merganser, bufflehead duck, common goldeneye, Canada goose, brant, and trumpeter swan (CEAA 2019d). Of these, surf scoter is noted for being rich in flavour and fat and is a traditional winter staple in the diet. Goldeneye is also a favoured species.

As with other marine resources, Ditidaht First nation has said many Elders and resource users have noted a marked decline in duck populations across Ditidaht territory, and at Nitinaht Lake in particular (CEAA 2019d).

4.2.3.2.1.2 Other Cultural Practices and Sites

Ditidaht First Nation has reported that the sites and species they rely upon for traditional purposes (as reviewed in the previous sections), and the traditional knowledge (e.g., language, named places, beliefs) associated with those sites and species, provide a link to Ditidaht territory and to Ditidaht identity itself (CEAA 2019c). Despite the cumulative effects upon the environment, and the effects of colonialism, Ditidaht continue traditional practices and transmit Ditidaht language and culture between generations (CEAA 2019d).

To help sustain Ditidaht cultural values and ways of knowing, Ditidaht First Nation wishes to maintain, for example, the ability to access traditional harvesting grounds, the safety of Ditidaht mariners, and the ability to pass on traditional knowledge to succeeding generations. Ditidaht has noted that passing on traditional knowledge related to harvest techniques when shipping traffic constrains these activities. Ditidaht First Nation also wishes to maintain the quality of experience and use and enjoyment of their territory and the integrity of sensitive spiritual and cultural sites, such as burial caves on the shoreline (CEAA 2019d).

Marine Travel Sites

Ditidaht First Nation has identified travel routes that overlap with the shipping lanes, including an anchorage and two maritime travel routes that cross Juan de Fuca Strait; one from Bonilla Point to Neah Bay and the other from Port Renfrew to Neah Bay (CEAA 2019c,d). Several other marine travel sites are identified in the RSA, including to and from offshore areas within the RSA, as well as along all of Ditidaht's territorial shoreline and within Nitinat Lake (CEAA 2019c,d).

Other Cultural Sites

Marine resource harvesting activities such as fishing and seafood gathering are "integral expressions of Ditidaht culture, a culture that is connected to a specific landscape that is sacred and storied." (CEAA 2019d). The landscape within Ditidaht is rich in place names that recount Ditidaht history (CEAA 2019d). This cultural landscape reflects history of use and occupancy and traditional practices that "retain deep significance for the Ditidaht people and remain intimately linked to Ditidaht's Aboriginal title" (CEAA 2019d).

Sites of importance across Ditidaht territory include several hundred within the RSA, have been identified by Ditidaht First Nation. Sites include (although are not limited to) aquatic and land resource sites (such as fishing, hunting and seafood gathering, trapping, water supply, plant gathering) cultural history sites (e.g., burial sites conflict, reserves, Legendary Being, marker sites, pictograph/petroglyph, sacred and ceremonial, traditional history), settlement

activity sites (e.g., burial and dwellings), archaeology sites and travel sites (such as canoe and anchorage points) (CEAA 2019d).

4.2.3.2.2 *Pacheedaht First Nation*

Pacheedaht First Nation has four reserves located on southwest Vancouver Island: Cullite 3 about 3.5 km southeast of the mouth of Carmanah Creek; Gordon River 2, where the main community resides, at the mouth of the Gordon River in Port San Juan; and Queesidaquah 4, at the mouth of Harris Creek on the San Juan River (AANDC 2019b). As of September 2019, Pacheedaht First Nation has 298 registered members, with 90 people living on reserve and 191 living off reserve (AANDC 2019b).

The Pacheedaht First Nation regard themselves as a distinct First Nation with a history in their territory that extends back through many centuries. The Pacheedaht are closely related by language and culture to the Nuuchahnulth First Nations whose territories are distributed along the west coast of Vancouver Island. The Ditidaht to the northwest, and with the Makah across the Strait of Juan de Fuca in Washington are the closest relations to Pacheedaht through kinship, language and culture (CEAA 2019i).

Pacheedaht territory, as described in the *Pacheedaht First Nation Traditional Use and Occupancy Study (TUOS) Report for the Roberts Bank Terminal 2 Project (Updated 2019)* stretches along the coastline of Vancouver Island between *bakulqawa?* (Sheringham Point) on the east and *bu:lqawa?* (Bonilla Point) on the west, and extends inland to include the intervening watersheds, taking in Walbran Creek, Gordon River, San Juan River, Loss Creek, Jordan River and others as shown on Figure 2. Pacheedaht territory includes the offshore area between these points (*bakulqawa?* and *bu:lqawa?*) and extends into the Strait of Juan de Fuca as it includes *lučii?aa?aq* (Swiftsure Bank) (CEAA 2019i). Pacheedaht First Nation assert their Aboriginal rights, including title and governance rights throughout their territory.

The area where Pacheedaht's asserted traditional territory and the Marine Shipping Area intersect is shown in Figure 4.2-3 and it includes an area at Swiftsure Bank that is closed to commercial and recreation fin-fishing but is open to Pacheedaht for food, social and ceremonial purposes (i.e., Swiftsure Bank, DFO Area 121, closed area). Other traditional use locations discussed in the following summary that area outside this closed area and territory are not presented in the figure.

The following sections that describe Pacheedaht First Nation use rely on materials submitted to Port Metro Vancouver and through the Roberts Bank Terminal 2 hearings and apply to the shipping area. Materials include the TUOS Report that was submitted for Roberts Bank Terminal 2 and that was updated in 2019 and submitted as part of closing comments for the hearing and Pacheedaht First Nations comments submitted for the Roberts Bank Terminal 2 Project. Pacheedaht does not wish to make the TUOS maps for the Roberts Bank Terminal 2 Project available to the public. These maps remain confidential.

Pacheedaht First Nation has emphasized that the results are not exhaustive and should not be considered "definitive or fully representative of Pacheedaht Aboriginal rights, title, use and interests". (CEAA 2019 i,n,o). The 2015 TUOS report includes all marine, intertidal and tidal influenced waters within the Pacheedaht territory" and marine areas used traditionally and currently by Pacheedaht people at Swiftsure Bank" (CEAA 2019). This study area also

includes the “terrestrial portions of Pacheedaht territory within 150 m of marine shorelines and within 40 m of tidal influenced river waters” (CEAA I, n).

The Current Use spatial boundaries for Pacheedaht First Nation include the study area described above and presented in Figure 4.2-2.

4.2.3.2.2.1 Marine Resource Use

Pacheedaht means “people or children of the sea foam” and reflects their coastal orientation. Pacheedaht state that they have occupied their territory on an exclusive and continuous basis for at least several centuries up to the present day, and that during much of this time, they have lived, seasonally or permanently, as 22 identified village, house or camp sites, from which they “used and harvested an extensive range of resources for cultural, spiritual, sustenance, and economic purposes” (CEAA 2019m,n,p,q). From east to west, lying along the shorelines and rivers of Pacheedaht territory, these sites are:

- *qwa?ə·qw’a* – the name for Kirby Creek and for the Pacheedaht village located approximately 600 m from the river mouth
- *bakutqawa?* – the Pacheedaht name for Sheringham Point, also known as “Store Point.”
- *ke:ʔioadl* – a summer fishing village of 8 long houses located at Point No Point
- *ʔiʔi:bic'aqpiʔs* – an ancestral village located on the eastern side of the mouth of Jordan River.
- *Ditiida* – a large village at the mouth of Jordan River located on the west side of Jordan River.
- *Ti'ehib* – a village between Magdalena and Simon Points at Boulder Beach
- *Qwa:qtliis* – a fishing and seafood gathering village located near the mouth of Sombrio River
- *li:xwa:p* – top of a bluff at Botanical Beach
- *ʔapsawa?* – a winter village behind Cerantes Rock at the south side of the entrance to Port San Juan.
- *K'oʔoba?* – a village at Robertson Cove.
- *Bo:ʔapiʔis* – a winter village at Port Renfrew.
- *K'witibiʔt* along the shore of Port San Juan from the cove at the mouth of the San Juan River extending to Snuggery Cove, including the present Beach Camp area.
- *P'a:chi:da?* –the main Pacheedaht village along the beach that extends between the mouths of the north and south branches of the San Juan River. Pacheedaht Indian Reserves #1 and #2 are located at this site.
- *Ti'i:xsit* –at the mouth of a creek on the south channel, 2.5 km up the San Juan River
- *Tlołasi?* – the “flat” at Fairy Lake
- *ʔaʔaqwaxtas* –north side of the mouth of Fairy Lake on the northside of the San Juan River.

- Kwi:sidok'wa? –At the mouth of Harris Creek on the San Juan River.
- Tl'oqwxwat' – a summer fishing village on the Gordon River where salmon traps were set in the river from April to October.
- ʔo:yats' –Thrasher's Cove on the northwest side of Port San Juan.
- K'adataʔs –half mile from Owen Point on the northwest side of Port San Juan
- Qawö adt –Camper Bay
- Qaqawöadtakk?- at the mouth of Sandstone Creek.
- Wiʔe:ʔ –near the mouth of Logan Creek.
- Kaxi:ks - near the mouth of Walbran Creek.
- Qala:yit –village east of Bonilla Point that was occupied yearround. This village, located on what is now Cullite Indian Reserve #3, provided excellent access to ʕučiiʔaaʔaq (Swiftsure Bank)

Pacheedaht report that their ancestors “enjoyed unrestricted access to the wide variety of resources in the ocean, rivers and lands in their territory”, gaining a wealth of knowledge about their territory based on the direct observations and experiences (CEAA 2019o). Village, house and camp sites were selected for their suitability for launching and landing canoes, exposure to wind and waves, defensive features, sightlines and the availability and quality of resources (CEAA 2019o).

Four reserves were set aside for the Pacheedaht in 1882 and 1890. The reserve commissioner at the time recognized the importance of fishing to the Pacheedaht people, reserving to them the exclusive right to fish in both branches of the lower San Juan River, as well as remarking on their expertise as fishermen (CEAA 2019o). The maritime orientation of the Pacheedaht, as well as other Aboriginal groups of the west coast of Vancouver Island, was noted by government officials of the era, noting that they fished for halibut, cod, and herring with the “greatest facility” (CEAA 2019o). The river and ocean resources were recognized as supplying as aspects of Pacheedaht life (CEAA 2019o).

The traditional economy of the Pacheedaht included being “profitably engaged in fishing and selling marine products” and supplying bot Aboriginal and non-Aboriginal markets. Pacheedaht were employed in commercial whale, sea otter, and fur seal hunting because of their exception marine mammal hunting skills. The Pacheedaht report earning relatively large incomes from their involvement in the industry (CEAA 2019o,p).

Since contact, many developments and historic events have occurred to the Pacheedaht and within their territory that have had significant adverse impacts on their traditional rights, as well as on the land and more increasingly, in the marine portions in their territory (CEAA 2019o,p) Pacheedaht First Nation has identified numerous contributing factors that have cumulatively affected their ability to exercise their rights. These include direct effects to the Pacheedaht such as disease and depopulation, reserve creation and the alienation of lands and resources off-reserve and the effects of colonialism such as loss of traditional language, culture and traditions. Impacts from various resource development and extraction activities such as hydroelectric development and forestry and

settlement activities have changed the environment and reduced access to resources. The Pacheedaht have also seen the depletion of fisheries and other marine resources and the imposition of fishing and marine harvesting regulations, including loss of economic rights related to the harvesting of marine resources. The Pacheedaht also state that the re-routing of the international shipping lanes in 2005, caused significant interference with Pacheedaht's ability to harvest at Swiftsure Bank, one of Pacheedaht's richest and preferred fishing locations (CEAA 2019o,p). The marine traffic presents hazards to fishers due to threat of collision, and the effects of vessels wakes.

Despite the effects experienced by Pacheedaht, they continue to rely heavily on marine resources and the marine environment and they continue to harvest extensively for food, social and ceremonial purposes, with Swiftsure Bank as a prime harvesting location (CEAA 2019o). The resources harvested at Swiftsure Bank are preferred and are perceived to be healthier and more abundant and thus remain significant to Pacheedaht. Pacheedaht First Nation benefits economically from the fisheries managed by the Fisheries Department however, individual members frequently go out in small boats, and fish throughout the offshore portion of Pacheedaht territory, with Swiftsure Bank being one of the important areas due to the still relatively, abundant resources at the bank. but also continue to participate (CEAA 2019 o,p).

Pacheedaht First Nation's plans for economic development activity is centred on the promotion of eco-tourism within their land and marine territory (CEAA 2019 o,p). A recreational campground at Pachena 1 and Gordon River 2 function as an important sources of revenue and employment for Pacheedaht, and there are plans to expand operations and develop other recreational and tourism opportunities to support their local employment (CEAA 2019 o,p).

Due to the importance of marine resources and the marine environment for economic and cultural reasons, Pacheedaht First Nation states that any impacts to Pacheedaht members' access to fisheries and intertidal resources will result in "significant losses to Pacheedaht's traditional marine harvesting activities and rights" (CEAA 2019o,p). Furthermore, any damage or degradation of Pacheedaht marine resources, cultural archaeological or other harvesting sites, or access to these sites will result in significant losses (CEAA 2019o,p).

Marine Fish and Fish Habitat

Marine Vegetation

Pacheedaht First Nation has identified a number of seaweeds, intertidal plants, and subtidal plants that are currently or formerly harvested within the Study Area. These include, red laver, bull kelp, eelgrass, Scouler's surf grass, bladderwrack, leafy kelps, short kelp, sea palm, and sea lettuce and others. There were seven marine vegetation site identified in the Pacheedaht Study Area. They are located in Port San Juan and on the outer coast of the territory, east and west of Port San Juan (CEAA 2019 n,m,o,q)

Pacheedaht members continue to collect seaweed today and it is integral to the economic development of resources in the territory. Bull kelp continues to be harvested. Red laver has a very, high, market value known as the Japanese named seaweed "nori." Bladderwrack is harvested today as a medicine for thyroid conditions and has a growing importance in the community. It is also used topically for burns. Other species were harvested in the past and there is interest in resuming consumption of some species (CEAA 2019q).

Marine Invertebrates

Pacheedaht First Nation report harvesting a large number of shellfish and benthic species. Clams (butter, littleneck, razor, horse, mya, geoduck), cockles, oysters, mussels (California, blue), barnacles (gooseneck, acorn/giant), chitons (black katy, giant gumboot, black leather), limpets, and whelks (CEAA 2019q). although they no longer harvest abalone due to overharvesting commercially. Pacheedaht would like to resume collection once the stocks have been restored. Pacheedaht have plans for remediating shellfish areas that have degraded (CEAA 2019q o).

Subtidal marine invertebrates reported as currently harvested include urchin (red, purple, green) crab (red rock, Dungeness), scallops (weathervane, giant rock, smooth pink, spiny pink) Humboldt squid, octopus, and sea cucumber (CEAA 2019q,o). Sea urchins are a favourite seafood and are sometimes gathered in large quantities for ceremonial purposes. Pacheedaht trade crab with other First Nations (CEAA 2019q,o). Pacheedaht have observed that sea cucumber, which are collected for food, are the target of a growing commercial industry and need to be managed (CEAA 2019q,o). The Pacheedaht Fisheries Department has developed planning initiatives for prawn and shrimp because they have been low in numbers over the last few years.

Pacheedaht First Nation have identified 119 seafood gathering sites in their TUOS (CEAA 2019 q). The large number of sites reflects the importance of the resources and activities related to Pacheedaht First Nation. Many of the collection sites are located in Port San Juan but there are sites at specific points along the outer coast as well (CEAA 2019q).

Marine Fish

The Pacheedaht First Nation have identified all five species of Pacific salmon, steelhead, cutthroat trout, herrin and herring spawn, flounder, halibut and halibut eggs, soles, greenling (tommycod), kelp geenling, sablefish, ling cod, black rockfish (sea bass, black bass, blue rockfish), yellow rockfish (red snapper), other rock fish (canary, quillback, yellowtail, silver grey, vermillion, copper, tiger, china, red banded), cabezon, dogfish shark, sturgeon, sand lance, smelts (surf, might), sardines (pilchard), perch (shiner, red tailed), ratfish, northern anchovy, wolf eel, American shad, and skate as species that they formerly or presently harvest (CEAA 2019q).

Salmon are a fundamental feature of their culture and economy and have been for centuries (CEAA 2019q). The rights to fish in salmon-bearing waterways were the hereditary property of the chiefs, and the species was managed under their authority. Salmon continues as one of the most important resources for Pacheedaht members, harvested in the Pacheedaht rivers and offshore at Swiftsure Bank. Sockeye and coho are favoured but all species are important due their varying qualities and uses. Pinks have become increasingly fished because they are thriving in Pacheedaht fishing areas (CEAA 2019 p,q).

Pacheedaht First Nation fish for halibut at Swiftsure Bank in food, social and ceremonial harvest. They are sought for the abundance of meat. Pacheedaht report being able to capture 500 to 1,200 pounds (228 to 544 kilograms) in one day (NEB 2014a). Rock fish were also identified as an important food, social and ceremonial fishery species since they provide a reliable source of fresh fish throughout the year (CEAA 2019 q,o).

Herring and herring spawn were once abundant but Pacheedaht state that they have been depleted by commercial over-harvesting (CEAA 2019 q, o). Pacheedaht believe that herring stocks could recover if carefully managed. Pacheedaht note that herring and herring roe were an integral food sources and a valuable trade item and will be integrated into the resource management strategy (CEAA 2019 q, o).

Other species harvested in the past and currently that have economic potential due to growing markets include sablefish, which Pacheedaht have expressed interest in pursuing through fin-fish aquaculture. Cabezon, sand lance (for bait), ratfish (for oil), and wolf eel (not typically consumed by Pacheedaht). In the nineteenth century, dogfish shark oil became an important commodity for Pacheedaht people and the trade of dogfish shark oil reportedly was economically profitable for the whole community for several decades (CEAA 2019 q, o). Dogfish are not currently fished but could be integrated into the resource management planning process should they become an economically important species again (CEAA 2019 q, o).

Pacheedaht have identified 270 fishing sites in their TUOS. The high number of fishing sites indicates the importance of fishing to past and current fishing practices (CEAA 2019 q, o). The sites are distributed throughout the study area, including all areas of Port San Juan, up the San Juan River and Gordon River, as well as both inshore and offshore along the outer coast. Many of the fishing areas are extensive and overlap all of Pacheedaht marine territory from the shoreline out to the international boundary in Juan de Fuca Strait and the outbound shipping lane for several kilometres (CEAA 2019 q, o). This includes the area at Swiftsure Bank that is closed to commercial and recreational fin-fishing but is open to Pacheedaht for food, social and ceremonial harvest as well as areas to the north and east of that closure area identified by Pacheedaht.

Pacheedaht First Nation has described Swiftsure Bank as its “centre of aquatic resource concentration” and the Nation’s “dinner plate” (CEAA 2019 q, o). In addition to the species listed above, Pacheedaht report catching pomfret, jack mackerel, skipjack tuna, and Greenland turbot and other species.

Pacheedaht state that they manage the fishery for all visiting First Nations and monitors the activity within the designated closed area for encroachment by unauthorised commercial and recreational users (CEAA 2019 q, o). The Pacheedaht state that they exercise their traditional ownership at Swiftsure Bank, by issuing intertribal fishing protocols to members from many other First Nations. Under this protocol, visitors are issued an intertribal pass on behalf of the Pacheedaht hereditary chief, and a Pacheedaht First Nation flag (CEAA 2019 q, o). Pacheedaht reports that its management of the fishery at Swiftsure Bank is supported by DFO and the protocol is monitored in their radio room (CEAA 2019 q, o).

Pacheedaht state that in 2005, Transport Canada moved the outbound shipping lane north so that it intersects with the Swiftsure Bank closed area and other hereditary fishing grounds identified by the Pacheedaht in the Study Area (CEAA 2019n,q,o). The Pacheedaht state that the re-routing of the international shipping lanes has created significant interference with Pacheedaht’s ability to harvest resources in this area. The marine traffic presents hazards to fishers due to threat of collision, and the effects of vessels wakes (CEAA 2019 q, o). In some conditions such as fog the reduced visibility makes it even more hazardous for Pacheedaht fishers since they are unable to view large vessels until it is too late. Members must scramble to pull up or cut anchor to get out of the way. Community members report that they have been hiring charter boats that are equipped with radar technology to help them avoid interactions with large vessels when accessing Swiftsure Bank. Pacheedaht First Nation asserts that shipping traffic in this lane interferes with their ability to exercise their Aboriginal right to harvest at Swiftsure Bank (CEAA 2019 q, o).

Marine Mammals

Marine mammal species identified by Pacheedaht as currently or formerly harvested include harbour seal, northern fur seal, sea otter, northern and California sea lions, harbour porpoise humpback whale, gray whale, orca, and

northern right whale (CEAA 2019 q, o). As fur seals, sea otters, and whales have been protected for some time, locations for hunting these species were not identified. However, sites for hunting seals and sea lions were identified in the TUOS.

Pacheedaht First Nation report that harbour seals were once hunted at many sites along the coast of Pacheedaht traditional territory but they are rarely hunted today.

Pacheedaht have expressed interest in hunting fur seals as an Indigenous right, should their population recover sufficiently (CEAA 2019 q, o). Pacheedaht report that there is a growing interest in their community in seals as a resource. Pacheedaht states that if populations of fur seal recover through the current restoration efforts, they will resume seal harvest and management (CEAA 2019 q, o).

Sea otter were once hunted when their pelts were considered valuable and were a source of substantial income for Pacheedaht. Sea otters no longer occur in Pacheedaht First Nation territory but Pacheedaht anticipate that they will re-establish themselves in the future (CEAA 2019 q, o).

Pacheedaht do not currently hunt porpoise or sea lion. They have both been identified as important for Pacheedaht's eco-tourism initiatives and they plan to view these sea mammals by traditional dugout canoe (CEAA 2019 q, o).

Whaling was a central component of Pacheedaht culture. Whaling has been described as the basis of worldviews, identities, and cultures. Whales were seen as sacred gifts that provided both sustenance physically and spiritually for Pacheedaht people and whaling was considered a sacred activity. While traditional Indigenous whaling has been widely reported for its cultural and ritual importance, it also had great economic value. However, whaling has not occurred in the area in the last 100 years due to the near extermination from commercial whaling in the mid 1900s (CEAA 2019 q, o).

When whaling did occur, the village of *Qala:yit* was the launch point. Species sought were humpback, gray whales, and Northern right whales, which were plentiful and were reported to have tasty meat (CEAA 2019 o). Orcas were hunted (but not killed) by young whalers in order to test and improve their skills since orcas fast, agile swimmers and difficult to harpoon (CEAA 2019 o). Orcas were an important spiritual characters in traditional stories and belief systems.

The Pacheedaht First Nation have noted that whale populations have started to recover and a group of gray whales has been observed near *Qala:yit* during the summer (CEAA 2019 q, o). Should the whale populations recover sufficiently, the Pacheedaht along with the Makah (in the United States), and other whaling First Nations would like to resume the whale hunt. Whale hunting is considered an activity that could strengthen traditional culture and supply traditional foods to improve the health of the community (CEAA 2019 q, o).

Marine Birds

Birds harvested by Pacheedaht First Nation include ducks such as mallard, surf scoter, common merganser, bufflehead, and common goldeneye. Brant and swans (trumpeter, whistling) were also taken. Pacheedaht used a range of hunting techniques for harvesting marine birds in the past but now they are hunted with rifles. Ducks and other intertidal birds are hunted on beaches, rocky shorelines, marshes, river estuaries, tidal zones, and tidal flats. Ducks, particularly Mallards, are hunted at these sites while they feed on eelgrass at low tide during the winter (CEAA 2019o). Ducks, geese and whistling swan are important winter food sources. Trumpeter swans are not commonly hunted today but are an admired site (CEAA 2019o).

4.2.3.2.2 Other Cultural Practices and Sites

Marine Travel Sites

Pacheedaht Traditional Territory encompasses approximately 129 kilometres of marine coastline along the Juan de Fuca Strait and they are a marine people (CEAA 2019 m,n). Pacheedaht has reported that access to many of their current and potential future resource sites along this coastline and that traditional travelways remain important to their community (CEAA 2019n).

In their TUOS, Pacheedaht has identified canoe routes and travel corridors on water in their Study Area. These sites include marine travel routes that extend from the head of Port San Juan and follow the length of the outer coast within and beyond Pacheedaht territory. There are routes that access Swiftsure Bank and across the Juan de Fuca Strait to Neah Bay, where the Makah Tribe reside (NEB 2014a; CEAA 2019 q, o).

Pacheedaht First Nation has reported extensive trade with the Makah that their members have traditionally brought their harvested marine resources across Juan de Fuca Strait to the Makah, sharing marine resources with family and extended family. It was common practice amongst Nuu-chah-nulth and other First Nations to establish and maintain kinship ties with neighbouring nations through marriages between chiefly families. These ties generally supported good relations and were critical in maintaining good trading conditions (Pacheedaht First Nation 2017). Pacheedaht First Nation have documented their long history of travel across the Juan de Fuca Strait in their TUOS (Pacheedaht First Nation 2019) and their provision of fish for ceremonial events that is integral to who they are as Pacheedaht (NEB 2015l, CEAA 2019 q, o).

Pacheedaht have repeatedly raised their concerns through studies and hearings for the Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2 projects about safety while harvesting and travelling to and from fishing grounds, and across the Strait, especially at Swiftsure Bank. Their safety concerns arise from the large vessel traffic and wake in the Juan de Fuca Strait (CEAA 2019 q, o).

Other Sites of Importance

In their TUOS and as identified in the Marine Resource Use section above, Pacheedaht have identified sever village, house and camp sites in their traditional territory that were occupied seasonally or permanently. The distribution of many of these sites along the marine shoreline demonstrates the importance of marine resources to Pacheedaht (CEAA 2019 q, o). Their Pacheedaht name is derived from their word for sea foam that ties to a legendary story of the San Juan River (CEAA 2019 q, o).

Pacheedaht First Nation have presented their origin stories that tie them to neighbouring nations and the landscape in which they live. Pacheedaht have stated the importance of how sites must be considered in the context of Pacheedaht history and that sites are interconnected to each other and to their culture and identity as a people. Pacheedaht state that "sites are all part of the Pacheedaht cultural landscape and Pacheedaht history" and their participation "in traditional use and contemporary activities on this landscape produces and expresses Pacheedaht identity (CEAA 2019 q, o).

Pacheedaht note archaeological sites (both recorded in the provincial database and unrecorded), numerous cultural history sites and dwelling sites in their TUOS (CEAA 2019 o) Pacheedaht recognize their archaeological sites as being culturally and spiritually important, as well as significant to the Pacheedaht as evidence for their activities demonstrating their long-standing occupation on the land. Culture history sites are also valued and include named

places, historical event locations, ceremonial or sacred sites, burial, medical or therapeutic sites (e.g., places known for the presence or rare or abundant species of plants or other materials used in the treatment of illness or ritual bathing areas), and non-human being sites (i.e., locations where legendary creatures, for example, Thunderbird and Sasquatch, frequent or have been sited) (CEAA 2019 o). Locations where Pacheedaht people have or continue to reside on a permanent or temporary basis are considered dwelling sites and include villages, houses cabins, tents, lean-tos, and campsites (CEAA 2019o). These sites are located in the primary use areas for Pacheedaht; up the San Juan River, in Port San Juan, and along the outer coast of Pacheedaht territory (CEAA 2019 n,m,o).

4.2.3.2.2.3 Maa-nulth First Nations (Huu-ay-aht First Nations, Ka:’yu:’k’t’h’/Che:k’tles7et’h First Nations, Toquaht Nation, Uchucklesaht Tribe, and Yuulu?il?atl:tḥ (Ucluelet) First Nation

The Huu-ay-aht First Nations, Ka:yu:kth/Che:k:tlés7eth First Nations, Toquaht Nation, Uchucklesaht Tribe, and Yuulu?il?atl:tḥ (Ucluelet) First Nation are collectively known as the Maa-nulth Nations. The Maa-nulth Nations are Nuu-chah-nulth people and speak the Nuu-chah-nulth language. Maa-nulth means “villages along the coast” and they are located along the west coast of Vancouver Island. The Maa-nulth describe themselves as always having been “ocean people” (Maa-nulth Treaty Society 2019).

As of September 2019, the registered population of the communities according to AANDC as of September 2019 is provided in Table 3. Maa-nulth Treaty Society reports that Maa-nulth Treaty Society has indicated that Maa-nulth Nations are each responsible for determining their own citizenship, and the AANDC population figures listed below may not be precise.

Table 4.2-3: Maa-nulth Nations Population

First Nation	On Treaty Lands	Off Treaty Lands
Huu-ay-aht First Nations	101	631
Ka:yu:kth/Che:k:tlés7eth First Nations	164	418
Toquaht Nation	9	147
Uchucklesaht Tribe	26	202
Yuulu?il?atl:tḥ (Ucluelet) First Nation	204	466

Maa-nulth Nations are Treaty Nations under the terms of the Maa-nulth First Nations Final Agreement (Maa-nulth Treaty), which was entered into with the Governments of Canada and BC and came into force on April 2, 2011.

Rights specified under the Maa-nulth Treaty (MFN et al. 2011) are:

- Maa-nulth Fishing Right, including harvesting aquatic plants;
- Maa-nulth Right to Harvest Wildlife;

- Maa-nulth Right to Harvest Migratory Birds;
- Maa-nulth Right to Gather Plants;
- Maa-nulth Right to Harvest Renewable Resources; and
- Maa-nulth Right to Practice Maa-nulth First Nation Culture.

Maa-nulth notes that they have the rights to domestically harvest and trade fish, aquatic plants, wildlife and migratory birds and a right to participate in fisheries-related management activities within the Treaty Fishing Area. These rights are limited by measures necessary for conservation, public health, and public safety.

Maa-nulth's traditional territories (*hahoulth/hahoulthee*), which they report having utilized and stewarded since time immemorial, comprise both land and the sea in what are now known as Kyuquot Sound and Barkley Sound on the West Coast of Vancouver Island (Maa-nulth Treaty Society 2019) (Figure 4.2-4a). They include two Domestic Fishing Areas that extend off the coast as represented in Figure 4.2-4b (Maa-nulth Treaty Society 2019). The Maa-nulth Treaty Society has expressed concern about the effects of shipping on their treaty area, including areas that do not overlap with the MSA (i.e., past J Buoy). Maa-nulth Treaty Society has said that ships transit through waters in which Maa-nulth have harvesting rights, as defined in the Treaty (Maa-nulth Treaty Society 2015, 2019).

The Maa-nulth Treaty Society emphasizes that the harvesting, processing, consuming and trading of fish and other ocean resources have always been integral to their distinctive culture and that they understand their territories as unified whole, including both the ocean and land (Maa-nulth Treaty Society 2019). Maa-nulth Nation have economic interests or are exploring economic development opportunities on or near their treaty lands. Businesses currently operated by, on behalf of, or in partnership with each of the Maa-nulth Nations include the following (NEB 2015a):

- Huu-ay-aht First Nations a forestry business, a commercial fishing business, a gravel business, a local food market and a café, a wharf, and a campground on Pachena Bay;
- Ka:yu:kth/Che:k:tlés7eth First Nations – a forestry business, a commercial fishing business, a fishing lodge, a guide outfitter business, and a campground and marine at Fair Harbour;
- Toquaht First Nation – a forestry business, an aquaculture business and a campground, marina, and kayak launch at Secret Beach, on the main kayak launch point to the Broken Group Islands;
- Uchucklesaht Tribe – a forestry business, a transportation business carrying passengers and freight between Elhlateese and Port Alberni, a store at Green Cove, and a lodge on Henderson Lake; and
- Yuulu?il?atl:th First Nation – Way Point Surf Shop and Café, Way Point resort with a campground, RV Park, yurts, and luxury lodges, Way Welcome Centre with a gift shop, coffee bar and garden market, Kwistis Gift Shop, Kwistis Feast House that serves First Nations inspired cuisine, and Thornton Motel.

4.2.3.2.2.4 Marine Resource Use

Maa-nulth Nations have reported that, historically they harvested an abundance of fish, marine invertebrates, marine plants, marine mammals, and marine birds from a variety of locations within their respective traditional

territories (NEB 2015a). Maa-nulth First Nations have reported that they harvested salmon, herring, halibut, dogfish, butter clams, kelp, gray whales, humpback whales, seals, sea otters, ducks, geese, and swan amongst others (NEB 2015c). Maa-nulth First Nations built the traditional political, social, cultural, and economic structure around these important food sources. Resources and the products that can be derived from them, such as dogfish oil and sea otter skins, were important trade commodities (NEB 2015c).

Maa-nulth Nation state that the foreshore and marine portions of each Maa-nulth Nations' respective traditional territory, and the resources harvested within these areas, were and continue to be an integral component of Maa-nulth Nations' way of life (NEB 2015a,b,c). Maa-nulth notes that with their treaty, their ability to manage, harvest, and utilize resources has been restored after having been restricted by Canada's assertion and exercise of jurisdiction over them (NEB 2015a,c).

Chapter 10 of the Maa-nulth Treaty (Fish and Aquatic Plants) addresses marine resources. Chapter 11, Wildlife, and Chapter 12 Migratory Birds may be more applicable to marine birds.

Marine resources defined in Chapter 10 of the Maa-nulth Treaty are listed as follows (Maa-nulth First Nations et al. 2011):

- Fish, means fish, shellfish, crustaceans, and marine animal; the part of fish shellfish, crustaceans, and marine animals; and the eggs, sperm, spawn, larvae, spat, juvenile stages, and adult stages of fish, shellfish, crustaceans, and marine animals;
- Intertidal bivalves means manila clams, varnish clams, butter clams, native littleneck clams, razor clams, and oysters; and
- Aquatic plants include all benthic and detached algae, brown algae, red algae, green algae, golden algae, and phytoplankton, and all marine and freshwater flowering plants, ferns, and mosses, growing in water or in soils that are saturated during most of the growing season.

Chapter 12 of the Maa-nulth Treaty states that migratory birds have been defined under "Federal Law enacted further to international conventions that are binding on British Columbia, including the eggs of those birds" (Maa-nulth First Nations et al. 2011). Chapter 11 of the Maa-nulth Treaty, which concerns other bird species, including their eggs and juvenile stages, does not specifically define those species.

Two Domestic Fishing Areas that apply to the harvesting of fish and aquatic plants are centred on Kyuquot Sound on the northwest coast of Vancouver Island and Barkley Sound in the southwest coast of Vancouver Island (Figure 4.2-4b). The Kyuquot Sound Domestic Fishing Area takes in all or portions of Pacific fishery management Areas (PFMA) 26 (inside Kyuquot Sound) and 126 (offshore of Kyuquot Sound) (Maa-nulth First Nations et al. 2011b, Appendix N). The Kyuquot Domestic Fishing Area lies more than 200 km north of Buoy J, at the 12 nautical mile limit.

The Barkley Sound domestic Fishing Area takes in all or portions of PFMA 21 (in-shore between Pacheena Point in the north and Bonilla Point in the sound); 23 (inside Barkley Sound); 121 (off-shore between Pacheena Point and Bonilla Point Lighthouse to the international border); 123 (off-shore of Barkley Sound to the international border); and 124 (off-shore of Clayoquot Sound) (Maa-nulth First Nations et al. 2011b, Appendix N). The Barkley Sound

Domestic Fishing Area full overlaps with the Marine Shipping Area in PFMA Subarea 121-1, partially overlaps the Marine Shipping Area in PFMA 21, and lies immediately adjacent to the MSA in PFMA Subarea 121-2. The Maa-nulth Treaty Society has stated that shipping traffic passes through waters of the Barkley Sound Domestic Fishing Area, as well as past lands to which the Maa-nulth Treaty applies (Maa-nulth Treaty Society 2015, 2019, NEB 2015a,c).

There are eight Maa-nulth intertidal bivalve harvesting areas where harvesting takes place and they are described in Appendix P to the Maa-nulth Treaty. Harvesting areas within waters of the Kyuquot Sound include Big Bunsby, Toquaht Bay, Effingham Inlet, Tzartus Island, and Sarita River (Maa-nulth First Nations et al. 2011). All areas are outside the Marine Shipping Area.

Two Maa-nulth Migratory Bird Harvest Areas, centered on Kyuquot Sound and Barkley Sound, provide bird harvesting opportunities. Two Maa-nulth Wildlife Harvest Areas in same Sounds, also permit bird harvest (Maa-nulth First Nations et al 2011b, Appendices Q and R). The southeastern corner of the Migratory Bird Harvest Areas and Wildlife Harvest Area centred on Barkley Sound lies adjacent to a small part of the Marine Shipping Area at the 12 nautical mile limit (Maa-nulth First Nations et al 2011b).

Maa-nulth Treaty Society has emphasized that large shipping vessels travel from J Buoy (at the edge of the Marine Shipping Area) west and northwest through a large portion of their Treaty Fishing Area. The trajectories of vessels appear to be consistent with international trade routes from the Pacific Northwest to Asia. These vessels can restrict the times and locations in which Maa-nulth can exercise rights within the Treaty Fishing Area (Maa-nulth Treaty Society 2019). Furthermore, Maa-nulth First Nations are concerned about effects to fish stocks, orcas, and other marine resources from shipping traffic. Currently, as identified in Figure 4.2-4b the Marine Shipping Area includes a small portion of Maa-nulth's Treaty Fishing Area (approximately 2%).

Marine Fish and Fish Habitat

Under the Maa-nulth Treaty, each government of the five Maa-nulth Nations has enacted legislation governing their respective fisheries (Maa-nulth Treaty Society 2015). These include:

- Ka:yu:kth/Che:k:tl̓es7eth First Nations Resources Harvesting Act;
- Toquaht Nation Resources Harvesting Act;
- Uchucklesaht Tribe Resources Harvesting Act; and
- Yuulu?il?atl:th̓ First Nation Resources Harvesting Act.

Marine Vegetation

Under the Maa-nulth Treaty, the right to harvest fish allows each Maa-nulth First Nation harvest marine plants, as described in the Marine Resource Use section for food, social and ceremonial or non-commercial (domestic) purposes within the Domestic Fishing Areas, and to trade and barter marine plants among themselves or with other Aboriginal people of Canada (MFN et al. 2011a) Chapter 10; NEB 2015a).

As discussed in the Marine Resource Use section, the Barkley Sound Domestic Fishing Area overlaps with the Marine Shipping Area in PFMA Subarea 121-1, partially overlaps the Marine Shipping Area in PFMA 21, and lies immediately adjacent to the Marine Shipping Area in PFMA Subarea 121-2.

Additional information on the harvesting of marine plants that pertains to the Maa-nulth Treaty, such as species and amounts harvested under the new Treaty, has not been provided.

Marine Invertebrates

The Maa-nulth Treaty allows each Maa-nulth First Nation to harvest intertidal bivalves for domestic purposes with the eight Intertidal Bivalve Harvesting Areas as described in the preceding Marine Resource Use section, and to trad and barter intertidal bivalves amongst Maa-nulth Nations and other Aboriginal people within Canada (Maa-nulth First Nations et al. 2011a, Chapter 10).

Intertidal bivalves (as listed previously in Marine Resources) are an “Allocated Species” under the Maa-nulth Treaty. The quantity of a given species that may be harvested annually is defined but may be reduced or increased depending on the health and population in a given year (NEB 2015b). Domestic allocations for intertidal bivalves are defined as the harvestable surplus from the beaches between the high-water mark and the low water mark in the Intertidal Bivalve Harvest Areas (Maa-nulth First Nations et al. 2011b, NEB 2015 b). All of these areas are outside the Marine Shipping Area for the Project.

Some marine invertebrates are “Unallocated Species” and include but aren’t necessarily limited to Dungeness crab, red rock crab, blue mussels, prawns, and sea urchins (NEB 2015a,b). These species may be harvested for domestic purposes within the Domestic Fishing Areas. These species are harvested in the Barkley Sound Domestic Fishing Areas that overlaps with the Marine Shipping Areas in PFMA Subarea 121-1, and partly overlaps with PFMA 21, and lies adjacent to the Marine Shipping Area in PFMA Subarea 121-2.

Harvest amounts of marine invertebrates since the Treaty came into effect was not provided in the sources reviewed.

The Maa-nulth Treaty does not include a general right to harvest marine resources for commercial purposes (NEB 2015c) but Maa-nulth Treaty Nations entered into a separate Maa-nulth Harvest Agreement is a contractual arrangement but has provisions for the responsible Minister to consult with Maa-nulth Nations on proposals to establish new commercial fisheries off the west coast of Vancouver Island (Maa-nulth First Nation et al 2011, Chapter 10).

The Maa-nulth Harvest Agreement states that Maa-nulth Nations may relinquish certain numbers of commercial harvesting licences, including licences for crab and prawns, and convert them to Harvest Agreement licences (NEB p,s). Maa-nulth Nations say they have a right to request that any Harvest Agreement licences be entrenched as constitutionally protected treaty rights in the Maa-nulth Treaty (NEB 2015d). Maa-nulth has converted commercial fishing licences to Harvest Agreement licences, including Prawn by Trap licences. These licences apply along the entire BC Coast and therefore all Canadian waters of the Marine Shipping Area.

Currently, there are no “Designated Shellfish Aquaculture Sites” which are intended of providing Maa-nulth First Nations commercial shellfish aquaculture tenures, within the Marine Shipping Area.

Marine Fish

Under the Maa-nulth Treaty, Naa-nulth First Nations may exercise their rights to harvest for domestic purposes with the Domestic Fishing Areas (as described previously in Marine Resource Use) and to trade and barter marine fish among themselves or with other Canadian Aboriginal people (Maa-nulth First Nations et al, 2011a). Maa-nulth Nations have stated that fish are an extremely important dietary staple to which they wish to ensure ongoing access.

All five species of salmon are allocated under the Maa-nulth Treaty. Allocations are presented in Table 4.2-4.

Table 4.2-4: Maa-nulth Domestic Allocations for Salmon

Species	Allocation	Areas	Comment
Ocean Chinook Salmon	1,875 plus 1.78% Total Allowable Catch	–	
Terminal Chinook	2,600	PFMAs 23,26,123,126 in Domestic Fishing Areas	
Chum Salmon	17,500	PFMAs 23,26,123,126 in Domestic Fishing Areas	
Ocean Coho Salmon	7,000	PFMAs 121,123,124, 126 in Domestic Fishing Areas	
Terminal Coho Salmon	3,630	PFMA 23 in Barkley Sound Domestic Fishing Area	
Pink Salmon	7,250 (2-year period)	PFMA 23 in Barkley Sound Domestic Fishing Area	
Somass Sockeye	22,886	PFMA 23 in Barkley Sound Domestic Fishing Area	
Fraser River Sockeye Salmon	0.13366% Total Allowable Catch	-	
Henderson Lake Sockeye	17,055	PFMA 23 in Barkley Sound Domestic Fishing Area	
Terminal Jansen Lake Sockeye	50% (based on Minister's determination for harvest)	PMFA 26 Kyuquot Sound Domestic Fishing Area	Currently not harvestable due to conservation reasons

Species	Allocation	Areas	Comment
Terminal Power Lake Sockeye	50% (based on Minister's determination for harvest)	PMFA 26 Kyuquot Sound Domestic Fishing Area	

Other allocated species have been given maximum domestic annual allocations. They are presented in Table 4.2-5.

Table 4.2-5: Maa-nulth Domestic Allocations for Fish

Species	Allocation
Herring	90 short tons
Halibut	26,000 pounds
Halibut	0.39% Total Allowable Catch
Rockfish	11,250 pounds
Rockfish	2.46% of the Rockfish Commercial Total Allowable Catch
Groundfish	13,000 pounds
Sablefish	0.082% Total Allowable Catch

There are several unallocated species such as perch and steelhead and numerous others (Maa-nulth Treaty Society 2015).

As previously noted, Maa-nulth First Nation have a right under their Harvest Agreement to relinquish and convert commercial harvesting licences to Harvest Agreement licences, including commercial harvesting licences for salmon, halibut, rockfish, roe herring, and sablefish (NEB 2015 c,d). Maa-nulth have converted two Salmon Area G Troll licences, a Salmon Area D Gillnet licence, four Halibut licences, and one Rockfish licence to Harvest Agreement licences (NEB, 2015d). Maa-nulth have said that Under the Maa-nulth Treaty, the right to harvest fish allows each Maa-nulth First Nation harvest marine plants, as described in the Marine Resource Use section for food, social and ceremonial or non-commercial the Salmon Area G and D licences apply along the west coast of Vancouver Island, their rockfish licence applies to “outside waters”, and their halibut licences applies to the entire BC coast. The Marine Shipping Area overlaps with all or a portion of the commercial areas that these licences apply.

Marine Mammals

Maa-nulth First Nations have each have a treaty right to harvest marine mammals for domestic purposes within the Domestic Fishing Areas, and to trade and barter amongst themselves, or with other Aboriginal people of Canada (Maa-nulth First Nations et al. 2011a). Information regarding the harvesting of marine mammal for domestic purposes, such as number and species harvested was not available or provided.

4.2.3.2.2.5 Cultural Practices and Sites

Marine Travel Sites

Travel sites or travel routes for traditional purposes have not been identified in the reviewed sources.

Other Sites of Importance

Huu-ay-aht First Nations have indicated that their traditional capital village of *Kiix?in*, a National Historic Site, is a Huu-ay-aht site of importance (Huu-ay-aht 2015). *Kiix?n* Village and Fortress National Historic Site of Canada is strategically set between the rugged outer coast and the protected inner waters of Barkley Sound. *Kiix?n* is the site of a 19th-century village and fortress that exhibits evidence of occupation dating to 1000 B.C.E. It also remains a sacred site to present-day Huu-ay-aht First Nations (Huu-ay-aht 2015). It is situated just north of the Marine Shipping Area, within the northern boundary of the Pacific Rim National Park Reserve. Huu-ay-aht First Nations report that there are other culturally important sites near the Marine Shipping Area, but their locations are confidential and not publicly reported.

In Chapter 24 of the Maa-nulth Treaty addresses parks and protected areas and sets out an agreement for the BC Government and Maa-nulth First Nations to participate in the management planning and protection of specific parks, reserves, and protected areas (Maa-nulth First Nations et al. 2011). The location of these parks, reserves and protected areas are outside of the Marine Shipping Area.

Under the Maa-nulth Treaty, each Maa-nulth First Nation may develop processes to manage heritage sites on Maa-nulth First Nation Lands in order to preserve Maa-nulth Nations' sites and heritage values associated with those sites. Details regarding Maa-nulth heritage sites and locations of these sites is not provided in the Maa-nulth Treaty. Section 4.4, Heritage Resources will address effects to archaeological sites generally.

4.2.3.2.3 Pauquachin First Nation

Pauquachin First Nation (*BOKÉĆEM*) has three reserves located on southeast Vancouver Island: Cole Bay 3, on Coles Bay in Saanich Inlet; Hatch Point 12, on the west shore of the Saanich Inlet; and Goldstream 13 at the south end of Finlayson Arm and the mouth of Goldstream River. The Goldstream reserve is shared with four other First Nations; Malahat Nation, Tsartlip First Nation, Tsawout First Nation, and Tseycum First Nation. Collectively, Pauquachin and these First Nations are known as *WŚÁNEĆ* (AANDC 2019d, Pauquachin First Nation 2019).

The registered population of Pauquachin First Nation as of September 2019 was 400 with 228 living on reserve at Coles Bay and 179 living off reserve (AANDC 2019d).

The *WŚÁNEĆ* First Nations are speakers of *SENĆOŦEN*, which is part of the Northern Straits Salish language family (First Peoples Cultural Council 2019). Pauquachin First Nation asserts that they have Douglas Treaty rights, Aboriginal rights, including title, to an area in which shipping lanes currently pass. (NEB 2014e, 2015). These rights have been described as applying to the lands, waters, and seabed within their traditional territory (NEB 2014). Pauquachin First Nation has asserted the right to continue their cultural practices and to protect areas critical to the survival of their culture. These sites include sites such as heritage and spiritual sites (NEB 2014e).

A map of the collective traditional territory of the *WŚÁNEĆ* and the area of overlap with the Marine Shipping Area is provided in Figure 4.2-5. Pauquachin First Nation demonstrates marine and land use in their studies that extends

beyond the WSÁNEĆ traditional territory and say that their territory extends into U.S. lands and waters. Current use sites and resources that extend beyond the traditional territory boundary but are within the Marine Shipping Area will be discussed in the following sections.

4.2.3.2.3.1 Marine Resource Use

Pauquachin First Nation has said that marine resources are a preferred and greatly cherished part of the Pauquachin diet for subsistence, health and spiritual reasons (NEB 2015e). Pauquachin First Nation notes that access to these resources has diminished, especially in the recent year (NEB 2015e). Pauquachin First Nation state that the quality and availability of marine resources and their access to them were all better than in the present. Several barriers to harvesting were noted by community members including pollution in Saanich Inlet, government restrictions due to pollution, government regulations in relation to licencing, reduced availability due to over-harvesting of resources, lack of boats or gear and costs associated with traveling to location farther away. Pauquachin First Nation also notes that their kinship networks are not as strong but that they still rely on these networks to access marine resources that are of better quality, often in the Gulf Islands (NEB 2015f).

Pauquachin First Nation see that the combination of these effects have reached a crisis point for some community members, with the loss of access to traditional marine resources forcing them to rely more on purchased foods and adversely affecting the health of youth (NEB 2015e). Pauquachin members are not satisfied with the amount of marine resources that they are able to access and that it is not enough to sustain their physical and community social health. They see these barriers to harvest as “violations of their freedom to exercise Douglas Treaty and Aboriginal rights”. (NEB 2015f).

Pauquachin First Nation provided additional information on their traditional use resources. Pauquachin emphasizes that this information is not representative of their use but only a limited sample of information provided by a small number of knowledge holders (Pauquachin First Nation 2019). Pauquachin First Nation determined to keep mapped information confidential and it is not publicly available (Pauquachin First Nation 2019).

Pauquachin First Nation provided the following list of “important resource use spaces” that include tracts of water, land and foreshore.

- James Island, and the waters surrounding it;
- Sidney Island, and the waters surrounding it;
- Forest Island, and the waters surrounding it;
- Waterway between Domville and Brethour Island;
- Waterway between Gooch Island and Sidney Island;
- Prevost Passage (including Greig island, Reay Island, and Imrie Island);
- Saturna Island, especially the south east Point, and the waters surrounding it;
- North Pender and South Pender* Islands, and the surrounding waters;
- Tumbo Island, and the waters surrounding it;

- Mayne Island, and the waters surrounding it;
- Active Pass;
- Satellite Channel; and
- Saanich Inlet

Marine Fish and Fish Habitat

Marine Vegetation

Pauquachin First Nation harvest seaweed and it is a preferred traditional marine resource that has medicinal value (NEB 2015f). Pauquachin First Nation identified a wide variety of seaweeds that were once collected in large quantities by *WSÁNEĆ* such as red laver, for food and other purposes. Seaweeds are not as available as they once were and access to many traditional sites in Saanich Inlet and around the top of the Saanich Peninsula as been lost due to pollution (NEB 2015f). Despite this, Pauquachin First Nation still harvest seaweed at Saanich Inlet as well as on James Island and Discovery Island, in Haro Strait, west of the shipping lanes (NEB 2015f).

Marine Invertebrates

Pauquachin First Nation members that clams are valued for nutritional and cultural reasons and stated that clam-digging is a central to family, community and what it means to Pauquachin (NEB 2015). Pauquachin's favourite clams are cockles, steamers, butters, and littlenecks. Horse and manila clams are also harvested (NEB 2015f).

Pauquachin First Nation reports that access to bivalve harvesting locations has diminished in Saanich Inlet and around the north end of Saanich Peninsula due to contamination and restrictions related to pollution. Clams are still harvested, as often as daily, in Coles Bay, despite restrictions, as they remain one of the few marine foods that Pauquachin members can still directly harvest without boats. Pauquachin First Nation community members have been driven to harvesting clams on the Southern Gulf Islands, such as Pender and Saturna on the north side of Boundary Passage (NEB 2015f).

Mussels were previously present in Coles Bay but now are absent from local harvesting sites, as has chiton, which is considered a delicacy by Pauquachin Elders (NEB 2015). Octopus, also a delicacy, has become more difficult to find in Saanich Inlet than in the recent past (NEB 2015). Harvesting locations for octopus previously described include Senanus Island (in Saanich Inlet), beaches around Saanich Inlet (Cowichan Bay south to Mill Bay), and Stuart Island on the American side of Boundary Passage (NEB 2015). Oysters are reportedly present in Saanich Inlet but cannot be harvested due to contamination (NEB 2015). Sea urchin, or *SQUITZI*, has been described by Pauquachin as another favourite food and delicacy (NEB 2015). Pauquachin first Nation members have reported that their traditional sea urchin harvesting locations have been "fished out" due to commercial harvesting (NEB 2015f). Traditional harvesting locations included Swartz Bay, Piers Island, Knapp Island, Pym Island, Goudge Island, and the small islands around Fernie Island, all within the Marine Shipping Area (NEB 2015f). Sea urchin remains important culturally to the Pauquachin First Nation but is rarely available (NEB 2015f).

Pauquachin First Nation state that their crab traps are often raided, vandalized, or stolen (NEB 2015f). As a result, harvesters have been forced to their practice of setting and leaving traps unattended for fear of losing their equipment or catch (NEB 2015f).

Marine Fish

Pauquachin First Nation has reported that fishing, especially salmon fishing, is central to the *WSÁNEĆ* traditional diet, seasonal activities, cultural practices and identity (NEB 2015f). Pauquachin harvest salmon from the sea as there are no salmon-bearing rivers in their traditional territory (NEB 2015f).

The reef net is a distinctive *WSÁNEĆ* technology. Fishing employing reef net technology allows for taking salmon before they leave the ocean. The reef-net technique was used throughout the southern Gulf Islands and San Juan Islands, as well as Point Roberts. Although it was outlawed by the Canadian government in 1916 and by the US government in 1950, *WSÁNEĆ* communities continued to use this technique in some areas of the U.S. and are working to revive the fishery (NEB 2015f).

Salmon fishing sites include Stuart Island, Saanich Inlet, around North and South Pender Island, Mayne Island, Coal Island and Sidney Spit. The majority of salmon harvesting occurred inside Saanich Inlet at sites on Coles Bay, Goldstream, Mill Bay, Bamberton, and Hatch Point (NEB 2015). As with other marine resources, Pauquachin community members say that salmon stocks are reduced and are not available in the numbers that they once were in Saanich Inlet (NEB 2015f). Sockeye, Coho, and spring salmon are the species most sought (NEB 2015f).

Pauquachin First Nation fish for halibut, cod (lingcod and several species of rockfish known as “rock cod”, “black bass”, and “red snapper”), and other fish at North and South Pender Island, Galiano Island, through active pass (between Galiano and Mayne Island), East Point on Saturna Island, Coal Island, and James Island, as well as Waldron Island and Peavine Island in the U.S.A. (NEB 2015f, Pauquachin First Nation 2019). Sites in Saanich Inlet were identified at Coles Bay, Mill Bay, Deep Cover, and Lands End (NEB 2015f, Pauquachin First Nation 2019). Pauquachin members say that cod, like salmon, is no longer abundant in Saanich Inlet as in the past, and that the same can be said for most fish species, including flounder and herring, that were previously harvested there (NEB, 2015f). Pauquachin First Nation has reported that herring used to pass through the Sannich Inlet directly in front of the Pauquachin community annually in March, but that it has been decades since they were abundant (NEB 2015f). Active Pass was also identified as an important herring fishing area (NEB 2015f, Pauquachin First Nation 2019). Pauquachin community members would like greater access to herring, which they continue to access by trading smoked fish for it, purchasing it from other communities, and receiving it at community events (NEB 2015f). They would also like more access to herring eggs another preferred food (NEB 2015f).

Marine Mammals

Pauquachin First Nation has reported that marine mammals, including harbour seals and California and Northern sea lions, were hunted in the past. Seal and sea lion hunting by some individuals has been recorded in living memory and was once part of the fishery and seasonal round of Pauquachin people. Pauquachin knew to take seals when they were on land since they are slower when not in the water. They also knew to take them during reef net harvesting but had to be upwind of them so their prey wouldn't catch their scent (NEB 2015f). While half a dozen seal hunting sites are known, only one was named; Stuart Island (NEB 2015f).

Orca is a prominent figure in *WSÁNEĆ* cosmology and oral history, but whales were not commonly hunted or relied upon for food, oil or trade (NEB 2015f). They are considered helpers and provided protection for sea travel. Pauquachin First Nation noted that the inlets within *WSÁNEĆ* territory were safe, quiet harbours for whales to rear their young. Pauquachin has observed declining numbers of orcas in Saanich Inlet and see them as an indicator species for the health of the environment (NEB 2015f).

Marine Birds

Duck hunting by net was a former practise of the *WSÁNEĆ*. Working with the Songhees and the Lummi, they once used a net site in Mosquito Pass which runs between San Juan Island and Henry Island on the American side of the shipping lanes. The net was strung on a pole placed on Henry Island while the other pole was placed across the water on Pole Island (about 30 m apart). Pauquachin First Nation continues to duck hunt and it accounts for the majority of hunting reported by members (NEB 2015f). Surf scoter, usually called black duck, is considered a sacred bird by Pauquachin and the primary species for longhouse ceremonies. Ducks are a staple at ceremonies and are served at funerals and important community events. Ducks in general are hunted at Coles Bay. Surf scoter are hunted on the beach in East Saanich and within Saanich Inlet from dugout canoe, between the Pauquachin community and Brentwood Bay and sometimes south to Goldstream (NEB 2015f).

Pauquachin First Nation members report hunting cormorant regularly in the autumn (NEB 2015f) and have gathered and consumed seagull eggs within living memory from Mandarte Island (in Haro Strait, east of Sidney Island, near the shipping lanes) (NEB 2015f).

Pauquachin hunters experience barriers to hunting due to restrictions and regulations relating to licensing and public safety in their traditional hunting areas (NEB 2015f). They observe that waterfowl, like many other species, have reduced populations (NEB 2015f).

4.2.3.2.3.2 Cultural Practices and Sites

Pauquachin First Nation is one of five bands that make up the *WSÁNEĆ* Nation, along with Tsawout, Tsartlip, Tseycum and Malahat bands. Each of these represent a permanent winter settlement located on the Saanich Peninsula or southern Vancouver Island. Historically, these communities did not consider themselves to be separate from one another, they were simply different villages of interconnected families and households. *WSÁNEĆ* organized themselves through “several interrelated systems of governance including the inherited rights of and roles within extended family units, the reef-net fishery, and the longhouse and winter dancing” (NEB 2015). Dancing in winter was held once a week or daily for several weeks, the longhouse was, and continues to be, the site of ceremonies and knowledge exchange. Younger people have the opportunity to listen and take counsel from Elders in the longhouse (NEB 2015f).

Marine resources serve critical roles in the longhouse ceremonies and other cultural purposes such as providing materials or reason for cultural practices (e.g., sockeye salmon run) (NEB 2015f).

Marine Travel Routes

Places or locations were named as they would appear to people approaching by canoe. This naming practice emphasized how fundamental the traditional marine territory was to *WSÁNEĆ* people (NEB 2015f). Pauquachin First Nation report that members continue to use traditional canoe routes for marine travel (NEB 2015f). Pauquachin First Nation members continue to access fishing sites on the eastern side of the Strait of Georgia (i.e. Roberts Bank) via Active Pass (NEB 2015f). Weather, tides, currents and vessel traffic are all considerations in planning routes to access harvesting sites (NEB 2015f).

Several marine travel sites that traverse the channels that separate Saanich Peninsula from the southern Gulf Islands have been identified by Pauquachin First Nation members (NEB 2015). The route from Saanich Inlet to Stuart Island crosses the shipping lanes, as well as routes in proximity to the shipping lanes (NEB 2015).

Other Cultural Sites

Pauquachin First Nation has reported that important sites include those with traditional place names, heritage (archaeological) sites, harvesting locations (as reviewed above), trails and travel routes, reef-net sites, graves, and special and sacred story sites (NEB 2015f).

Pauquachin First Nation has identified *W̱SÁNEĆ* place names for most of the southern Gulf Islands and San Juan Islands in the United States. Place names are frequently known by the resources that were traditionally collected. Place names are known, but not limited to, the following: Blakely Island; Prevost Island; Sucia Island; D'Arcy Island, Little D'Arcy Island, Sidney Island; James Island; as well as for most of the small islands close to the shores of the Saanich Peninsula, including Coal Island; Shell Island; Piers Island; Arbutus Island; Portland Island; Moresby Island; Halibut Island; and Gooch Island Group (NEB 2015). These islands are within the Marine Shipping Area and in proximity to the existing shipping lanes.

In the past, *W̱SÁNEĆ* settlements were located throughout the islands and sheltered bays of the Saanich Peninsula. Recorded village sites on Sidney Island, Stuart Island, Salt Spring Island, and Mayne Island as well as on South Pender Island, Samuel Island, and Saturna Island (NEB 2015f). Pauquachin First Nation notes that the Cole Bay village (their present-day home) was founded or reoccupied in the mid-nineteenth century to be closer to winter dances and to avoid attacks from northern First Nations. This village, as a winter village, was used three to six months of the year as part of the seasonal round that took families to other locations, also within the Marine Shipping Area, through spring, summer and autumn (NEB 2015f). *W̱SÁNEĆ* families also travel to Point Roberts, a settlement where reef-netting took place (NEB 2015f).

Pauquachin First Nation has reported that *W̱SÁNEĆ* cultural ties to location throughout the southern Gulf Islands and San Juan Islands, including harvesting locations identified in previous sections, are held in Elders' teachings that say these islands were made by the Creator from their *W̱SÁNEĆ* ancestors. Pauquachin First Nation regards these locations are considered sacred to them (NEB 2015f).

4.2.3.2.4 Tsawout First Nation

Tsawout First Nation has six reserves located on southeast Vancouver Island and on nearby Gulf Islands: Bare Island 9, on Mandarte Island in Haro Strait; East Saanich 2, at the south shore of Saanichton Bay; Fulford Harbour 5, on Salt Spring Island; Pender Island 8 on South Pender Island Saturna Island 7, on the easterly point of Saturna Island; and Goldstream 13, at the south end of Saanich Inlet's Finlayson Arm, at the mouth of the Goldstream River (AANDC 2019d). The Bare Island 9, Pender Island 8, and Saturna Island 7 reserves are shared with Tseycum First Nation. The Goldstream reserve is shared with four other First Nations (i.e., Malahat First Nation, Pauquachin First Nation, Tsartlip First Nation, and Tseycum First Nation), known together with Tsawout First Nation as the Saanich Nation or *W̱SÁNEĆ* (AANDC 2019d).

As of September 2019, the registered population of Tsawout First Nation is 955 with 547 living on-reserve and 408 off-reserve.

Tsawout First Nation, like other *W̱SÁNEĆ* Nations, speak *SENĆOŦEN* of the Northern Straits Salish language family (First Peoples Cultural Council 2019d). Tsawout report that they are related to the Semiahmoo, who also speak a dialect of Northern Straits Salish (NEB 2015a,b).

Tsawout First Nation is a signatory to the Douglas Treaties and has established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries “as formerly” (AANDC 2018). Tsawout First Nation assert that they have rights, including title, that they continue to exercise throughout their traditional territory (Tsawout First Nation 2015a). The Tsawout First Nation state that they use the Salish Sea for the purposes of fishing, hunting, gathering, and other harvesting, travelling and exercise of their Douglas Treaty rights (Tsawout First Nation 2015a). The international marine shipping lanes are also close to the Tsawout First Nation reserves on Vancouver Island, Saturna Island, South Pender Island, and Mandarte Island (NEB 2014). Tsawout has previously stated that shipping vessels pass through their territorial waters (NEB 2014).

Tsawout First Nation is affiliated with the *W̱SÁNEĆ* Nations and the area of overlap with *W̱SÁNEĆ* Nation traditional territory and the Marine Shipping Area is presented in Figure 4.2-5.

The summary provided below is based on the *Preliminary Traditional Marine and Land Use Baseline, Prepared for Tsawout First Nation’s Review of the Roberts Bank Terminal 2 Project, Marine Shipping Assessment* (Tsawout First Nation 2015) and *Tsawout Marine Use Study, Prepared for Tsawout First Nation’s Review of the Kinder Morgan Trans Mountain Expansion, Marine Shipping Component* (Tsawout First Nation 2015). As presented in maps from the studies, Tsawout First Nation has used the shipping corridor as the spatial scope for their analysis with the proviso that the data in their reports was based on different spatial scopes. The Marine Shipping component notes that use described in the study is within the memories of the participants and is in the recent past and can be considered more or less contemporary with the present (Tsawout First Nation 2015a).

Tsawout First Nation notes that prior to signing of the North Saanich Treaty of 1852, and the creation of reserves and “bands”, *W̱SÁNEĆ* people had winter villages throughout the southern Gulf Islands and San Juan Islands, and on every bay of the Saanich Peninsula (Tsawout First Nation 2015c). The largest reef-netting ground was located across the Strait of Georgia at Point Roberts (Tsawout First Nation 2015c). Tsawout First Nation also claims villages along the Fraser River (Tsawout First Nation 2015b).

W̱SÁNEĆ tailored seasonal movements to the timing of resources and events and exploited different ecological niches. Their use reflects a complex system of community and family that links them to territory and resources (“animal relatives”) (Tsawout First Nation 2015a). *W̱SÁNEĆ* people moved to their summer homes for specific resources and would be sustained by the resources that they harvested and preserved through the harsher winter months (Tsawout First Nation 2015c).

Tsawout First Nation use ethnographic accounts to explain that *W̱SÁNEĆ* identity and marine harvesting are elemental and of everything within their habitat. *W̱SÁNEĆ* culture with respect to reef-net sites are better understood if thought of as families belong to their sites. Sites were managed by families, and usually an Elder was appointed as a manager and that individual would have “an intricate knowledge of the sites, the salmon, and all the ritual and technical aspects of successful reef-net construction and use” (Tsawout First Nation 2015c).

The marine environment continues to drive Tsawout’s social and cultural life, with the sharing of resources playing as much a role in *W̱SÁNEĆ* subsistence economy as the harvesting of those resources, increasing food security and supporting Tsawout identity (Tsawout First Nation 2015c). Marine resources also play a critical role in health,

and Tsawout believe these resources provide medicinal value to them, not just food. Sharing amongst the community, especially since there has been a reduction in resource availability from what they had experienced in the past. Other factors such as harvesting restrictions, the expenses associated with maintaining vessels and gear, and the time needed away from wage-labour jobs also encourage sharing amongst *WSÁNEĆ* members (Tsawout First Nation 2015). Certain members are specialists and active harvesters gather the majority of resources that are then circulated within the social and food-sharing networks and provide for community events such as spiritual gatherings, funerals, and the longhouse (Tsawout First Nation 2015c).

4.2.3.2.4.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Vegetation

Tsawout First Nation currently harvest bull kelp, eelgrass, red lavel or red sea lettuce and sea wrack and other seaweeds for food, fishing and medicine (NEB 2015). Some are seasonally harvested but some are harvested year round. Eelgrass beds are harvested less but tended because they provide habitat for other species that are harvested. Seaweed was once harvested in large amounts and was sold to Chinese immigrants (Tsawout First Nation 2015d).

Seaweed gathering locations have been identified in the Marine Shipping Area, and many are along the shoreline adjacent to shipping lanes, including South Pender Island, Saturna Island, Moresby Island, Reay Island, Stuart Island (in the United States), Tumbo Island, Gooch Island, Sidney Island, James Island, Brethour Island, Sheep Island, Domville Island, Forrest Island, Little Group Islands, Coal Island, Portland Island, D'Arcy Islands, 10 Miles Point (near Victoria), the shoreline at Saanichton Bay, and the northern tip of Saanich Peninsula (NEB 2015, Tsawout First Nation 2015d). Tsawout First Nation has indicated that only a small percentage of the Tsawout members reported harvesting seaweed in the year prior to the study. The amounts harvested were enough to share with multiple families (NEB 2015 b; Tsawout First Nation 2015d).

Tsawout First Nation has expressed concern about kelp and eelgrass disappearing. Both provide habitat for species that are harvested by *WSÁNEĆ*. Tsawout have noted that bull kelp was abundant and so strong it could provide anchor for boats. While Tsawout has noted that the seaweeds are becoming more scarce they do not understand why this is occurring (Tsawout First Nation 2015d).

Marine Invertebrates

Tsawout First Nation has mapped their marine invertebrate harvesting for traditional purposes and all it occurs within the Marine Shipping Area and at a number of preferred locations adjacent to or within the shipping lanes, including these Canadian locations: East Point on Saturna Island, Tumbo Island, south Pender Island, Moresby Island, Gooch Islands (including the cooper and North and South Cod Reefs), Mandarte Island, Halibut Island, Sidney Island, and Little D'Arcy Island. On the American side, Stuart Island and Turn Point in Boundary Passage. Tsawout First Nation that location closer to the Tsawout community have declined due to erosion, development, pollution, species loss and over-regulation, and that locations around South Pender Island, Saturna Island and the east side of Sidney Island are preferred because they are not contaminated and less likely to be overharvested (Tsawout First Nation 2015d).

Crab is one of the most commonly harvested and relied upon wild protein sources for Tsawout First Nation. Preferred locations for crab harvesting identified in Saanichton Bay, and surrounding Sidney Island, James Island, Mandarte Island, and Saturna Island; D'Arcy Island was also identified as a crabbing site (Tsawout First Nation 2015d). Crabs are extremely important to the *WSÁNEĆ* subsistence economy and are harvested most heavily from February through to November (Tsawout First Nation 2015e). Crab fishers (superharvesters) will spend nearly every day on the water harvesting 100-300 per day during the most productive season. Crabs are harvested by superharvesters and they are shared amongst families and provided to events and ceremonies (Tsawout First Nation 2015e). Competition from commercial crab fishing and environmental changes, such as climate change, are resulting in effects to traditional harvesting locations (Tsawout First Nation 2015e).

Bivalves have cultural and dietary importance to Tsawout members. Bivalves harvested include clams (butter, littleneck, horse, manila, and cockles). Cockles are harvested in July while butter, littleneck and manila are harvested in the spring and early summer months (Tsawout First Nation 2015f). Clams were once cultivated in gardens in bays to increase production (Tsawout First Nation 2015 d,e). Traditionally, bivalves were harvested once a year from the same, highly productive sites but now are harvested through a longer period over the year. Tsawout First Nation reports that testing for Bivalve Shellfish Biotoxins and sanitary contaminants is done at some locations by Health Canada to confirm their safety for consumption but pollution-free clam beds are becoming more difficult to find. To find suitable harvest location, Tsawout harvesters must travel outward towards the shipping lanes (e.g., Little D'Arcy Island and Sidney Island) to find clean beaches (Tsawout First Nation 2015e). Tsawout superharvesters share clams more than they consume them at home. Mussels are rarely harvested while oysters are sometimes harvested but less commonly than clams. Tsawout First Nation is working with non-Aboriginal groups around Victoria and Saanich to restore clam and oyster beds in the Gulf Islands (NEB 2015b).

Sea urchin has been described by Tsawout First Nation as an important food for community and longhouse events, and as a favourite food, a delicacy, and important medicine (Tsawout First Nation 2015e). Sea urchin roe is considered an excellent source of iron. Sites for harvesting sea urchin near the southern tips of both Saturna Island and South Pender Island, and along the waters from the southeastern shore of Moresby Island to Gooch Island, along the east sides of both Mandarte Island and Halibut Islands, north and east of both D'Arcy Island and Little D'Arcy Island, throughout the Little Group Islands, the islets west of Coal Island, east of Piers Island, along the southern edge of Portland Island, inside the shipping lane between Sidney Island and Henry Island, and along a reef on the east side of Gooch Island (Tsawout First Nation 2015e). On the northwestern shore of Stuart Island, on Boundary Passage, lies what Tsawout's most reliable harvesting location for sea urchin and the only giant red urchin site (Neb 2015b) Tsawout First Nation 2015e). Sea urchin is most frequently harvested from February to June but it can occur throughout the year (Tsawout First Nation 2015e). Tsawout First Nation reports that vessel wake disrupts urchin harvesting with sea rakes by disturbing sediment. The commercial urchin harvest and environmental changes have results in reduced harvesting. Sea urchin plays a crucial role in the grieving process and are sought for funerals (Tsawout First Nation 2015e).

Octopus remains a sought-after species and is hunted throughout the southern Gulf Islands and San Juan Islands, including but limited to locations near the shipping lanes.

Tsawout First Nation harvest chitons (*TENSEWEĆ*) within the MSA throughout the Gulf Islands, including the Pender Islands (e.g., Bedwell Harbour), Saturna Island (e.g., East Point), Sidney Island, Gooch Island, the smaller islands off Sidney (e.g., Coal Island and Piers Island), and 10 Mile Point (NEB 2015b, Tsawout First Nation 2015d).

Chitons were reportedly once plentiful along the shore of Sidney Island, but Tsawout First Nation notes that they have become increasingly rare (Tsawout First Nation 2015e).

Tsawout First Nation participate in commercial fishing through Salish Strait Seafoods, a company that has been active since 2011, and that is equally owned and run by Tsawout First Nation, Malahat First Nation, T'Sou-ke First Nation, Scia'new First Nation, and Snaw-naw-as (Nanoose) First Nation (NEB 2015b). Marine invertebrate species targeted commercially through the company included shrimp, prawn, and crab (NEB 2015b).

Marine Fish

The centrality of salmon to Tsawout First Nation, as well as the absence of a freshwater river in Tsawout territory, compelled Tsawout to get their salmon from the sea; for this reason, Tsawout say they are referred to as "the Saltwater People" (NEB 2014b). The technology developed for harvesting salmon from the sea by reef-netting is the defining element of Tsawout traditional life (Tsawout First Nation 2015d).

Salmon harvesting for all five species is reported as intensively pursued at hundreds of locations that line the shipping lanes through Segments A and B of the MSA, as well as in other areas within and beyond the MSA. Examples within the MSA includes sites around Tumbo Island and Saturna Island (e.g., East Point), along the southern shores of Saturna Island and the Pender Islands, in the channel between Moresby Island and the Pender Islands (i.e., Swanson Channel), around Sidney Island, James Island, and the D'Arcy Islands, east and south of Coal Island, and from Saanichton Bay south and west to Port Renfrew (in Segment D) (Tsawout First Nation 2015b) and others. Salmon harvesting typically occurs from as early as February into the fall but is concentrated between May or June and September (Tsawout First Nation 2015b). Tsawout First Nation has said that the boats and equipment of Salish Strait Seafoods are used every year to go seining for their food fishery target of 10,000 sockeye (NEB 2015b).

Lingcod and rockfish (i.e., rock cod and red snapper) are taken at multiple sites throughout the Boundary Passage and Haro Strait area. Within the MSA, these sites include off the southern ends of Saturna Island, South Pender Island, and Moresby Island, including a reef that links the Pender Islands to Moresby Island, and surrounding Sheep Island, Domville Island, Forrest Island, Gooch Island, Coal Island, and Halibut Island, and others (NEB 2015b). Tsawout First Nation has reported that one of the most important cod harvesting locations lies around D'Arcy Island southwest to Big Zero Island (Zero Rock) and Little Zero Island (Little Zero Rock), off Cordova Bay (NEB 2015b, Tsawout First Nation 2015e). Cod was and continues to be fished "frequently" year-round, with the largest catches reportedly occurring in July (Tsawout First Nation 2015e). Tsawout First Nation reports that rock cod and black cod are fished commercially by Salish Straits Seafoods (NEB 2015b). Halibut, previously numerous off the southern shore of Vancouver Island, has been sought near the shipping lanes in the vicinity of Boundary Passage from East Point to Taylor's Beach on Saturna Island and south of the Pender Islands and Moresby Island, and in Haro Strait southwest of D'Arcy Island (i.e., off Cordova Bay) and near Halibut Island (Tsawout First Nation 2015c). Reid Harbour on the southwestern aspect of Stuart Island (U.S. side of Boundary Passage) has also been identified as a halibut fishing location (Tsawout First Nation 2015c). Halibut fishing traditionally commenced as early as January, and while some Tsawout report harvesting halibut in early spring and the summer months, an increase in halibut fishing in fall has been reported (Tsawout First Nation 2015c). Halibut is also among species reportedly fished commercially through Salish Straits Seafoods (NEB 2015b).

Sole were reportedly harvested in the past in the MSA in Saanichton Bay, Cowichan Bay and south of that location (i.e., near Manley Creek), a reef between Moresby Island and the Pender Islands, and at sandbars east of James Island (Tsawout First Nation 2015c). Saanichton Bay remains a harvesting location for sole and flounder, extending south along the east side of the Saanich Peninsula. Other locations for halibut fishing close to the shipping lanes include the area around James Island and between James Island south to the D'Arcy Islands and northwest of Sidney Island (Tsawout First Nation 2015c).

Herring has been taken in Active Pass, in harbours on the southern aspect of Salt Spring Island, in Saanich Inlet, in Boundary Passage, and between James Island and Sidney Island in Haro Strait, with herring roe collected in the bays of Saanich Inlet (e.g., Mill Bay, Brentwood Bay). Other locations for herring include Saanichton Bay south along the Saanich Peninsula to an area west of D'Arcy Island (Tsawout First Nation 2015b). February traditionally marked the onset of the earliest herring runs; however, Tsawout members have reported a steady decline in herring availability in recent decades (Tsawout First Nation 2015b). When harvested, herring is more often used for bait and less frequently for food (Tsawout First Nation 2015b).

Marine Mammals

Tsawout First Nation has used marine mammals for food, manufacturing, clothing, ceremony, and trade. Locations within MSA, include Tumbo Island, in the waters off Saturna Island, the east side of the Pender Islands, and off the south end of South Pender Island, adjacent to the shipping lanes (Tsawout First Nation 2015b). Seals were traditionally hunted near Salt Spring Island, including at a sacred seal hunting place marked by a petroglyph, and seals and sea lions were once taken in the San Juan Islands (Tsawout First Nation 2015c). An important orca whale location was identified at D'Arcy Island (Tsawout First Nation 2015b).

Tsawout First Nation has reported that whales, particularly the orca (*KELŁOLEMEĆEN*), are key figures in oral history, providing a sense of place and well-being; however, few references indicate that Tsawout First Nation traditionally hunted whales or relied on them for traditional purposes (NEB 2015b). A Tsawout First Nation leader has described whales as being like the Tsawout and are relatives of the Tsawout (NEB 2015a).

Marine Birds

Marine birds harvested by Tsawout First Nation for traditional purposes include ducks and geese (NEB 2014b). Preferred species have been identified to include surf scoters, pintails, mallards, "sea pigeon," mergansers ("sawbill"), murrelets, buffleheads, and wigeons (NEB 2015b). Other species targeted include Barrow's goldeneye, common goldeneye, Canada geese, and brant (Tsawout First Nation 2015b). The harvesting season runs from fall through winter (Tsawout First Nation 2015b).

Surf scoter, or "black duck," is said to be sacred, preferred for duck soup and for a number of other ceremonial uses within the longhouse (NEB 2015b, Tsawout First Nation 2015b). Tsawout First Nation has also reported, however, that surf scoter is no longer available in the same numbers as they were in the past, and that harvesting these ducks is now more expensive because hunters must now travel further to find them (Tsawout First Nation 2015b). Some hunters have reportedly opted to target other species, such as "puddle ducks" and geese, but they are not considered "adequate or acceptable replacements" for surf scoter (Tsawout First Nation 2015b).

Traditional duck hunting took place generally in open water, and at locations near the shipping lanes within the MSA. Locations noted are Boat Pass and Mitchell Bay in the San Juan Islands, Saanichton Bay, Saanich Inlet, and

in the waters surrounding Sidney Island, James Island, and D'Arcy Islands (Tsawout First Nation 2015b). Several contemporary hunting locations have also been identified for the area surrounding Sidney Island and James Island, with a heavy cluster of sites from Saanichton Bay south towards Cordova Bay, as well as sites adjacent to the shipping lanes on the south side of Saturna Island and south and west of South Pender Island (Tsawout First Nation 2015b).

Tsawout First Nation has reported that seagull eggs were once harvested (e.g., from Saturna Island, Pender Islands, Halibut Island) but are no longer eaten since birds have been observed eating garbage (NEB 2014b, Tsawout First Nation 2015b).

4.2.3.2.4.2 Cultural Practices and Sites

Tsawout people's identity and beliefs are rooted in a *WSÁNEĆ* worldview, and that the fundamental relationship of their traditional marine territory to this worldview and traditional way of life is illustrated by the practice of naming places and locations as they would appear to people approaching by canoe, which was the main mode of transportation (NEB 2015b; Tsawout First Nation 2019). Tsawout First Nation has also reported that *WSÁNEĆ* traditionally believe that all living things were once people who were transformed and then given to Tsawout First Nation as gifts (NEB 2015b). Respect for these gifts is shown, for example, through the first salmon celebration held at the onset of salmon harvesting season (NEB 2015b).

Tsawout First Nation leader says that the *WSÁNEĆ* clan system is central to Tsawout culture and traditions still practised today (NEB 2015a; Tsawout First Nation 2014). Each clan is associated with a species that is important for gatherings and functions (e.g., killer whale (orca) and (sawbill) merganser) (NEB 2015a). As a result, any impact to or loss of that species is felt culturally and spiritually by the clan related to that species (NEB 2015a). A Tsawout people continue go out on the water for spiritual purposes, to meditate and carry out their spiritual practices (e.g., burning ceremonies conducted on the shore of Saanichton Bay), and that waters in Tsawout territory are also used for renewal and cleansing ceremonies (NEB 2015a).

Marine Travel Sites

Tsawout First Nation use their travel routes seasonally to access fishing, gathering, and hunting locations, and are planned around weather, tides, currents, and other vessel activities (NEB 2015b; Tsawout First Nation 2014). Marine travel routes are chosen based on familiarity, knowledge of "rips", productivity and availability of resources, and with the limitations of equipment in mind (NEB 2015b; Tsawout First Nation 2014). One Tsawout superharvester reportedly travels daily in winter on a long loop within the MSA, from Saanichton Bay to Zero Rock and the east side of D'Arcy Island and Sidney Island, then north to Halibut Island and Mandarte Island, on to Gooch Island, then north to Stuart Island or even further north to the Bell 2 reef at Boundary Passage (Tsawout First Nation 2014). Tsawout First Nation members say they travel by boat to preferred deer hunting areas, where they anchor small outboards for transporting their harvests back to the community (Tsawout First Nation 2014a).

Other Sites of Importance

SENĆOTEN named places, and locations associated with their culture such as reef-net sites, anchorages, gravesites, archaeological sites, longhouse sites, special or sacred story locations, or clam gardens are important to Tsawout First Nation (Tsawout First Nation 2014a).

Tsawout First Nation has identified Point Roberts (Segment A of the MSA) as the location of the Saanich people's most important village site and associated reef-net sites. They would continue to use this area but they have been forced out over time (Tsawout First Nation 2015a).

Other sites of importance to Tsawout First Nation that are located within the MSA (in Segment B) include a first village site in Tod Inlet, and burial sites on Pender Island, Scull Island (south of Pender Island), Saturna Island, and Cabbage Island (beside Saturna Island) (Tsawout First Nation 2014a).

Tsawout First Nation expressed concern that ship wake is demolishing archaeological sites, burial grounds, and other heritage sites close to the water, including in the Gulf Islands (NEB 2014b, NEB 2015b, Tsawout First Nation 2015a, b).

Summer camps throughout the Gulf Islands were reportedly used by Tsawout First Nation, and area beaches were used for traditional ceremonies (i.e., rites of passage for both girls and boys) (NEB 2014b). Henry Island (in the U.S.A.) was reported as a well-established summer camp site used for fishing and reef-net fishing (NEB 2014b).

A small island off Salt Spring Island has been identified as a location where Tsawout First Nation members used to stop off and dry their fish (NEB 2014b). Tsawout First Nation has also identified a small island near Saturna Island as a historical spiritual training centre, and this island, considered a sacred island, is still used by members as a spiritual place today (NEB 2014b).

4.2.3.2.5 Tsartlip First Nation

Tsartlip First Nation (*WJOLELP*) has four reserves located on southeast Vancouver Island and other islands on the western side of the Strait of Georgia: Mayne Island 6, located on the island's northwestern tip, along Active Pass; the whole of Senanus Island 10, which lies within Saanich Inlet; South Saanich 1, located at Brentwood Bay, on the eastern shore of Saanich Inlet; and Goldstream 13, at the south end of Saanich Inlet's Finlayson Arm, at the mouth of the Goldstream River. The Goldstream reserve is shared with four other First Nations (i.e., Malahat First Nation, Pauquachin First Nation, Tsawout First Nation, and Tseycum First Nation), known together with Tsartlip First Nation as *WSÁNEĆ* (AANDC 2019f, NEB 2015h).

As of September 2019, the registered population of Tsartlip First Nation is 1017 members, of which 537 live on the Tsartlip First Nation reserve South Saanich 1 in Brentwood Bay, with 480 living off-reserve (AANDC 2019f).

Tsartlip First Nation, like other *WSÁNEĆ* Nations, speak a dialect of *SENĆOŦEN*, part of the Northern Straits Salish language family (Tsartlip First Nation 2019a).

Tsartlip First Nation is a signatory to the Douglas Treaties and has established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries "as formerly" (AANDC 2018; Tsartlip First Nation 2019). Tsartlip First Nation has said that they had specifically asked for the inclusion of their fishing right in their Douglas Treaty because it so important to who they are as a people (NEB 2015h). Tsartlip First Nation also asserts Aboriginal rights, including title (NEB 2014e).

Tsartlip First Nation has stated that their rights apply throughout *WSÁNEĆ* territory, from Southern Vancouver Island through the Strait of Georgia and Gulf Islands to the Fraser River, an area that encompasses their fishing stations, hunting, trapping, and gathering areas, winter and summer villages, and spiritual and cultural sites (Tsartlip First

Nation 2019). Tsartlip First Nation has indicated that marine shipping lanes traverse waters through the heart of *WSÁNEĆ* marine territory and close to their reserves on Vancouver Island and Mayne Island (NEB 2014f; Tsartlip First Nation 2019b).

A map of the collective territory of the *WSÁNEĆ* (Saanich Nation), and the area of overlap with the Marine Shipping Area (MSA), is shown in Figure 4.2-5. This figure does not include Current Use locations mentioned in the following summary that lie outside this territory.

4.2.3.2.5.1 Marine Resource Use

Tsartlip First Nation has reported that they are known as the “Saltwater People,” having lived on the islands and the sea as “fishermen, sailors, navigators, [and] canoe builders” and because they go to sea to harvest salmon (NEB 2014g; Tsawout First Nation 2019b).

Marine Fish and Fish Habitat

Marine Vegetation

Tsartlip harvesters report numerous seaweed harvesting locations exposed to the shipping lane, including sites surrounding the Trial Islands, Great Chain Island, and Discovery Island; along the east shore of San Juan Island; on the south shore of D’Arcy Island; along the southeastern shore of Sidney Island; on the east shore of Henry Island; and on the south shore and in the eastern foreshore of Moresby Island (Tsartlip First Nation 2019b). According to a Tsartlip First Nation Elder, seaweed, including red laver and sea lettuce (both traditionally called *ŁEKES*), was harvested in the past. Seaweed or red laver was harvested in the intertidal area by cutting them away from the rocks with a sharp knife, dried in the sun, and compacted into blocks to store for the winter (NEB 2014g). Seaweed was either used in cooking, such as eating boiled red laver with clams, or eaten dried (NEB 2014g). Tsartlip First Nation has reported that seaweed is harvested in April (NEB 2014i).

Marine Invertebrates

Tsartlip First Nation harvesting for sacred and preferred marine species, such as chiton and sea urchin, both of which have important cultural value and can be difficult to find in *WSÁNEĆ* territory. Harvesting chitons take place on the shores of Discovery Island, in the MSA (Tsartlip First Nation 2019b). Sea urchin sites are within the western and northern foreshore of D’Arcy Island, along the southern tip of Sidney Island and at a reef between Gooch Island and within the MSA, along the western shore and foreshore of Prevost Island and throughout the southern and eastern foreshore of Tumbo Island (Tsartlip First Nation 2019).

Tsartlip First Nation have bivalve harvesting sites throughout the southern Gulf Islands. They harvest cockles and clams on southeastern shore of South Pender Island and southeastern tip of Saturna Island. Mussel and geoducks are harvested at the southeastern tip of Saturn Island and oyster harvesting takes place on the southwestern foreshore of Mandarte Island, the eastern foreshore of Moresby Island, and the southeastern tip of Saturna Island. Cowichan Bay, southern Salt Spring Island, east of Saanich Peninsula, and north of Sidney Island have also been identified as harvesting sites (NEB 2014e,g). Clams and crabs were harvested by Tsartlip First Nation members on sandy beaches, and mussels and sea urchins were harvested on rocky beaches (NEB 2014g). Saanich people reportedly harvested clams in the low tides during the winter months (NEB 2014i).

Crab has become important in *WSÁNEĆ* subsistence economy as well (Tsartlip First Nation 2019b). Preferred crab harvesting locations are reported in Saanichton Bay, and surrounding Sidney, James, Mandarte, and Saturna Island (Tsartlip First Nation 2019).

Marine Fish

Tsartlip First Nation describe extensive foundational cultural values associated with salmon harvesting; a traditional food source that they rely upon for subsistence throughout the entire year (Tsartlip First Nation 2019b, NEB 2014g, 2015h). Sharing fish with members and Elders is important to Tsartlip First Nation members, especially during winter, when families and unemployed people depend on salmon for survival (NEB 2015h).

Tsartlip First Nation fishing territories followed the main migration route of sockeye salmon (NEB 2014g). Salmon start to trickle through their territory in the summer, with the peak of the salmon run taking place in August and sometimes into September (NEB 2015h). Harvesting primarily takes place in July and August, though sometimes as early as June and into early September (NEB 2015h). Salmon is harvested on several occasions throughout the summer to allow community members enough time to process and preserve the salmon for the winter between harvests (NEB 2015h). Processing and preserving the salmon, which involves cutting, cleaning, freezing, smoking, or canning the fish, can take weeks and involves the entire community (NEB 2015h).

Tsartlip First Nation has said they developed reef-net technology (*SXOLE*) to fish for salmon in the ocean and that this unique harvesting technique was a supernatural gift from the “Salmon People” (Tsartlip First Nation 2019b). The reef-net was used in bays when salmon were moving out and when the tide was running, and often required up to six men using two canoes to set the nets (NEB 2014e,g).

Reef-net locations (*SWÁLET*) once used by Tsartlip First Nation have been described as sacred, connecting the community to those locations “out in the islands” (NEB 2014e). Locations of historic *SENĆOŦEN* reef-net sites within the MSA reported by Tsartlip First Nation include Active Pass at the northwest side of Mayne Island; in Swanson Channel and Boundary Pass near the west side and the southern tip of North Pender Island; the southern tip of South Pender Island; and at Race Rocks (NEB 2014h). Historic reef-net sites in the U.S.A have been identified off the southeast side of Point Roberts; Cherry Point; throughout the San Juan Islands, including Waldron Island, southeast Stuart Island, northwest Orcas Island, along the eastern side of Haro Strait with multiple sites on San Juan Island, and along the northwest, southwest, and southeast sides of Lopez Island (NEB 2014h). Tsartlip First Nation members have stated that they recently joined members from the Lummi Tribe (a closely related U.S.-based group) to set up a reef-net fishery in Mitchell Bay, which lies along the shipping route on the west coast of San Juan Island (NEB 2014e Tsartlip First Nation 2019b).

While reef-netting in the ocean was central to Tsartlip First Nation fishing, the Nation also harvested coho and dog (chum) salmon in the smaller streams within their territory; however, Tsartlip First Nation has said that they depend on ocean fish, such as sockeye and pink salmon (NEB 2014g), and that some of their members still make a living by fishing (NEB 2014e). Tsartlip First Nation identify kill sites on the far side of the Strait of Georgia running from Bowen Island to Point Roberts, at Roberts Banks and Sturgeon Banks, from south of Burrard Inlet at Point Grey to the international border, at Stuart Island, along the southwestern side of San Juan Island, and running the length of the international border from southeast of Saturna Island to west of San Juan Island (Tsartlip First Nation 2019b)

Cod and rockfish were fished with Active Pass being a particularly well used spot for rock cod and herring fishing. Elders reported lingcod and rockfish harvesting locations in Saanichton Bay, between San Juan and Sidney islands,

from Moresby over to Pender, around Gooch and Sidney Islands, at East Bay, from East Point to Taylor's Beach on Saturna Island, in the Straits, near Stuart Island, and on a reef that links Pender and Moresby Islands (Tsartlip First Nation 2019b)

Dogfish and herring roe are among other fish species the *SENĆOŦEN* people, including Tsartlip First Nation, have said they traditionally harvested in waters within the MSA (NEB 2014e,g,h, Tsartlip First Nation 2019b). Dogfish were caught at the fishery in Goldstream and herring roe was harvested at locations within the MSA, including the south side of Salt Spring Island; the east side of Saanich Inlet; and in the U.S.A. in Haro Strait on the west side of San Juan Island (NEB 2014g).

Halibut fishing has been important to *WSÁNEĆ* members throughout the Gulf Islands (Tsartlip First Nation 2019). *WSÁNEĆ* harvesters report current halibut harvesting locations south of Pender and Moresby Islands, southwest of D'Arcy Island, and near Halibut Island, as well as in Reid Harbour at Stuart Island on the east side of the MSA and the shipping lanes (Tsartlip First Nation 2019b). Flounder and sole are also fished at these location (Tsartlip First Nation 2019b).

Marine Mammals

Harbour seal, California sea lion, and the Northern sea lion are all found in *WSÁNEĆ* marine territory and were hunted at the same time as the humpback salmon (Tsartlip First Nation 2019b). Sea lions were also eaten opportunistically, often after they were killed or injured by orca whales (Tsartlip First Nation 2019b). Porpoise were also used for food. Orca is a prominent figure in *WSÁNEĆ* cosmology and oral history, and there are some references indicating that the *WSÁNEĆ* hunted whales or relied on them for food, oil, or trade (Tsartlip First Nation 2019b). Recent submissions on traditional use note that the understanding of the current use of marine mammals by Tsartlip First Nation is limited and requires more research (Tsartlip First Nation 2019b).

Marine Birds

WSÁNEĆ Elders report traditional duck harvesting locations at Boat Pass and Mitchell Bay in the San Juan Islands, Saanichton Bay, Saanich Inlet, and in the waters surrounding Sidney, James and D'Arcy Islands (Tsartlip First Nation 2019b). These duck hunting areas exposed to the shipping lane still in use, on the south side of Saturna Island, at sites south and west of South Pender Island, surrounding Sidney and James Islands, and clustered heavily in Saanichton Bay, and extending south down the east coast of Vancouver Island towards Cordova Bay (Tsartlip First Nation 2019b). Contemporary duck hunting activities on the eastern waters of Sidney Island, Sidney Spit, Sidney Channel, the water surrounding James Island, the spit at Tsawout, and Saanichton Bay. The surf scoter is the most preferred of all the species and is used for ceremonial purposes (Tsartlip First Nation 2019b). Tsartlip members note that surf scoter is becoming more, rare and that they must go farther to find them resulting in increased cost (Tsartlip First Nation 2019b). Other species are taken as substitutes (e.g., geese and puddle ducks) but are not as preferred.

Tsartlip First Nation have gathered seagull eggs, and that this harvesting often occurred in May, while visiting camas bulb harvesting sites at locations in the U.S.A., including Little Pathos Island and Spiden Island (Tsartlip First Nation 2019b) as well as D'Arcy, Mandarte, and Seagull Islands (Tsartlip First Nation 2019b).

4.2.3.2.5.2 Cultural Practices and Sites

Marine resources remain a preferred and highly valued part of the *W̱SÁNEĆ* diet, and an important part of community feasts and events and used throughout the year (Tsartlip First Nation 2019b). Reef-net fishing is described as what it meant to be a *W̱SÁNEĆ* person (Tsartlip First Nation 2019b). Members will burn salmon as part of a burn ceremony to give their relatives of the past the food they liked; this gives their members closure (NEB 2015h). Other cultural gatherings take place throughout the year, including the First Catch Salmon Ceremony to “honor the first salmon and thank the salmon spirit so that it will return each year” (NEB 2015h).

Tsartlip First Nation has explained that they pass their beliefs on to their youth by teaching them the traditional ways, and the salmon harvest is an important time for this knowledge transfer. Youth are taught to be respectful and thankful of the salmon for providing the medicine (from fish oil) to help keep their members strong (NEB 2015h). Other harvesting also provides opportunity harvesters to share ecological and traditional knowledge with younger generations (Tsartlip First Nation 2019b).

W̱SÁNEĆ communities report that they are not able to access and harvest marine resources in the quantity that they would like. They rely on other communities to be able to access some of the traditional foods in their diet (Tsartlip First Nation 2019b).

Marine Travel Routes

Harvesters report salmon fishing locations at Stuart Island and southwest of San Juan Island and indicate that the preferred travel route for accessing these locations is the most fuel efficient and economical: boating directly east from the Saanich Peninsula across the international border (Tsartlip First Nation 2019). Researchers for the Tsartlip First Nation report that travel routes have been underreported and additional study is necessary (Tsartlip First Nation 2019).

Tsartlip has also expressed concern about exclusion effects from shipping lanes. Tsartlip states that as more vessels transit through their area smaller vessels (e.g., recreational boats, anglers, and ecotour operators) are increasingly displaced. These vessels also generate noise, odours, and wake effects that affect Tsartlip marine use (Tsartlip First Nation 2019).

Other Sites of Cultural Importance

Tsartlip First Nation has reported the presence of burial sites, midden sites, and villages within the MSA (Tsartlip First Nation 2019). Reported Canadian locations include sites throughout the Gulf Islands, and specifically Saturna Island, Coates Cove, Grace Islet, and multiple sites in and around the Saanich Peninsula; a “shore camp” site at Tsawwassen was also identified (Tsartlip First Nation 2019). Identified sites in the U.S.A. include San Juan Island and a shore camp at Point Roberts (Tsartlip First Nation 2019).

Tsartlip First Nation has expressed concern that vessel wake is eroding the burial sites, midden sites, and villages within the MSA. Tsartlip also report the erosion of reserve lands due to vessel wake and the effect of climate change (Tsartlip First Nation 2019).

4.2.3.2.6 Malahat First Nation

Malahat First Nation has two reserves on Saanich Inlet, north of Victoria, B.C., on southeast Vancouver Island. The main reserve is on the west shore of Saanich Inlet south of Mill Bay; a second reserve is at the south end of Saanich Inlet's Finlayson Arm, at the mouth of the Goldstream River. This reserve is shared with four other First Nations (i.e., Pauquachin First Nation, Tsartlip First Nation, Tsawout First Nation, and Tseycum First Nation), known together with the Malahat as *WSÁNEĆ* (AANDC 2019g).

As of September 2019, the registered population of Malahat First Nation was 348 members, of which 133 live on the Malahat Nation reserve, and the remainder live off their reserve (AANDC 2019g).

Along with other *WSÁNEĆ*, Malahat First Nation speaks *SENĆOŦEN*, part of the Northern Straits Salish language family (First Peoples Cultural Council 2019). Unlike most other Saanich groups, however, the Government of Canada takes the view that Malahat First Nation has asserted rather than established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries "as formerly" (AANDC 2018).

Malahat First Nation is part of the Te'Mexw Treaty Association, along with Scia'new First Nation, Songhees First Nation, T'Sou-ke Nation, and Nanoose First Nation. As of November 2019, the Te'Mexw Treaty Association, Government of Canada, and Government of B.C. are in Stage 5, Final Agreement negotiations under the British Columbia Treaty Commission process (TTA et al., 2019). The Final Agreement will define the scope and content of the Aboriginal rights asserted by the Malahat First Nation.

The Malahat First Nation are part of the traditional territory asserted by the *WSÁNEĆ* (Saanich Nation), shown in Figure 4.2-5.

Existing information related to Malahat First Nation's Current Use in the MSA was available (i.e., TMX 2014); however, Malahat First Nation has previously advised Port Metro Vancouver for the RBT2 Project, that they did not want this existing information used as the basis of the assessment of Project-associated shipping (Malahat First Nation 2015). Therefore, any information provided for previous Projects has not been made public for this assessment. Malahat First Nation has not provided other information on prior or current use that could be used for this assessment.

4.2.3.2.7 Tseycum Indian Band

Tseycum Indian Band (*WSIKEM*) has five reserves located on southeast Vancouver Island and the Gulf Islands: Union Bay 4, on Patricia Bay in Saanich Inlet; Bare Island 9, covering the whole of Mandarte Island, in Haro Strait; Pender Island 8, on the west side of South Pender Island, at Hay Point; Saturna Island 7, on the easterly point of Saturna Island; and Goldstream 13, at the south end of Saanich Inlet's Finlayson arm, at the mouth of the Goldstream River. The Bare Island 9, Pender Island 8, and Saturna Island 7 reserves are shared with Tsawout Indian Band (AANDC 2019i). Goldstream 13 reserve is shared with four other First Nations (i.e., Malahat First Nation, Pauquachin First Nation, Tsartlip First Nation, Tsawout Indian Band), known together with Tseycum Indian Band as *WSÁNEĆ* (AANDC 2019h).

As of September 2019, the registered population of Tseycum Indian Band is 200 members, of which 79 live on the Tseycum Indian Band reserve at Union Bay 4, with the remainder living either on other reserves or off-reserve (AANDC 2019x).

Along with other *WSÁNEĆ*, Tseycum Indian Band speaks *SENĆOŦEN*, part of the Northern Straits Salish language family (First Peoples Cultural Council 2019d).

Tseycum Indian Band is a signatory to the Douglas Treaties and has established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries “as formerly” (AANDC 2018). Tseycum Indian Band has indicated that shipping traffic transits through waters to which they consider their Douglas Treaty rights to apply, and through their sensitive habitats, hunting areas, and gathering areas (NEB 2014j).

A map of the collective territory of the *WSÁNEĆ* (Saanich Nation), and the area of overlap with the MSA, is shown in Figure 4.2-5. This figure does not include Current Use locations mentioned in the following summary that lie outside this territory.

4.2.3.2.7.1 Marine Resource Use

Tseycum Indian Band has reported that the Boundary Passage area has a lot of recreational users and that the busiest area known for accidents is along the shipping route as it approaches the curve between Moresby Island and Stuart Island (U.S.A.), and just after the curve (Tseycum Indian Band 2015a). Tseycum Indian Band has also reported that in the busiest months, throughout the summer and, in particular, during the month of August, sport and commercial fishing boats, sailboats, regattas, and commercial ships are all using the area at once (Tseycum Indian Band 2015a).

Marine Fish and Fish Habitat

Marine Vegetation

No information regarding Tseycum Indian Band’s past, current, or future use of marine vegetation within or near the MSA was identified in previous reports nor in any sources reviewed for this Project.

Marine Invertebrates

Tseycum Indian Band has said that they are a saltwater people and seafoods are considered medicine for their people (Tseycum Indian Band 2015c). Tseycum Indian Band has reported that they currently harvest marine invertebrates throughout their traditional territory and that their members currently use small fishing boats to catch crab, prawns, and clams in the inlet (Tseycum Indian Band 2015a).

Tseycum Indian Band has provided a map of food, social, and ceremonial (FSC) fishing locations and has indicated that they currently harvest marine invertebrates within the MSA including, but not limited to, the southern Gulf Islands, Cowichan Bay (*WTEMETEM*), Saanich Inlet (*TELPOLES*), Haro Strait, Swanson Channel, Boundary Passage, and Port Renfrew (Saanich Tribe 1991). Tseycum Indian Band are currently harvesting for traditional purposes in Canadian waters within the MSA include crab, prawns, clams, geoduck, oysters, and sea urchins (Tseycum Indian Band 2015c). Tseycum Indian Band harvest sea urchins in the U.S.A. at Henry Island (*TETINCET*), Stuart Island (*KENNES*), and San Juan Island (Saanich Tribe 1991).

Tseycum Indian Band states that the seafoods they once harvested are gone or unavailable and that while there is an abundance of oysters (*STELNOC*) present in front of their main community (on Saanich Inlet, within the MSA), they cannot eat them due to contamination by pollution. Tseycum Indian Band has also expressed concern

regarding contaminated shellfish in general. They note that the run-off from agricultural fields to the beach are a contributing problem (Tseycum Indian Band 2015a). They believe that people are getting sick from consuming contaminated clams and have reported “black stuff” on oysters in the vicinity of the inlet (Tseycum Indian Band 2015a).

Tseycum Indian Band has reported that the conservancy area on the southeast shore of Sidney Island, which is good crab habitat, is losing one foot of shoreline per year due to erosion (Tseycum Indian Band 2015c).

Marine Fish

Tseycum Indian Band historically fished for halibut between Salt Spring Island and Vancouver Island, and in the area between Cowichan Bay, Genoa Bay, and the Satellite Channel Ecological Reserve (Segment B); however, halibut do not seem to be in these areas any longer (Tseycum Indian Band 2015c). Halibut fishing was occurring near the pilotage station near Victoria and around Moresby Island, in areas intersecting with the shipping lanes (Tseycum Indian Band 2015c).

Tseycum Indian Band currently harvest cod and other unspecified fish within the MSA (Segment B), in Saanich Inlet, Prevost Passage, Swanson Channel, Haro Strait, and the Gulf Islands (Tseycum Indian Band 2015c).

Tseycum Indian Band fish for sockeye in the MSA (Segment B), including within Boundary Passage between Moresby Island and Stuart Island, between Prevost Island and Galiano Island, and at Pender Bluffs (Tseycum Indian Band 2015). Tseycum Indian Band has reported that sockeye salmon migrate from the Fraser River through the vicinity of Swanson Channel, right through the Nation’s traditional fishing territory, and along the international shipping lane where a lot of fishers reportedly travel (Tseycum Indian Band 2015c).

Tseycum Indian Band also fish in Henry Island, Stuart Island, Spieden Island, Pearl Island, and San Juan Island in the U.S.A. (Saanich Tribe 1991). Tseycum First Nation currently participate in both FSC and commercial fisheries (Tseycum Indian Band 2015a).

Tseycum Indian Band has said that herring no longer occur in the area (Tseycum Indian Band 2015c), and expressed concern about “black stuff”, possibly a fungus, reported on fish, including wild salmon, and appearing “like a cancer” (Tseycum Indian Band 2015b). Tseycum Indian Band are concerned that plastic from the bottom of the sea is killing salmon, and that increased shipping traffic in shipping lanes could disrupt salmon migrating through that area (Tseycum Indian Band 201c).

Marine Mammals

Traditionally, Tseycum Indian Band harvested a variety of marine mammals for traditional purposes, including seals, porpoises, and whales that were caught in inlets within their traditional territory, including Saanich Inlet (Elliot 1983).

No information regarding Tseycum Indian Band’s past, current, or future use of marine mammals within or near the MSA was identified in sources reviewed; however, they have reported concern about the vibrations from ships affecting southern resident killer whales (SRKW) (Tseycum Indian Band 2015a).

Marine Birds

Tseycum Indian Band has reported that their birds are gone and have said that in their traditional territory, there were loons that used to function as alarm clocks for them (Tseycum Indian Band 2015b). They describe ducks as

once so plentiful they could not be counted, but now they can. They attribute the decline in bird numbers to pollution (NEB 2014j).

Tseycum Indian Band had a duck net on the western side of San Juan Island in the U.S.A., at *PKAYELWET* (Saanich Tribe 1991), but that they are no longer allowed to use this site (Tseycum Indian Band 2015b).

4.2.3.2.7.2 Other Cultural Practices and Sites

Tseycum Indian Band previously indicated that they undertake cultural activities within the MSA but specifics were not available in the reviewed sources.

Tseycum Indian Band has said that the reduction in or absence of traditional marine resources, which they attribute to pollution, have removed opportunities to engage in cultural activities, and specifically to transfer knowledge to younger generations (NEB 2014j).

Marine Travel Sites

Information pertaining specifically to Tseycum marine travel sites, such as travel routes for traditional purposes, was not identified in sources reviewed.

Other Sites of Importance

Tseycum Indian Band has previously stated that cultural heritage and places are present within the MSA and that their that their sites of importance include villages and burial grounds located in the southern Gulf Islands, including Salt Spring Island, Mayne Island, and North Pender Island (*SDAYES*), and the Saanich Peninsula, including Cordova Bay (Tseycum Indian Band 2015c). Tseycum Indian Band has sites of importance in the U.S.A., at Henry Island, Pearl Island (*MALEQE*), and San Juan Island (Saanich Tribe 1991).

Tseycum Indian Band has reported that vessel traffic wake has damaged their gravesites throughout their traditional territory (NEB 2014k, Tseycum Indian Band 2015 a,b). Tseycum First Nation has said that one gravesite by the beach had to be removed because it had been exposed (NEB 2014j); however, the location of the gravesite was not identified in sources reviewed.

4.2.3.2.8 Esquimalt Nation

Esquimalt Nation has a single reserve, situated on the eastern shore of Esquimalt Harbour, in Esquimalt, B.C. (Esquimalt Nation 2019). As of September 2019, the registered population of Esquimalt Nation is 324 members, of which 170 live on the Esquimalt Nation reserve, with the remainder living either on other reserves or off-reserve (AANDC 2019i).

Esquimalt Nation speaks *Lekwungun*, considered part of the Northern Straits Salish language family (First Peoples Cultural Council 2019g). The Esquimalt Nation states that they have always been “ocean people” harvesting, processing, consuming and trading all the marine resources within their territory. They rely on ocean resources for a healthy life (Esquimalt Nation 2019).

Esquimalt Nation is a signatory to the Douglas Treaties and has established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries “as formerly” (Canada 2019). Esquimalt Nation also asserts Aboriginal rights, including Aboriginal title, based on historic use and occupation (NEB 2015k). Esquimalt Nation has characterised their rights as including but not limited to rights to land, water, and seabed within their territory, rights to both renewable and non-renewable resources, and a right of self-government (Esquimalt Nation 2015).

Esquimalt Nation has submitted a letter through the RBT2 hearings objecting to the use of their traditional use information that was provided for the TMX in the RBT2 Current Use of Lands and Resources for Traditional Purposes report for the Project (Esquimalt Nation 2019). Esquimalt Nation has stated that it is inappropriate to use this information regardless of whether it is publicly available, without explicit permission, especially as it pertains to mapped information. Esquimalt Nation also states that the information was not comprehensive. Esquimalt Nation’s information has not been made available for consideration.

4.2.3.2.9 Songhees Nation

Songhees Nation has four reserves on or adjacent to southeast Vancouver Island, near Victoria, B.C.: Halkett (Deadman’s) Island 2, in the Gorge Waterway; Chatham Islands 4 and Discovery Island 3, along Haro Strait, opposite Oak Bay in the area of great cultural importance to Songhees, known as *Tl’ches*; and New Songhees 1A, fronting Esquimalt Harbour (AANDC 2019j, Songhees Nation 2019).

As of September 2010, the registered population of Songhees First Nation is 585 members, of which 342 live on Songhees Nation reserves with 243 living either on other reserves or off-reserve (AANDC 2019h). Songhees Nation is a successor group of the Lekwungen, which refers to the Lekwungen-speaking people who have occupied southern Vancouver Island since time immemorial (Songhees Nation 2019). Songhees Nation is a signatory to the Douglas Treaties and has established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries “as formerly” (Canada 2018).

Songhees Nation is also associated with the Te’Mexw Treaty Association, along with Scia’new First Nation, Malahat Nation, T’Sou-ke Nation, and Snaw-naw-AS Nation. As of November 2019, the Te’Mexw Treaty Association, Government of Canada, and Government of B.C. are in Stage 5 Final Agreement negotiations under the British Columbia Treaty Commission process (TTA et al. 2019). The Agreement-in-Principle will form the basis for negotiating a Final Agreement between the parties; the Final Agreement will define the scope and content of the Aboriginal rights asserted by Songhees Nation.

The spatial relationship of Te’Mexw Treaty Association’s Statement of Intent and traditional territory (as submitted to the British Columbia Treaty Commission) to the Marine Shipping Area (MSA) is shown in Figure 4.2-6.

4.2.3.2.9.1 Marine Resource Use

The Songhees Nation state that they continue to use Songhees territory for a variety of purposes including hunting, fishing, trapping, gathering, camping, spiritual practices, and ceremony. The practices that are carried out on the land are considered critical to the survival of their culture. Songhees Nation carries out these activities as the exercise of their rights and they pass on culture to future generations while carrying out their cultural activities.

Songhees Nation has not previously submitted past, current, and preferred current use information with respect to Projects overlapping or adjacent to the current MSA (i.e., RBT2 and TMX). However, in the closing comments for

RBT2 they submitted information that describes the importance of Tl'ches to the Songhees Nation (Songhees Nation 2019).

4.2.3.2.9.2 Cultural Practices and Sites

Tl'ches is located a few kilometres off of the District of Oak Bay and consists of a small archipelago of islands that are rich with marine resources (Songhees Nation 2019). It is recognized by the Songhees Nation as an important Songhees village that contains middens, burial cairns, and other sacred sites. It was a central location for traditional reef net fishery and salmon camps that were used for harvesting. Songhees Nation members continue to harvest camas bulbs, gather medicinal plants, fish and carry out other cultural practices at Tl'ches.

Songhees Nation has expressed concern about past, current, and future adverse impacts. Songhees has noted that there has been intense residential, industrial and retail development since the mid-1800s that has resulted in the degradation of the eco-system around Tl'ches deteriorating (Songhees Nation 2019). Songhees Nation has prepared a draft Marine Use Plan that proposes to protect Tl'ches by establishing a protective zone around Tl'ches for non-Songhees members for the foreseeable future. By undertaking a number of management objectives, Songhees Nation hopes to restore the ecosystem for Songhees use (Songhees Nation 2019).

4.2.3.2.10 Scia'new (Beecher Bay) First Nation

Scia'new (Beecher Bay) First Nation has eight reserves, with the main community located on Beecher Bay 1, near East Sooke, B.C. (see Figure 4.2-6). Other reserves include Beecher Bay 2, Fraser Island 6, Lamb Island 5, Long Neck Island 9, Twin Island 10, Village Island 7, and Whale Island 8. As of September 2019, the registered population of Scia'new First Nation was 262 members, of which 106 live on Scia'new First Nation reserves, with the remainder living either on other reserves or off-reserve (AANDC 2019k). Scia'new First Nation's reserve lands, totalling 308 hectares, are managed by Scia'new First Nation pursuant to a Land Code adopted by Scia'new First Nation under the federal *First Nations Land Management Act* (NEB 2014l).

Scia'new First Nation has reported that the community has origins in Clallam-speaking families located on the north shore of the Olympic Peninsula in Washington (NEB 2015i). Clallam or Klallam (*Nəxʷsʰáɣəmúçən*) is one of four different languages once spoken by Scia'new First Nation members, and shares words with dialects from the Northern Straits Salish language family (e.g., *SENĆOŦEN*, T'Sou-ke, *Lekwungen*, Semiahmoo). Today, the main Aboriginal language spoken by Scia'new First Nation people is *Hul'q'umi'num'*, the Island dialect of Halkomelem (First Peoples Cultural Council 2019f).

Scia'new First Nation is a signatory to the Douglas Treaties and has established Douglas Treaty rights to hunt over unoccupied lands and to carry on their fisheries "as formerly" (Canada 2018). Scia'new First Nation also asserts Aboriginal rights, including Aboriginal title, within its territory. Scia'new has said that their asserted Aboriginal rights and established Douglas Treaty rights apply to the area traversed by marine shipping lanes (NEB 2015j).

Scia'new First Nation is associated with the Te'Mexw Treaty Association, along with Songhees First Nation, Malahat Nation, T'Sou-ke Nation, and Nanoose First Nation. As of November 2019, the Te'Mexw Treaty Association, Government of Canada, and Government of B.C. is in Stage 5, Final Agreement negotiations, under the British

Columbia Treaty Commission process (TTA et al. 2019). The Final Agreement will define the scope and content of the Aboriginal rights asserted by the Scia'new First Nation.

The spatial relationship of Te'Mexw Treaty Association Statement of Intent Area traditional territory to the MSA is shown in Figure 4.2-6.

Scia'new First Nation has submitted a letter through the RBT2 hearings objecting to the use of their traditional use information that was provided for the Trans Mountain Expansion Project (TMX) in the RBT2 Current Use of Lands and Resources for Traditional Purposes report for the Project (Scia'new First Nation 2019). Scia'new Nation has stated that it is inappropriate to use this information regardless of whether it is publicly available, without explicit permission, especially as it pertains to mapped information. Scia'new Nation also states that the information was not comprehensive. In respect of Scia'new First Nation's comments on the use of their information, and in consultation with the BC EAO, the Scia'new Nation information will not be considered for the MSA assessment of this Project.

4.2.3.2.11 T'sou-ke (Sooke) Nation

T'Sou-ke Nation (formerly Sooke Nation) has two reserves located on 67 hectares around the Sooke Basin on the southern end of Vancouver Island, B.C. The majority of T'Sou-ke Nation community members live on T'Sou-ke 2, located on Sooke Bay fronting Juan de Fuca Strait, while the administration offices are on T'Sou-ke 1, located on the left bank of the Sooke River at the head of Sooke Harbour (AANDC 2019h).

In September of 2019, the registered population of T'Sou-ke Nation was 267 members, with 127 living on-reserve and 140 living off-reserve (AANDC 2019h).

The word T'Sou-ke reportedly comes from the *SENĆOŦEN* word for stickleback fish, which live in the estuary of the Sooke River (T'Sou-ke Nation 2019a). The traditional language of T'Sou-ke Nation is the T'Sou-ke dialect of the Northern Straits Salish language family, to which *SENĆOŦEN* also belongs (First Peoples Cultural Council 2019).

T'Sou-ke Nation is a signatory to the Douglas Treaties, and has established Douglas Treaty rights to hunt over unoccupied lands and to carrying on their fisheries "as formerly" (Canada 2015). In addition to Douglas Treaty rights, T'Sou-ke Nation asserts Aboriginal rights and title to land, air, water, and foreshore across their traditional territory (NEB 2014n).

T'Sou-ke Nation is also associated with the Te'Mexw Treaty Association, along with Scia'new First Nation, Songhees First Nation, Malahat Nation, and Nanoose First Nation. As of November 2019, the Te'Mexw Treaty Association, Government of Canada, and Government of B.C. is in Stage 5, Final Agreement negotiations, under the British Columbia Treaty Commission process (TTA et al. 2019). The Final Agreement will define the scope and content of the Aboriginal rights asserted by T'Sou-ke Nation.

The spatial relationship of Te'Mexw Treaty Association's Statement of Intent Area (as submitted to the British Columbia Treaty Commission) and Agreement-in-Principle Territory to the MSA is shown in Figure 4.2-6 T'Sou-ke Nation has reported that in the past their territory stretched over a larger area, towards Port Renfrew to the west and the Cowichan River to the north, and to areas of the Olympic Peninsula in Washington State, on the southern shore of Juan de Fuca Strait (NEB 2014m, NEB 2015l).

T'Sou-ke Nation submitted information on their traditional resource use for the TMX Project that was specific to that area. T'Souke Nation has submitted comments in the RBT2 hearings objecting to the use of their traditional use information that was provided for the TMX Project in the RBT2 Current Use of Lands and Resources for Traditional Purposes report for the Project (T'Souke Nation 2019). T'Sou-ke Nation has objected to the information that they submitted for that project being used for subsequent projects in the same area. At the time of writing, permission to use existing information has not been obtained and is not presented in this section.

4.2.3.2.12 Cowichan Tribes

Cowichan Tribes, along with Halalt First Nation, Penelakut Tribe, and Stz'uminus First Nation, are represented by the Cowichan Nation Alliance (CNA) on collective interests on matters outside of treaty negotiations. As speakers of the Island dialect of Halkomelem (Hul'q'umi'num), these four CNA members, along with Ts'uubaa-asatx (formerly Lake Cowichan First Nation) and Lyackson First Nation, refer to themselves collectively as Hul'qumi'num Mustimuhw (HTG, 2005a).

Cowichan Tribes are based in southeast Vancouver Island, with their main community located on Cowichan No. 1 in the city of Duncan. Cowichan Tribes are the largest First Nation in British Columbia, with a registered population of 5,044, with 2,527 members living on Cowichan Tribes reserves as of October 2019 (AANDC 2019 m). Neither the LSA nor the RSA overlaps any current or former reserve lands of Cowichan Tribes.

Cowichan Tribes are, or have been, affiliated with the Hul'qumi'num Treaty Group (HTG), along with the other CNA member communities, Ts'uubaa-asatx and Lyackson First Nation. The HTG assert a core territory, or title lands, and a wider marine or fishing territory, as described in its Statement of Intent to the BC Treaty Commission and shown in Figure 4.2-7 (BCTC, 2009a).

Cowichan Tribes, Halalt First Nation and Stz'uminus First Nation presented a map of their traditional territory to the RBT2 panel (CEAA, 2019aj and 2019av). The marine component of the territory extends from Gabriola Island in the north, south to the north end of the Saanich Peninsula and east to the confluence of the South and North Arms of the Fraser River, which includes international shipping lanes (CEAA 2019av). Cowichan Tribes, along with the other CNA First Nations, assert that they have Aboriginal rights to fish, harvest and hunt within the LSA (CEAA, 2019av).

The following summary of Cowichan Tribes' Current Use in the MSA area relies on the EAC Application for the WesPac Tilbury Marine Jetty Project, and material submitted for Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2, including submissions made during the CEAA panel hearings for Robert's Bank Terminal 2, including the Cowichan Tribes, Stz'uminus First Nation, and Halalt First Nation Written Panel Submission (CEAA, 2019av).

4.2.3.2.12.1 Marine Resource Use

Stz'uminus First Nation, Halalt First Nation, and Cowichan Tribes rely on the marine environment to provide resources to sustain their people and culture. The Cowichan Nation has recorded and asserted named places, dwellings, canoe travel routes, stories, camping sites, fishing sites, hunting sites, and gathering sites within the area assessed for the RBT2 project (CEAA, 2019av). Cowichan Nation members transmit culture to younger generations

through practices of harvesting marine resources and celebration of water, lands and animals with songs and prayers. Cowichan Nation members value overall ecosystem health, biodiversity, and integrity to ensure that there are enough resources to share among their communities and have a sustainable economy (CEAA 2019av, p. 9).

Marine Fish and Fish Habitat

Marine Fish

Cowichan Tribes members report harvesting a variety of seafood including salmon (i.e., chinook, coho, chum, pink, and sockeye), eulachon, cod, rockfish, halibut, sole, flounder, sturgeon, herring (and roe), red snapper, lingcod (and roe), and skate (CT, 2014b; Marshall, 2017; MOTI, 2016; TMEP, 2014a). Cowichan have said their ancestors used Tl'uq̓tinus to fish for salmon and sturgeon and to trade dried clams (BC and PMV, 2012).

Salmon has previously been identified by Cowichan Tribes members as a vital food, both historically and currently. They have identified numerous fishing sites, including the Fraser River and Salish Sea as sites for the harvesting of salmon (i.e., coho, chum, jack spring (small male Chinook), Chinook, and sockeye). They also report harvesting sturgeon on Fraser River, Lulu Island and Point Roberts (TMEP, 2014a). Cowichan Tribes have identified herring as a traditional food source, once harvested year-round. Declining herring stocks mean harvesting only occurs from September to October, making it more difficult to meet community needs (TMEP, 2014a).

As part of the HTG, Cowichan Tribes, maintain that during the reserve creation era in the late nineteenth century, government officials were aware of Cowichan Nation fishing interests at the Fraser River; however, no reserves were set aside for them. Government regulations introduced in the same era also had the effect of restricting their access to fishing in this area. Despite these changes, the Cowichan Nation continued to use the Fraser River for fishing, including commercially, into the early twentieth century (HTG, 2005a; MOTI, 2016; TMEP, 2014a). Currently, they are working to re-establish residential villages and river access along the Fraser River, across the river from the Project, and fishing rights along the Fraser River (MOTI, 2016; SFN, 2014). Cowichan Tribes report that they are in active negotiation with DFO for access to the south arm of the Fraser River around Kirkland and Deas Island for sockeye in the summer of 2018 (Charlie, 2018a).

Cowichan Tribes' current FSC licence allows them to harvest all five species of salmon, herring, herring spawn, and all the species of groundfish in Pacific Fishery Management Area (PFMA) Subareas 29-3, 29-6, 29-7, 29-9, and 29-10 (PMV, 2015b). Several of these subareas overlap the LSA/RSA. Fishers have reported that they have to move to accommodate larger commercial vessels in the area near the RBT2 project (CEAA 2019av, p. 12). Cowichan Tribes, Halalt First Nation and Stz'uminus First Nation also note that the increase in vessel traffic related to the RBT2 project, which will follow the same shipping lanes of those calling at the Project will pass through their fishing areas (CEAA 2019av, p. 13).

Cowichan Tribes and Penelakut Tribe have previously stated that they are not permitted by DFO to fish for FSC purposes in the Fraser River (PMV, 2015b). Notwithstanding the preceding statement, current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by CNA member Nations has been previously discussed as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18) (PMV, 2015b).

Cowichan Tribes, along with Halalt and Stz'uminus First Nations, expressed concerns to the RBT2 panel regarding potential erosion effects from vessel wake on their harvest areas, especially around Saturna and Tumbo islands. They report that the reefs around Tumbo Island are particularly important for fishing and refuge (CEAA, 2019aj,av).

Marine Invertebrates

Cowichan Tribes members report harvesting a variety of seafood including clams (i.e., butter, horse, Japanese, littleneck), cockles, Dungeness crab, oysters, scallops, urchins, chitons, octopus, sea cucumber, mussels (blue, small) and abalone (CT, 2014b; Marshall, 2017; MOTI, 2016; TMEP, 2014a). Cowichan Tribes have recorded shellfish harvesting activities in the Chatham Islands, Discovery Island, Saturna Island and Tumbo Island. They expressed concerns to the RBT2 panel that erosion from vessel wake could impact these harvest areas (CEAA, 2019av)

Cowichan Tribes report that their current licence (April 2015 to March 2016) to fish for FSC purposes allows them to harvest Dungeness and red rock crab, prawn and other shellfish (excluding abalone) in the PFMA Subareas 29-3, 29-6, 29-7, 29-9 and 29-10, largely on the eastern side of the Strait of Georgia. Their current FSC licence also allows them to harvest Dungeness and red rock crab, prawn, clams (i.e., littleneck, butter, manila), oyster, and other species of shellfish (excluding abalone) within Subareas 18-1 through 18-11 (the entire PFMA 18) and partially within Subareas 29-4 and 29-5; on the west side of Georgia Strait (DFO, 2015c). These areas overlap the LSA.

Marine Vegetation

Cowichan Tribes members harvested seaweed and plants and medicines that grow near the ocean, many of which are still gathered today. Marine plants are important for food, social, and ceremonial purposes and are shared throughout the community at cultural events and celebrations. The practice of marine plant harvesting is also critical to the transfer of knowledge and culture to younger generations (CEAA, 2019av).

Cowichan Tribes, along with Halalt and Stz'uminus First Nations, expressed concerns to the RBT2 panel regarding potential erosion effects from vessel wake on intertidal and foreshore areas where they harvest marine plants and medicines (CEAA, 2019aj,av).

Marine Mammals

Marine mammals harvested at confidential locations, include, harbour porpoise, humpback whale, sea lion, harbour seal, and sea otter (TMEP, 2014a).

Killer whales (*q'ullhanumutsun*) and, in particular, the southern resident killer whale (SRKW) are important to the Cowichan Nation culture. Killer whales are depicted in visual art, stories and songs, are represented in the landscape (e.g., the Sea Wolf petroglyph, which protects Stz'uminus people) are important in teachings related to kin relations (CEAA 2019av, p. 14).

Traditional knowledge indicates that all whales have use and cultural significance to Cowichan Nation. Community knowledge indicates that grey whales and humpbacks have been returning to the inner waters of the Strait of Georgia. Previously assumed to be extirpated, the return is particularly significant as they provide opportunities to educate younger generations and share knowledge, which is integral to cultural health and wellbeing (CEAA 2019av, p. 16).

Cowichan Tribes has expressed concern that increases in marine traffic could affect marine mammals.

Marine Birds

Cowichan Tribes members report hunting or trapping waterfowl, including brant, canvasback, common merganser, and mallard in their asserted territory (CT, 2014b; WLNG, 2015). They have said they access to hunting sites at Canoe Passage and Fraser River for Brant goose, common merganser, canvasback duck, and mallard. Ducks are a preferred food during ceremonial events, and their feathers are used for ceremonial purposes. Cowichan Tribes, as part of CNA, note that ducks were not abundantly available in other part of their traditional territory and were sought after in the Lower Fraser River (Marshall, 2017). Cowichan Tribes expressed concerns to the RBT2 panel regarding potential effects on Western Sandpiper (CEAA, 2019av).

4.2.3.2.12.2 Other Cultural Practices

Cowichan Tribes is also concerned about potential effects on SRKW, ecosystem integrity and cultural values and knowledge transmission from vessel movements and potential spills (CEAA, 2019aj). CNA members have collectively said that journeys for their members in the U.S.A. have been affected by shipping traffic. They have raised concerns regarding the safety of community members undertaking traditional practices on the water (PMV, 2015b).

The loss of the *Tl'uq̓tinus* lands and access to the Fraser River have combined with other cumulative factors (e.g., ongoing government regulation, privatization of traditional lands, environmental destruction) to shift the Cowichan Nation diet from one heavily dependent on traditional foods to market foods. A survey conducted by the Hul'qumi'num Treaty Group (HTG) showed that levels of available traditional foods fall far short of levels required by almost all Cowichan Nation communities who wish to engage in traditional harvesting practices (Marshall, 2017, p.23).

In January 2016, the CNA issued a "Declaration for Reconciliation" to the government regarding *Tl'uq̓tinus*, expressing a desire that the reconciliation of Crown sovereignty with Cowichan Nation Aboriginal rights, including title, on the South Arm of the Fraser River be consistent with Cowichan Nation land and resource use objectives for that area. These objectives included: the recovery and restoration of *Tl'uq̓tinus*; reestablishment of the Cowichan Nation's residence and river access at *Tl'uq̓tinus*, as well as their culturally integral practices (e.g., harvesting fish, waterfowl, and plants); the realization of Cowichan Nation revenue, economic, and development opportunities and benefits that are compatible with their land and resource use objectives; and promotion of education regarding the presence and interests of the Cowichan Nation at and about *Tl'uq̓tinus* (Marshall 2017:31).

Marine Travel Sites

Travel between sites, between summer camps, and travel to hunting, fishing, and gathering locations along waterways, served as important travel corridors for Cowichan Tribes (TMEP, 2014a) Cowichan Tribes have expressed concerns about infringements upon their fishing rights with increases in marine traffic related to current and proposed projects in their asserted territory (CT, 2014b).

4.2.3.2.13 Halalt First Nation

Halalt First Nation, along with Cowichan Tribes, Penelakut Tribe, and Stz'uminus First Nation, are represented by the CNA on collective interests on matters outside of treaty negotiations. As speakers of the Island dialect of Halkomelem (Hul'q'umi'num), these four CNA members, along with Ts'uubaa-asatx and Lyackson First Nation, refer to themselves collectively as Hul'qumi'num Mustimuhw (HTG, 2005b).

Halalt First Nation's main community is located on Halalt No. 2 in the city of Chemainus, on the southeastern part of Vancouver Island. Of 217 registered members, 82 lived on reserve as of October 2019 (AANDC 2019n). The Project site does not overlap with any of Halalt First Nation's current or former reserve lands.

Halalt First Nation is, or has been, affiliated with the Hul'qumi'num Treaty Group (HTG), along with the other CNA member communities, Ts'uubaa-asatx and Lyackson First Nation. The HTG assert a core territory, or title lands, and a wider marine or fishing territory, as described in its Statement of Intent to the BC Treaty Commission and as is shown in Figure 4.2-7 (BCTC, 2009d).

Cowichan Tribes, Halalt First Nation and Stz'uminus First Nation presented a map of their traditional territory to the RBT2 panel (CEAA, 2019aj and 2019av). The marine component of the territory extends from Gabriola Island in the north, south to the north end of the Saanich Peninsula and east to the confluence of the South and North Arms of the Fraser River, which includes international shipping lanes (CEAA 2019av, p.6). Halalt First Nation, along with the other CNA First Nations, assert that they have Aboriginal rights to fish, harvest and hunt within the LSA (CEAA 2019 av).

The following summary of Halalt First Nation's Current Use in the MSA area relies on the EAC Application for the WesPac Tilbury Marine Jetty Project, and material submitted for Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2, including submissions made during the CEAA panel hearings for Robert's Bank Terminal 2, including the Cowichan Tribes, Stz'uminus First Nation, and Halalt First Nation Written Panel Submission (CEAA, 2019av).

4.2.3.2.13.1 Marine Resource Use

Stz'uminus First Nation, Halalt First Nation, and Cowichan Tribes rely on the marine environment to provide resources to sustain our people and culture. The Cowichan Nation has recorded and asserted named places, dwellings, canoe travel routes, stories, camping sites, fishing sites, hunting sites, and gathering sites within the area assessed for the RBT2 project (CEAA 2019 av, p. 8). Cowichan Nation members transmit culture to younger generations through practices of harvesting marine resources and celebration of water, lands and animals with songs and prayers. Cowichan Nation members value overall ecosystem health, biodiversity, and integrity to ensure that there are enough resources to share among their communities and have a sustainable economy (CEAA 2019 av, p. 9).

Marine Fish and Fish Habitat

Marine Fish

Halalt First Nation has said that they followed a seasonal round of resource use and regional settlement, which took them from their winter residence on Vancouver Island and Willy Island across the Strait of Georgia to the Fraser

River estuary, where they resided for all or part of the annual salmon runs (April and June to through October), or in some instances year-round (PMV, 2015a). Halalt First Nation previously reported that historically shellfish (crabs and mollusks) and fish were their key staples. They fished and gathered shellfish along watercourses and waterbodies in the Strait of Georgia and off the Gulf Islands, harvesting groundfish, including herring, sea bass, lingcod, rock cod, greenling cod, red snapper, halibut, flounder, and octopus. Steelhead trout was harvested in the Chemainus River in winter (TMEP, 2014a).

Halalt First Nation members report harvesting sockeye from their fishing sites in and around the mouth of the South Arm of the Fraser River, along with pink salmon, sturgeon, shellfish, and marine mammals. Dried clams and camas were traded while they were resident in and around this area of the Fraser River (BC and PMV, 2012, 2012; PMV, 2015a; TMEP, 2014a). Herring, cutthroat trout, and groundfish, including flounder, sole, and rockfish would have been available to them in the vicinity of Roberts Bank (PMV, 2015a).

Halalt First Nation has said that seasonal fishing villages were built along the region's watercourses and from there they would harvest salmon during their runs as well as collect mollusks and other shellfish (TMEP, 2014a).

As a member of both the CNA and HTG, Halalt First Nation, has previously reported that during the reserve creation era in the late nineteenth century, government officials were aware of *Hul'qumi'num Mustimuhw* fishing interests at the Fraser River; however, no reserves were set aside for them. Government regulations introduced in the same era also had the effect of restricting their access to fishing in the area. They maintain *Hul'qumi'num Mustimuhw* continued to use the Fraser River for fishing, including commercially, into the early twentieth century (BC and PMV, 2012; HTG, 2005a, 2005b; PMV, 2015a; TMEP, 2014a, p. 2014).

The Halalt First Nation Fisheries Agreement with DFO encompasses Cowichan Lake watershed and the marine waters surrounding Saltspring, North Pender, Saturna, Mayne and Galiano Islands, and extends into the Strait of Georgia towards Roberts Point and Lulu Island (WLNG, 2015). As a member of CNA, Halalt First Nation has been working to restore former fisheries within the Fraser River through the Department of Fisheries and Oceans. Most recently they have been seeking allocation increases on the Lower Fraser River and pursuing area change requests (DFO, 2015b).

Halalt First Nation, Cowichan Tribes and Stz'uminus First Nation also note that the increase in vessel traffic related to the RBT2 project, which will follow the same shipping lanes of those calling at the Project will pass through their fishing areas (CEAA, 2019av).

As noted in the previous section, DFO records for communal FSC licences in the Fraser River downstream of the Port Mann Bridge do not suggest that any of the CNA, individually or collectively, has had access to the FSC fisheries in this area in the last five years (DFO 2015a, 2015b, 2015c; PMV, 2015a). Notwithstanding the preceding statement, current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by CNA member bands previously has been discussed as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18) (PMV, 2015a).

As a member of the *Hul'qumi'num Fisheries Limited Partnership (HFLP)*, Halalt First Nation engages in a commercial fishing business along with Ts'uubaa-asatx, Lyackson First Nation, Penelakut Tribe and Stz'uminus First Nation. Species harvested through this enterprise are halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP, 2014, 2015).

Halalt First Nation, along with Cowichan Tribes and Stz'uminus First Nation, expressed concerns to the RBT2 panel regarding potential erosion effects from vessel wake on their harvest areas, especially around Saturna and Tumbo islands. They report that the reefs around Tumbo Island are particularly important for fishing and refuge (CEAA, 2019aj,av).

Marine Invertebrates

Halalt First Nation has said that seasonal fishing villages were built along the region's watercourses and from there they would harvest salmon during their runs as well as collect mollusks and other shellfish (TMEP, 2014a). Shellfish and intertidal harvesting included gathering clams (i.e., butter, littleneck, razor, and horse), cockles, chitons, oysters, mussels, Dungeness crab (served at feasts), and sea urchin (TMEP, 2014a). Halalt First Nation have documented shellfish harvesting activities on Pender and Saturna islands. They expressed concerns to the RBT2 panel that erosion from vessel wake could impact these harvest areas (CEAA, 2019av)

As a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP), Halalt First Nation engages in a commercial fishing business along with Ts'uubaa-asatx, Lyackson First Nation, Penelakut Tribe and Stz'uminus First Nation. Shellfish species harvested through this enterprise are crab (one Area H licence) and prawn (two local / coast wide licences) (HFLP, 2014, 2015)

Marine Vegetation

Halalt First Nation members harvested seaweed and plants and medicines that grow near the ocean, many of which are still gathered today. Marine plants are important for food, social, and ceremonial purposes and are shared throughout the community at cultural events and celebrations. The practice of marine plant harvesting is also critical to the transfer of knowledge and culture to younger generations (CEAA, 2019av).

Halalt First Nation, along with Cowichan Tribes and Stz'uminus First Nation, expressed concerns to the RBT2 panel regarding potential erosion effects from vessel wake on intertidal and foreshore areas where they harvest marine plants and medicines (CEAA, 2019aj,av).

Marine Mammals

Historically, Halalt First Nation members harvested sea mammals, including seals, porpoises, and sea lion. They used sea lion for their meat, oil, and hides and the intestines of sea lions were used to make bowstrings and in trade (TMEP, 2014a). Halalt First Nation utilized Active Pass on their way to the Fraser River to harvest marine mammals (BC and PMV, 2012).

Marine Birds

Halalt First Nation members reported harvesting waterfowl, such as ducks and geese. Among the hunting sites identified were, in part, Chemainus River and Estuary, as well as Porlier Pass/Cowichan Gap, Galiano Island, Tent Island, and Shoal Islands, including Wiley Island. In the recent past, ducks were harvested in November and December for longhouse ceremonies (TMEP, 2014a). Halalt First Nation, as part of CNA, note that ducks were not abundantly available in other part of their traditional territory and were sought after in the Lower Fraser River (Marshall, 2017). Halalt First Nation expressed concerns to the RBT2 panel regarding potential effects on Western Sandpiper (CEAA, 2019av).

4.2.3.2.13.2 Cultural Practices and Sites

Halalt First Nation members used watercourses to travel between sites, summer camps, and hunting, fishing, and gathering locations. These waterways remain important travel corridors for harvesting marine resources and accessing sites for ceremonial purposes (TMEP, 2014b; WLNG, 2015), and the Fraser River has been identified by the Hul'qumi'num Mustimuhw, (which includes Halalt) as the main transportation corridor that bridged the Island Hul'qumi'num communities to their relatives on the Mainland (HTG, 2005b). CNA members have collectively said that journeys to their members in the U.S.A. have been affected by shipping traffic, and they have raised concerns regarding the safety of community members which undertaking traditional practices on the water (PMV, 2015b).

Halalt First Nation, as part of the CNA, previously reported that for the last generation they have been revitalizing access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. They have also expressed concerns regarding the sustainability of vital habitats that are necessary to support their members (PMV, 2015a). Cowichan people have asserted that they would like to resume the exercise of the culturally integral Aboriginal rights to harvest and obtain traditional food and material resources in the Lower Fraser (Marshall, 2017).

As is the case with other Coast Salish groups, areas used for traditional purposes by Halalt First Nation members, such as fishing, hunting, or gathering sites, are regarded as sacred, features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG, 2015).

4.2.3.2.14 Kwantlen First Nation

Kwantlen First Nation resides on McMillan Island IR 6, in the Fraser River north of Fort Langley. Of 302 registered members, 71 lived on reserve as of October 2019 (INAC, 2019). Kwantlen has six reserves all centered on the area of confluence between the Stave River and the Fraser River. Kwantlen also share the Pekw'Xe:yles (Peckquaylis) reserve, approximately 2 km upstream of the Mission Bridge, with 20 Stó:lō nations (AANDC 2019o).

Kwantlen First Nation, while ancestrally a Halkomelem (Hən̓q̓əmi̓ñəḥ̓)-speaking nation, has been affiliated with the Stó:lō Tribal Council since 2005, when the organization formed out of a separation from the Stó:lō Nation. The Stó:lō speak the "Upriver" form of Halkomelem (FPHLCC, 2018a). Kwantlen First Nation consults on its interests independently of the Stó:lō Tribal Council under the leadership of a Hereditary Chief and two-member appointed council that has been in place since 1993 (SQBG, 2015). Like other members of the Stó:lō Tribal Council, Kwantlen is not currently involved in treaty negotiations; however, in April 2016, Kwantlen First Nation reached a three-year Forest Consultation and Revenue Sharing Agreement with the Province of British Columbia (MARR, 2018).

Since 2011, the economic arm of Kwantlen First Nation has operated as Seyem' Qwantlen Business Group, representing four limited partnerships owned by Kwantlen First Nation, and providing services principally in the areas of contracting (construction, excavation, and earthworks), on and off reserve land development, and resource management (fisheries, forestry, archaeology) (SQBG, 2015).

As illustrated in Figure 4.2-8, Kwantlen traditional territory extends from the watershed of the Stave River in the north to the international border in the south, taking in the northeastern part of Boundary Bay, the Serpentine, Nicomekl, and Salmon Rivers, as well as the Fraser River upstream of Tilbury Island to the Nicomen Slough, near Chilliwack. The Kwantlen First Nation traditional territory does not overlap the LSA or the RSA.

The review of Kwantlen First Nation Current Use in the LSA relied on the EAC Application for the WesPac Tilbury Marine Jetty Project.

4.2.3.2.14.1 Marine Resource Use

Kwantlen First Nation does not report Current Use in the LSA or RSA.

4.2.3.2.14.2 Cultural Practices and Sites

Kwantlen First Nation does not report undertaking cultural practices or use of cultural sites in the LSA or RSA.

4.2.3.2.15 Lake Cowichan First Nation (Ts'uubaa-asatx)

Lake Cowichan First Nation members descend from both Ditidaht (Nuu-chah-nulth) ancestors and Hul'q'umi'num' ancestors known as the Somenos (or Saumni, Samena, Saumina and other variations), one of seven village groups comprising the Cowichan Tribes (Rozen 1985). Community members primarily reside on a single reserve on the northeastern shore of Cowichan Lake, approximately 30 km west of Duncan on the east coast of Vancouver Island, and less than 20 km east of Nitinat Lake on the west coast of Vancouver Island. In 1860, the community was significantly affected by a smallpox epidemic (Rozen, 1985; VAFFC, 2011). Lake Cowichan First Nation's population has since remained small, with only 11 of 21 registered members living on reserve, as of November 2019 (AANDC, 2019p). The Project site does not overlap any current or former Lake Cowichan reserve lands.

Lake Cowichan First Nation has stated that Lake Cowichan has always been their primary home and remains the centre of their traditional territory, taking in surrounding lands, streams, and other waters, including the uppermost part of the Cowichan River. They have also stated that their use of this territory has continued to the present day (LCFN, 2013). A three-year Forest Consultation and Revenue Sharing Agreement with the Province of British Columbia, dated 2017, applies to this territory (MARR, 2018).

Lake Cowichan First Nation is affiliated with the HTG. As illustrated in Figure 4.2-7, the HTG member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory as described in its Statement of Intent to the British Columbia Treaty Commission (BCTC, 2009a). The HTG marine or fishing territory overlaps the Project site.

Ts'uubaa-asatx (formerly Lake Cowichan First Nation) members descend from both Ditidaht (Nuu-chah-nulth) ancestors and Hul'q'umi'num' ancestors known as the Somenos (or Saumni, Samena, Saumina and other variations), one of seven village groups comprising the Cowichan Tribes (Rozen, 1985). Community members primarily reside on a single reserve on the northeastern shore of Cowichan Lake, approximately 30 km west of Duncan on the east coast of Vancouver Island, and less than 20 km east of Nitinat Lake on the west coast of Vancouver Island. In 1860, the community was significantly affected by a smallpox epidemic (Rozen, 1985; VAFFC, 2011). Ts'uubaa-asatx's population has since remained small, with only 11 of 21 registered members living on reserve, as of October 2019 (INAC 2019). Neither the LSA nor the RSA overlaps any current or former Lake Cowichan reserve lands.

Ts'uubaa-asatx has stated that Lake Cowichan has always been their primary home and remains the centre of their traditional territory, taking in surrounding lands, streams, and other waters, including the uppermost part of the Cowichan River. They have also stated that their use of this territory has continued to the present day (LCFN, 2013).

Ts'uubaa-asatx is affiliated with the HTG. As illustrated in Figure 4.2-7, the HTG member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory as described in its Statement of Intent to the British Columbia Treaty Commission (BCTC, 2009a). The HTG marine or fishing territory overlaps the LSA and RSA.

The summary of Ts'uubaa-asatx Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project.

4.2.3.2.15.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Fish

Fishing activities of the Ts'uubaa-asatx have been primarily inferred from descriptions pertaining to the Hul'qumi'num Mustimuhw as a whole. Hul'qumi'num Mustimuhw, including Ts'uubaa-asatx, followed a seasonal round of resource use and regional settlement that took them from their winter residences on Vancouver Island and the Gulf Islands across the Strait of Georgia to the Fraser River estuary, where they resided for all or part of the annual salmon runs (April and June to through October), or, in some instances, year-round (BC and PMV, 2012; Fediuk & Thom, 2003a, 2003b; HTG, 2005b; Thom & Fediuk, 2008). The Hul'qumi'num Mustimuhw maintain that historically, the Lower Fraser represented the most important location within their regional settlement system (HTG, 2005a). Areas within the wider Fraser River estuary were also utilized by Hul'qumi'num'-speaking peoples for fishing salmon, sturgeon, groundfish, and other marine resources on the foreshore (e.g., Tsawwassen, Point Roberts, Boundary Bay) (HTG, 2005b). Certain species (e.g., sockeye and pink salmon, sturgeon, eulachon, trout, flounder) could only be obtained in, or were preferred to be taken at, Fraser River-based locations within their trans-Georgia Strait settlement round.

Ts'uubaa-asatx along with other Hul'qumi'num-speaking people on Vancouver Island and the Gulf Islands, relied heavily on salmon (i.e., chum, spring, coho and sockeye from the Fraser River) year round, herring and herring roe (March), cod, lingcod, red snapper, rockfish and steelhead (winter) (Thom & Fediuk, 2008).

Ts'uubaa-asatx as a member of the HTG maintains that during the reserve creation process in the late nineteenth century, Dominion officials were aware of Hul'qumi'num Mustimuhw fishing interests at the Fraser River; however, no reserves were set aside for them. Government regulations introduced in the same era also had the effect of restricting their access to fishing in the area. However, Hul'qumi'num Mustimuhw continued to use the Fraser River for fishing into the early twentieth century (BC and PMV, 2012; HTG, 2005b, 2005a)

DFO management areas to which Ts'uubaa-asatx FSC licences apply are not specified in their latest available fisheries agreement with DFO; however, Ts'uubaa-asatx's agreement mentions sockeye, which does not occur in the Cowichan River system. DFO records for communal FSC licences in the Fraser River downstream of the Port Mann Bridge do not indicate that Lake Cowichan has had recent access to fisheries in this area. Lake Cowichan

previously reported, however, that one of their FSC fishers harvested fish at the mouth of the Fraser and Roberts Bank in two of the last three years (as of 2015). Two species of salmon have been targeted at Roberts Bank – sockeye and spring (Chinook) -- with approximately 20 to 50 of each species harvested annually (spring through fall) (PMV, 2015a).

Ts'uubaa-asatx, as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP), engages in a commercial fishing business along with Halalt, Lyackson and Stz'uminus First Nations and Penalakut Tribe. Species harvested through this enterprise are halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP, 2014, 2015).

Marine Invertebrates

Their most desired seafood species include, clams (butter clam, littleneck, manila), Dungeness crab, Pacific oyster, prawns, basket cockle, red sea urchin, octopus, and ghost shrimp or common shrimp (Thom & Fediuk, 2008).

Hul'qumi'num Mustimuhw harvested beach foods from February through the summer months. Basket cockles, and clams (horse and butter) were staples in their diet, preserved in large quantities for future consumption, ceremonial, social, and trade purposes. Many of the other marine resources were immediately consumed (Thom & Fediuk, 2008).

Under the HFLP, Ts'uubaa-asatx, harvest crab (one Area H licence) and prawn for commercial purposes (HFLP, 2014, 2015).

Marine Vegetation

Lake Cowichan members reported harvesting eelgrass at Roberts Bank in the intertidal zone (PMV, 2015a).

Marine Mammals

Marine mammals (particularly seals and sea lions) were harvested historically on the South Arm of the Fraser River (BC and PMV, 2012; HTG, 2005b).

Marine Birds

Lake Cowichan report they are harvesting ducks, specifically mallards and coots (mud hens), at Roberts Bank. They have previously expressed concern regarding the diminishing numbers of these and other marine birds (PMV, 2015a).

4.2.3.2.15.2 Cultural Practices and Sites

The HTG, of which Ts'uubaa-asatx, is a member, previously stated that the Lower Fraser River is the “central feature of the regional landscape that connects Hul'qumi'num culture across Vancouver Island to the Fraser Canyon” (HTG, 2005b). The Fraser River serves as the primary transportation route, bridging the Island Hul'qumi'num communities with their relatives on the Mainland (HTG, 2005b). Cowichan First Nation members used waterways to travel between sites, between summer camps, and hunting, fishing, and gathering locations along

waterways. These waterways remain important travel corridors for harvesting marine resources and accessing sites for ceremonial purposes (WLNG, 2015).

As is the case with other Coast Salish groups, sites used for traditional purposes by Ts'uubaa-asatx, members, such as fishing, hunting, or gathering sites, are regarded as sacred, features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG, 2015).

4.2.3.2.16 Lyackson First Nation

Lyackson First Nation has three reserves, all on Le'eyqsun (Valdes) Island, which lies directly opposite the mouth of the Fraser River in the Strait of Georgia. The three reserves are Lyackson IR 3, which is the largest, Shingle Point IR 4 and Portier Pass IR 5. Of the total registered membership of 216, 14 lived on Lyackson reserves as of September 2019 (AANDC 2019q). Neither the LSA nor the RSA overlap any current or former Lyackson reserve lands.

The Lyackson people are part of the Coast Salish linguistic group and speak the dialect Hul'q'umi'num (FPHLCC, 2018a). They describe Le'eyqsun (Valdes) Island as their homeland and ancestral territory, in which they continue to engage in traditional practices on a seasonal basis (LFN, 2015). Lyackson First Nation maintains that it enjoys Aboriginal title and rights interests in: the southern Gulf Islands, specifically Le'eyqsun; the southeast coast of Vancouver Island in and around the Cowichan Valley; along the South Arm of the Fraser River; and throughout the Salish Seas (Georgia Strait). Lyackson First Nation has stated that the South Arm of the Fraser River is the location of a very important village site, *Tl'uqtinus*, once central to Lyackson for trade, inter-community relations, inter-governmental relations, and for fishing and berry harvesting (LFN, 2015).

Based on their affiliation with the HTG, Lyackson First Nation is associated with a collective traditional territory with the other members of the HTG, as illustrated in Figure 4.2-7. The HTG marine or fishing territory overlaps the LSA and RSA. The traditional territory is also referenced in Lyackson's three-year Forest Consultation and Revenue Sharing Agreement with the Province of British Columbia, dated 2018 (MARR, 2018). The marine component of the territory extends from Gabriola Island in the north, south to the north end of the Saanich Peninsula and east to the confluence of the South and North Arms of the Fraser River, which includes international shipping lanes (CEAA 2019v:5).

Lyackson First Nation is one of the modern-day Hul'qumi'num speaking Aboriginal groups that form the Cowichan Nation, along with Cowichan Tribes, Stz'uminus First Nation, Halalt First Nation, and Penelakut Tribe. The communities often work together on different issues relating to Aboriginal rights and title. Cowichan Tribes, Stz'uminus First Nation, Penelakut Tribe, and Halalt First Nation are currently litigating their title claim to the location of *Tl'uqtinus*, on behalf of the Cowichan Nation. Lyackson First Nation is supporting this effort (CEAA 2019v).

The summary of Lyackson First Nation Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project, and material submitted for Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2, including their submission made during the CEAA panel hearings for Robert's Bank Terminal 2 (CEAA, 2019v).

4.2.3.2.16.1 Marine Resource Use

Lyackson First Nation reported to the RBT2 review panel that they have historically and currently use the RBT2 project area, including the shipping lanes, for fishing and other harvesting activities (CEAA 2019v). The shipping lanes identified for RBT2 are the same as those in the Project LSA and RSA.

Lyackson First Nation relies on resources found in the marine environment to help sustain their people and culture. The Cowichan Nation has recorded and asserted named places, dwellings, canoe travel routes, stories, camping sites, fishing sites, hunting sites, and gathering sites within the area assessed for the RBT2 project (CEAA 2019 av, p. 8). Cowichan Nation members transmit culture to younger generations through practices of harvesting marine resources and celebration of water, lands and animals with songs and prayers. Cowichan Nation members value overall ecosystem health, biodiversity, and integrity to ensure that there are enough resources to share among their communities and have a sustainable economy (CEAA 2019v).

Marine Fish and Fish Habitat

Marine Fish

Lyackson First Nation states that fishing was a critical aspect of their culture and economy. Historically, apart from salmon, halibut, herring, lingcod, dogfish, flounder, smelts, perch, sculpin, skate, and ruffin were traditionally harvested in and around Le'eyqsun. They harvested pacific herring from the Gulf Islands and sockeye salmon from the Fraser River in the summer months (University of Victoria, 2014; WLNG, 2015).

Lyackson First Nation reports fishing for salmon in the Salish Sea (Georgia Strait), relying heavily on their salmon fisheries for their traditions, health, and for economic reasons. Salmon forms a critical component of their food supply (LFN, 2015). They assert that fishing is a contemporary practice, continued from their traditional Aboriginal right practices (LFN, 2015).

Lyackson First Nation has said fishing by its members is principally undertaken in and around Le'eyqsun, but Lyackson fishers have estimated that more than 50% of their salmon harvest relies on transit of the Salish Sea between Le'eyqsun, and the Fraser River. Lyackson First Nation identified some of the reasons certain Lyackson members no longer make the trip to the Fraser, including large ship traffic, declines in reliable salmon and other fish, "restrictive administrative requirements," and increasing costs (PMV, 2015b).

Due to poor returns, Lyackson First Nation did not receive food fish in 2015, 2016, or 2017. Lyackson is concerned that increases in vessel traffic will limit their ability to access Fraser River salmon for food, social and ceremonial purposes as large vessels get priority over smaller fishing vessels (CEAA 2019v: p. 11).

Lyackson First Nation is a member of the HFLP along with Ts'uubaa-asatx, Halalt First Nation, Penelakut Tribe and Stz'uminus First Nation. Under the Pacific Integrated Commercial Fisheries Initiative, they have created the Hul'q'umi'num Fisheries Society, General Partnership and Limited Partnership. Through these organizations Lyackson owns a 1/5th share of the revenues generated in 5 (Area E) salmon licences, 13 herring gillnet licences, one herring seine licence for the Salish Sea. They also have 1/5th interest in revenues from one rockfish licence, one halibut licence, and in two sablefish quota (about 21,500 lbs. and 16,000 lbs.) on the west side of Vancouver Island (LFN, 2015; NEB, 2014d; PMV, 2015b).

Lyackson reports that they also own a 1/6th share of revenues in another sablefish quota and has its own access to five Area E communal commercial licences under their Aboriginal Fisheries Strategy. Lyackson explains that

revenues from their red sea urchin licence, sablefish licence, and the annual and limited distribution from HFLP are combined to pay for the First Nation's annual food fishery (LFN, 2015).

Lyackson First Nation expressed concerns during the RBT2 Panel Review that the project-related shipping may adversely affect their commercial interests by limiting fishing areas, impacting shoreline and other habitats, or by limiting future enterprises such as aquaculture. Disrupting HFLP's business would impact Lyackson's economy and community health (CEAA 2019v, p. 12-13).

Marine Invertebrates

Lyackson harvest shellfish in intertidal areas for subsistence and cultural reasons. Shellfish and intertidal gathering occur year-round but is most intensive during low tide in the summer months. Historically, various species of clams were available such as butters, littlenecks, razor, and horse clams. Other bivalves include cockles, chitons, oysters, and mussels. Dungeness crabs were also harvested in large numbers for summer feasts. Sea urchin was also speared in shallow waters along the shoreline. Many of these intertidal resources are no longer harvested due to availability or contamination closures. Lyackson First Nation has expressed concern to the RBT2 panel that project-related shipping will further impact the quantity and quality of the marine harvest, largely due to erosion from vessel wake (CEAA, 2019v).

Though the HFLP and related organizations, Lyackson First Nation owns a 1/5th share of the revenues generated in two prawn licences and one crab licence (Crab Management Area H which includes PFMA's 14, 16 to 19, and Subarea 29-5) (LFN, 2015; NEB, 2014d; PMV, 2015b). Lyackson also has access to a red sea urchin licence. Revenues from their red sea urchin licence, sablefish licence, and the annual and limited distribution from HFLP are combined to pay for the First Nation's annual food fishery (LFN, 2015).

Marine Vegetation

Lyackson First Nation reports that harvesting of plants, medicines, and other marine resources from intertidal areas is critical to the Lyackson way of life. Lyackson brought concerns to the RBT2 panel regarding the potential impacts of erosion on intertidal and foreshore habitats from vessel wake. Based on traditional and current ecological knowledge, Lyackson report that vessel wake can be detrimental to eelgrass growth (CEAA, 2019v).

Marine Mammals

Traditional seal, whale, and sea lion hunts occur in the Salish Sea (Georgia Strait), with Lyackson First Nation, along with Penelakut Tribe, enjoying the exclusive Aboriginal right to harvest seals and sea lions from Porlier Pass. This is a practice Lyackson First Nation is striving to revitalize, as Lyackson Elders have requested seal meat and consider seals and seal meat to have medicinal properties (LFN, 2015; NEB, 2014d; PMV, 2015b). Lyackson First Nation members have said that of all the marine mammals, sea lions are of particular importance to them, bridging all of the Nation's six primary use categories (i.e., "food, medicine, spiritual, material, trade, and indicator categories"). They report that whales are of similar importance (PMV, 2015b).

Killer whales (*q'u'llhanumutsun*) and, in particular, the SRKW are important to the Lyackson First Nation culture. Killer whales are depicted in visual art, stories and songs (CEAA 2019v:13). However, traditional knowledge indicates that all whales have use and cultural significance to Lyackson First Nation. Community knowledge indicates that grey whales and humpbacks have been returning to the inner waters of the Strait of Georgia.

Previously assumed to be extirpated, the return is particularly significant as they provide opportunities to educate younger generations and share knowledge, which is integral to cultural health and wellbeing (CEAA 2019v, p. 15).

Marine Birds

Shorebirds, including the Western Sandpiper, have cultural significance to Lyackson First Nation. Lyackson also hunted ducks for subsistence purposes at Roberts Bank (CEAA 2019v). Lyackson members also report hunting geese, as well as gathering the eggs of ducks and seagulls, on or near *Le'eyqsun* (Valdes) Island and within other areas of their asserted territory (University of Victoria, 2014; WLNG, 2015).

4.2.3.2.16.2 Cultural Practices and Sites

For Lyackson First Nation, foreshore and intertidal areas are of critical importance to subsistence and knowledge transmission. They note that the reef areas by Tumbo Island are of particular importance as a fishing area and as a refuge area in bad weather. Waterfront areas are also areas of high archaeological potential, with burials being unearthed on shorelines due to erosion. Lyackson First Nation is concerned that erosion related to increases in vessel traffic will affect these sites (CEAA, 2019).

Lyackson First Nation has previously said that their fish are being depleted. They note that many of the marine species that are important to their cultural practices, such as salmon, eulachon, and whales are in “serious decline” (PMV, 2015b). Lyackson First Nation has said that their community wants to see a return to food fish distribution levels that resemble the historical highs of the past, where each household would receive 200 salmon annually. Currently the distribution levels are much lower, with some members receiving no fish at all. However, the community as a whole continues to rely on its salmon fisheries for traditional, health, and economic purposes (PMV, 2015b).

The EA application for the Pattullo Bridge Replacement Project included site-specific data that appear to be relevant to this Project, including provided three “small-craft transportation” values identified as fishing routes to the Fraser River across the Salish Sea from *Le'eyqsun*, one “story-history” value is identified as taking in the lower portion of the South Arm, from *Tl'uqtinus* down to the Salish Sea, and Two “habitation” values are also identified, corresponding to the Deas Island and Steveston areas (MOTI, 2018, pp. 12–211).

4.2.3.2.17 Musqueam Indian Band.

The Musqueam people are a hə́nqəmíhəm-speaking people (FPHLCC, 2018a). Musqueam Indian Band's main community (Musqueam IR 2) is located at the mouth of the North Arm of the Fraser River, adjacent to what is now the City of Vancouver (AANDC 2019r). Musqueam IR 2 is the location of at least three villages, including the two important villages of máləy and scələx^w, as well as a multitude of named houses and other sites (Barnett, 1955; Tam, J. et al., 2018). The name x^wməθk^wəyəm, Anglicized Musqueam, was given to the largest village within IR 2 (Kew, 1979, 1996). A second reserve (Sea Island IR 3) is located across the river from Musqueam IR2 at sq^wsaθən, on Sea Island, adjacent to the City of Richmond. The Fraser River is intrinsically linked to Musqueam's oral histories, cultural identity and Musqueam's position in historical and contemporary trade networks (Tam, J. et al., 2016, 2018). A third reserve (Musqueam IR 4) is located adjacent to Ladner, near Canoe Pass, near šx^wíicəm on the South Arm

of the Fraser River. Musqueam IR 4 is the closest reserve to the Project site (approximately 10 km downstream), though Musqueam has advised WesPac that the Project site is in an area that contains multiple named sites. Musqueam place names form a network of over 125 named sites (Tam, J. et al., 2018). At one time, Musqueam had a fourth reserve (the first reserve set aside for them) further up the Fraser River at qiqéyt (Brownsville), on the south shore across from New Westminster (Crockford, 2010; MIB, 1976). Kew's ethnographic notes from work with a Musqueam elder and knowledge-holder indicated that present-day New Westminster represented the eastern extent of Musqueam's territory (Tam, J. et al., 2018).

The ancestors of present-day Musqueam people have lived in this area for thousands of years (Duff, 1952). Carbon dating at səwǫ́weqsən (former Glenrose-St. Mungo Cannery Site) dates to around 8,500 years ago (MIB, pers. comm). Their oral histories demonstrate Musqueam's knowledge and use of their territory over thousands of years (Tam, J. et al., 2018, p. 21). The registered population of Musqueam Indian Band as of October 2019 was 1,414 members, of which 639 were living on reserve, primarily at Musqueam IR 2 (INAC, 2019). Musqueam people are part of the Central Coast Salish linguistic group and speak the downriver dialect of həńǫ́mihəń (FPHLCC, 2018a).

Musqueam's traditional territory is depicted in the Musqueam's Statement of Intent filed with the British Columbia Treaty Commission in 1993 (BCTC, 2009e). As illustrated in Figure 4.2-9, beyond the core territory, Musqueam people use an extensive resource use area throughout the region based on traditional Coast Salish practices of stewardship and kinship protocols (Tam, J. et al., 2018, p. 19). Protocols exist that determine access rights and requires other Aboriginal groups to seek access to waterways and resources within this territory from Musqueam (Woolman, 2014 in MIB, 2018, p. 20). While the LSA and RSA do not overlap with any of Musqueam's current or former reserve lands, it is situated within the Musqueam Consultation, Accommodation and Resources Access (CARA) Boundary.

A network of year-round and seasonal settlements throughout the Fraser River Delta and upstream along the Fraser River were used by Musqueam people to access resources. With their neighbours and relations, Musqueam practiced a system of resource distribution based on kinship ties and underpinned by protocols. This included arrangement of inter-village marriages to ensure access to resources and sharing of food and other goods through feasts and ceremonies between families and village. These activities continued into the contact period and to the present day (Tam, J. et al., 2018, p. 23). Today, salmon and other fish, notably eulachon and sturgeon, remain central to Musqueam's patterns of use (Tam, J. et al., 2018, p. 26).

In 1990, the Supreme Court of Canada affirmed Musqueam members right to fish within the Fraser River in accordance with *R v Sparrow*, [1990] 1 SCR 1075. Musqueam continues to seek recognition of its Aboriginal rights and title throughout the territory (Tam, J. et al., 2018). Key areas of Musqueam rights-based practices include, but are not limited to, governance, trade, diplomacy, navigation and water-based transportation, construction of houses and related structures, artistic production, manufacture of textiles, cedar harvesting for various purposes, fishing and associated manufacture, hunting, shellfish harvesting, plant harvesting, food processing and spiritual and ceremonial activities (Tam, J. et al., 2018,).

The summary of Musqueam Indian Band Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project, and material submitted for Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2,

including submissions made during the CEAA panel hearings for Robert's Bank Terminal 2, including presentations and submissions to the RBT2 panel (CEAA 2019 u,v,w,x).

The Local Study Area for the Musqueam Knowledge and Use Study for PMV's RBT2 Project overlaps with the LSA and RSA (CEAA 2019u: 21).

4.2.3.2.17.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Fish

The Musqueam Indian Band have an established right to fish for food, social, and ceremonial (FSC) purposes in the area of Canoe Passage on the South Arm of the Fraser River (*R. v. Sparrow* [1990] 1 S.C.R. 1075); also described therein as “the waters of Ladner Reach and Canoe Passage”). The Musqueam also assert an Aboriginal right to fish for FSC purposes in a broader area that includes but is not limited to all waters of the Fraser River – including its North Arm, Middle Arm, and South Arm – downstream of the Port Mann Bridge to the Strait of Georgia (BC and PMV, 2012; PMV, 2015a).

For many Musqueam people, fishing and the Fraser River have always been a way of life. Fishing, and the activities that are associated with fishing, are central to Musqueam culture and livelihood, providing food and nutrition and income (MIB, 2016). Fishing was the main contributor to the Musqueam diet with salmon being the most important, followed by sturgeon (Suttles, 1984, Tam et al., 2018). Musqueam's location at the mouth of the Fraser River places salmon and other fish species at the centre of their life, language, culture, and economic systems (Tam et al, 2018). Fishing is also essential to Musqueam's identity and sense of place and members' spiritual, psychological and cultural wellbeing. Fishing and the sharing of the catch, build social connections, strengthen cultural resilience and enable Musqueam to transmit cultural knowledge, continue ceremonies and engage the community (Tam et al 2018).

Musqueam explain, “[t]hen as now, we are a fishing people whose rhythms, stories and culture are closely aligned with the Fraser River along whose banks we still live today” (Musqueam Indian Band, 2011; Tam et al., 2018). All five species of Pacific salmon (chinook, sockeye, pinks, coho, and chum), steelhead trout, rockfish (rock cod, red snapper), herring and herring spawn, smelt, halibut, eulachon, trout, and sturgeon were fished historically by the Musqueam in their asserted traditional territory (see previous section), and all were important economically. Musqueam consider salmon, sturgeon and eulachon, amongst other species, as cultural keystone species (MIB, 2016). Musqueam had tidal weirs in the North Arm of the Fraser River owned by kin groups, in which larger salmon and sturgeon were taken (Kew, 1979; Suttles, 1984 and 1990¹). Musqueam built smaller traps based on the same principles in sloughs to obtain mostly coho (Suttles 1984).

¹ Suttles, Wayne. 1990. Central Coast Salish. In Handbook of North American Indians, Northwest Coast, Volume 7. Smithsonian Institution, Washington.

Areas in which Musqueam harvest salmon for FSC purposes (and sale of those salmon in years where returning numbers allow) is permitted in Pacific Fishery Management Areas (PFMA) subareas 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, and 29-17 (DFO and MIB, 2013), described collectively as follows:

Those waters of the Fraser River westerly of the power lines immediately downstream of the Port Mann Bridge and the waters of the Strait of Georgia bounded by a line commencing at Point Grey thence northerly to the light on Point Atkinson, thence westerly to the light on Point Cowan on Bowen Island, thence following the southerly shoreline of Bowen Island to the light on Cape Roger Curtis, thence in a direct line southeasterly to the Roberts Bank LL# 309 (known as the Hooter Buoy) thence due west to the 40 metre contour line as shown on C.II.S. 3463, thence follow the 40 metre contour line to the International border. (DFO, 2013; Government of Canada & Musqueam First Nation, 2013)

The Musqueam Indian Band is involved in commercial fisheries through Salish Seas Limited Partnership, a business owned jointly with the Tsleil-Waututh Nation and Sliammon First Nation. Species harvested commercially through this enterprise include halibut and herring. Individual Musqueam members also hold commercial licences (PMV, 2015a).

Musqueam members reported fishing values in the LSA of their KUS prepared for the RBT2 panel hearings, which overlaps with the shipping channels in the Project's LSA and MAA (CEAA 2019u). Musqueam participants stated in the interviews that fishing in the ocean and the Fraser River was important to them and they reported fishing "over wide swaths of the ocean" (CEAA2019u). Important fishing areas included the shallow shelf found west of Vancouver, the area around Roberts Bank and Canoe Pass (CEAA 2019u).

Marine Invertebrates

At productive beaches within Musqueam traditional territory, abalone, barnacles, clams, chitons, cockles, mussels, crabs, crayfish, octopus, oysters, prawn, scallops, sea urchins, sea cucumber, shrimp, and seaweed were harvested and set aside for winter supplies; however, clams were the most abundant and heavily harvested within their traditional territory (MIB, 2006; Musqueam Band Council, 1984; PMV, 2015a; WLNG, 2015).

Crabbing occurs extensively in the shallow shelf and flats of the Salish Sea, including at Roberts Bank (CEAA 2019y,x). Musqueam report that decreases in sockeye, coho, and to a lesser extent, chinook and regulated access to these resources have resulted in an increase in Musqueam crab and prawn fishing for food, social and ceremonial purposes as well as economic opportunity (Nelitz et al., 2018).

In 2013 and 2014, and 2015 Musqueam were licenced to harvest crab (targeting Dungeness, graceful and red rock) within the Musqueam Crab Area and prawn in PFMA sub-areas 29-2, 29-3, and 29-4 through the year (DFO, 2016). They wish to secure DFO licences, allowing them to utilize FSC allocations of crab, as well as other species, for economic or commercial purposes, as they would have undertaken traditionally (DFO, 2014b; PMV, 2015a). Musqueam has previously expressed concern regarding the decreasing access to crab harvesting areas in their asserted territory as well as the compromised quality of crab in areas that remain accessible (PMV, 2015a).

Octopus is a traditional food source and Musqueam is seeking to obtain a licence to address the ongoing community need and demand for the resource. Concerns regarding contamination prevent Musqueam from harvesting sea urchin (food, medicine), sea cucumber (food, medicine), clams (food), and cockles (food). Musqueam must now trade for these resources with their relatives from other Aboriginal groups or buy the seafood from stores for their

Elders. They want to harvest these resources again and observe that forced changes in diet, for example as a result of food avoidance, may be a contributing factor to the overall health of community members (PMV, 2015a).

The Musqueam Indian Band is involved in commercial fisheries through Salish Seas Limited Partnership, a business owned jointly with the Tsleil-Waututh Nation and Sliammon First Nation. Species harvested commercially through this enterprise include crab and prawn. Individual Musqueam members also hold commercial licences. Commercial crab harvesting primarily occurs in Bowen Island waters, Burrard Inlet, and near the Roberts Bank terminals (PMV, 2015a).

Marine Vegetation

Kelp continues to be an important food and medicinal plant. Musqueam report they must now trade for it, either because it cannot be found or is avoided due to contamination concerns. Musqueam identify similar issues for seaweeds generally. They attribute loss of healthy kelp and eelgrass, which also serve as an important habitat for crab and other marine life, to the effects of industrial activity and habitat alteration within their asserted territory (PMV, 2015a).

Marine Mammals

The most commonly harvested marine mammals were the harbor seal, sea lion, and porpoise, with seals harvested throughout the Fraser River Estuary, including all areas of the South Arm of the Fraser River and offshore of Steveston, Westham Island, and Brunswick Point. Musqueam report also harvesting seal outside of Steveston (PMV, 2015a) and at Canoe Pass (MIB, 2016). Seal and sea lion meat was valued as a food source, and the whiskers have essential ceremonial functions. Seal skins have been used in drum-making (as compared to deer skin) and seal fat was once rendered for oil. Musqueam is able to harvest seals and sea lions under a special DFO licence, however, prefer not to due to concern regarding pollutants. They desire to resume harvesting seals and sea lions upon the resolution of contamination and conservation concerns (PMV, 2015a).

Marine Birds

In the 1980s, approximately 90 Musqueam members actively hunted, focussing primarily on wildfowl, including mallard, teal, widgeon, pintail, geese, brant, black duck, grouse, and pheasant. They harvested these birds on river banks, marshes, meadows throughout the Fraser delta; on the foreshore areas within and adjacent to their IRs (i.e., 2, 3, and 4); on Bowen and Passage Islands; and other sites within their asserted territory (Musqueam Band Council, 1984). Grouse were hunted in the open fields of Lulu Island and waterfowl were harvested at the western extent of the island and also at Westham Island, and Canoe Passage (Musqueam Band Council, 1984). Waterfowl and game birds are harvested for consumption and, in the case of ducks and geese, to provide feathers for feasts and ceremonies (MIB, 2016).

Musqueam report harvesting birds into the lower reaches of the Fraser River near the Project site, with intensive areas identified next to the southwestern portion of Westham Island, in and around Tsawwassen First Nation lands, Sturgeon Bank and Musqueam IR4 (MIB, 2016). They explain that while these areas were also hunted historically, displacement from other harvesting locations has been reported due to development and hunting restrictions, including prohibitions against discharge of firearms (PMV, 2015a).

4.2.3.2.17.2 Cultural Practices and Sites

Musqueam members continue to consider themselves to be “stewards of the lands, waters and living creatures within and around the Fraser River” (MIB, 2006). As is the case with other Coast Salish peoples, all areas used for traditional purposes, such as fishing, hunting, or gathering, are regarded as sacred and that features associated with culturally important landscapes include named places, former village sites, and travel routes (WLNG, 2015).

Musqueam have noted a number of sites used both historically and continuously that are important for the transmission of cultural knowledge and to engage in cultural practices. Sites and associated cultural activities such as fishing, conducting ceremonies, and other cultural practices are also important for Musqueam to maintain a sense of place and identity as Musqueam people. Musqueam have stated that their sense of place and cultural continuity can be affected by noise or changes to the river that affect fishing (Tam et al., 2018).

Musqueam report that the Fraser River and its surrounding waters is their “highway” (MIB, 2006) and these waterways still serve as important travel corridors for harvesting marine resources (WLNG, 2015; Tam et al., 2018). Musqueam explain, historically they could navigate from the North Arm of the Fraser River through Lulu Island (Richmond) and Delta, using slough channels as an alternate to ocean travel. These sloughs, which also once supported fishing locations, no longer survive. Musqueam maintains that the remaining waterways have become reportedly congested with log booms and increasing vessel traffic, resulting in more vessel interactions, loss of fishing gear, and safety concerns (PMV, 2015a; Nelitz et al., 2018).

λ'eqtines (also known as Tl'ektines, Tl'uqtinus t'theqtines) is reported as a permanent village (Ham, 2001; Kew, 2002) or a summer campsite of the Musqueam and other nations (Rozen, 1985; Suttles, 1955). According to Rozen (1979), the south side of Lulu Island and the opposite bank along the South Arm of the Fraser River was heavily populated by members of several Coast Salish groups during the summer months. Musqueam have expressed concern about changes to valued places such as λ'eqtines that may result in a disruption of cultural practices and sense of place (Tam et al., 2018). Thom notes that Coast Salish people have profound attachments to their home places which are foundational to their social organization and ontological orientation (Thom 2005).

Musqueam note that maintaining cultural continuity requires the ability to continue to transmit cultural knowledge and language across generations (Tam, J. et al., 2016, 2018). Inter-generational knowledge transmission is of critical importance and includes teaching younger generations how and where to fish, hunt and gather, and sharing morals and values through communication of hən̓q̓əmi̓ñəm̓ stories. Knowledge of the hən̓q̓əmi̓ñəm̓ language is also central to Musqueam identity (Tam, J. et al., 2016). Language connects the landscape to Musqueam culture through place names, for example, which link to actions, histories and stories related to Musqueam heritage and the environment (Tam, J. et al., 2016).

Musqueam members reported no cultural continuity values in the LSA of their KUS prepared for the RBT2 panel hearings, which overlaps with the Project LSA and RSA (CEAA, 2019v).

4.2.3.2.18 Penelakut Tribe

Penelakut Tribe, along with Cowichan Tribes, Halalt First Nation and Stz'uminus First Nation, are represented by the CNA on collective interests on matters outside of treaty negotiations. As speakers of the Island dialect of

Halkomelem (Hul'q'umi'num), these four CNA members, along with Ts'uubaa-asatx and Lyackson First Nation, refer to themselves collectively as Hul'qumi'num Mustimuhw (HTG, 2005b).

Penelakut Tribe is based in southeastern Vancouver Island. Their primary village is located on Penelakut Island (Penelakut Island No. 7), east of Chemainus. Penelakut members also reside on Kuper (Penelakut Island No. 7), Tent (Tent Island No. 8) and Galiano (Galiano Island No. 9) islands. As of November 2018, Penelakut Tribe had 999 registered members, of which 529 lived on their reserves as of October 2019 (AANDC 2019s). The Project area does not overlap any of Penelakut Tribe's current or former reserve lands.

Penelakut Tribe is, or has been, affiliated with the Hul'qumi'num Treaty Group (HTG), along with the other Cowichan Nation Alliance members, Ts'uubaa-asatx and Lyackson First Nation. The HTG assert a core territory, or title lands, and a wider marine or fishing territory, as described in its Statement of Intent to the BC Treaty Commission (BCTC, 2009a). HTG's broader marine or fishing territory overlaps the Project MSA (Figure 4.2-7).

Penelakut Tribe reports that there are locations of importance along the South Arm of the Fraser River, including the ancestral village and resource sites known as *Tl'uqtinus*, on the north shore opposite the Project site on Tilbury Island, and *Xwulit'sum*, at Canoe Pass. In November 2014, Cowichan Tribes, Stz'uminus First Nation, Penelakut Tribe and Halalt First Nations filed an Amended Notice of Civil Claim seeking a declaration of Aboriginal title to an area described as the Tl'uqtinus Lands and fishing rights to the South Arm of the Fraser River.

4.2.3.2.18.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Fish

Penelakut Tribe has previously stated, that prior to contact, all of the beach and marine areas between Chemainus Valley on Vancouver Island up to and including the South Arm of the Fraser River were available to them as resource harvesting areas (PMV, 2015b). Penelakut followed a seasonal pattern of resource use and regional settlement that took them from their winter residences on Vancouver Island and the Gulf Islands across the Strait of Georgia to the Fraser River estuary, where they resided for all or part of the annual salmon runs (April through October), and, in some instances, lived year-round). They report harvesting salmon and sturgeon in the Fraser River (TMEP, 2014a). At Telegraph Harbour they raked herring, collected herring spawn, fished for skate, and harvested beach foods (BC and PMV, 2012).

Cowichan Tribes and Penelakut Tribe have previously stated that they are not permitted by DFO to fish for FSC purposes in the Fraser River (PMV, 2015b). Notwithstanding the preceding statement, current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by CNA member Nations has been previously discussed as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18) (PMV, 2015a).

Penelakut Tribe (as part of the HTG) maintains that during the reserve creation era in the late nineteenth century, government officials were aware of Hul'qumi'num Mustimuhw fishing interests at the Fraser River; however, no reserves were set aside for them (HTG, 2005a, 2005b). Historical documents indicate Penelakut Tribe once had a fishing camp on a slough at the bridge on No. 4 Road south of the Steveston Highway, a second fishing camp, on

a little bay, said to be located on the south shore of Canoe Passage, just below Brunswick Point. As indicated in the preceding passage, Penelakut Tribe report seasonally using Tl'ektines/ Tl'uqtinus (BC and PMV, 2012; HTG, 2005a, 2005b; PMV, 2015a). Penelakut Tribe, along with other members of CNA has been working to restore former fisheries within the Fraser River through DFO, seeking allocation increases on the Lower Fraser River and changes in harvesting areas (DFO, 2015b). DFO records for communal FSC licences in the Fraser River downstream of the Port Mann Bridge do not suggest that any of the Cowichan groups, individually or collectively, has had access to fisheries in this area in the last 8 years up to 2016 (DFO, 2016). CNA reports that they have active litigation over their asserted fishing rights on the South Arm of the Fraser River (MOTI, 2016).

Penelakut Tribe, as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP), engages in a commercial fishing business. Species harvested through this enterprise are halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP, 2014, 2015).

Penelakut Tribe expressed concerns to the RBT2 panel that increased vessel traffic would increase navigational conflicts for Penelakut members travelling across the Salish Sea to harvesting sites at Roberts Bank (CEAA, 2019b).

Marine Invertebrates

They harvested beach food on Valdes Island, hunted marine mammals in the areas around the Gulf Islands, and Thetis Island was used for both hunting and collecting beach foods. At Telegraph Harbour they raked herring, collected herring spawn, fished for skate, and harvested beach foods (BC and PMV, 2012). The marine resources harvested in the Strait of Georgia by Penelakut Tribe included, clams (i.e., littleneck, butter, horse, geoduck, manila), basket cockles, oysters, scallops, mussels, chitons, crabs, sea cucumber, octopus, red and green sea urchins, barnacles, Dungeness crab, giant red chiton, northern abalone, prawn, and red rock crab (TMEP, 2013). Penelakut Tribe has discussed a 2007 survey, which found shellfish continue to be consumed in high levels by members of the Tribe (PMV, 2015b).

Penelakut Tribe, as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP), engages in a commercial fishing business. Shellfish species harvested through this enterprise are crab (one Area H licence, which applies to PFMA 14, 16 to 19, and Subarea 29-5) and prawn (two local / coast wide licences) (HFLP, 2014, 2015).

Marine Vegetation

CNA member groups report harvesting marine vegetation, specifically seaweed, in the Strait of Georgia, including around the southern Gulf Islands and San Juan Islands (TMEP 2014b). Penelakut report harvesting specifically around Salt Spring Island (TMEP 2014b).

Marine Mammals

Penelakut Tribe note that the SRKW is associated with the concept of “family” and have expressed concerns to the RBT2 panel that the project would have adverse effects on the mammals (CEAA, 2019b).

Penelakut Tribe harvested beach food on Valdes Island, hunted marine mammals in the areas around the Gulf Islands, and Thetis Island was used for both hunting and collecting beach foods (BC and PMV, 2012). Seals, sea lions, porpoises, whales, dolphins were harvested by the Penelakut in the Strait of Georgia (TMEP, 2013).

Marine Birds

Penelakut Tribe harvested ducks and geese in the Strait of Georgia (TMEP, 2013). Penelakut Tribe report that the hunting of marine birds to create 'duck soup', a standard staple food in the Big Houses in Penelakut and other Salish communities, is important to their traditional culture. The Roberts Bank area is one of the areas where marine birds are harvested (CEAA, 2019y).

4.2.3.2.18.2 Cultural Practices and Sites

Waterways have been and remain important travel corridors for the Penelakut Tribe when harvesting marine resources (WLNG, 2015). Penelakut Tribe, as a member of the Cowichan Nation Alliance, have reported that for the last generation they have been revitalizing access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. CNA members have collectively said that journeys to their members in the U.S.A. have been affected by shipping traffic and have raised concerns regarding the safety of community members while undertaking traditional practices on the water (PMV, 2015a, 2015b).

CNA member Nations collectively report that an important place on the landscape, in the vicinity of the Project area, is the former village site and cultivated berry grounds at Tl'uqtnus (PMV, 2015a).

Penelakut Tribe has previously expressed concerns regarding the cumulative effects of industrialization and pollution on access to fishing and harvesting areas, effects which have reduced and/or damaged the availability of harvesting areas in their territory (PMV, 2015b). They have expressed concern regarding the contaminants and the sustainability of vital habitats that are necessary to support their members (PMV, 2015a).

4.2.3.2.19 Semiahmoo First Nation

Semiahmoo First Nation has one reserve, fronting Semiahmoo Bay at the Canada-United States border, about 1 km southeast of White Rock, B.C. The reserve, covering 129.10 ha, was home to 50 of 97 registered members as of October 2019 (AANDC 2019t). Originally the reserve was 158.64 ha in area, although portions of it have been successively taken up for public purposes. Neither the LSA nor the RSA overlaps the reserve.

Semyome, the ancestral language of Semiahmoo First Nation, is one of six dialects of the Northern Straits Salish. Four of the dialects – SENĆOŦEN, Malchosen, Lkwungen (or Lekwungen), and T'Sou-ke – are spoken by Douglas Treaty groups residing on southern Vancouver Island (i.e., Pauquachin, Tsartlip, Tsawout, Tseycum, Malahat, Esquimalt, Songhees, Sci'aneew or Beecher Bay, and T'Sou-ke), as well as the Samish Indian Nation of northwestern Washington State (FPHLCC, 2018b). The other dialect was spoken by the Lummi Nation, who reside about 20 km south of the Canada-United States border, along the eastern side of the Strait of Georgia. Semiahmoo remain closely tied to other Northern Straits-speaking nations.

Semiahmoo traditional territory was previously represented as centred on Boundary Bay, taking in eastern portions of the Point Roberts peninsula, Mud Bay, and the lands and waters in and around the Serpentine, Nicomekl, and Little Campbell rivers (MOTI, 2016). As illustrated in Figure 4.2-10, Semiahmoo First Nation has presented a more extensive territory that is centered in the Lower Mainland in and around White Rock, B.C., and extends out from the mainland into the Strait of Georgia where it overlaps with the closely related Saanich peoples (FPHLCC, 2018b).

Semiahmoo reports that they exercise their rights, practices and culture throughout the broader resources area, which includes the Gulf Islands including San Juan Island, Vancouver Island, Washington State and the Salish Sea (CEAA 2019x).

The summary of Semiahmoo First Nation Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project and material submitted for Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2, including submissions made during the CEAA panel hearings for Robert's Bank Terminal 2, including their oral testimony (CEAA 2019x).

4.2.3.2.19.1 Marine Resource Use

Marine Fish and Fish Habitat

Semiahmoo First Nation has said that they were once one of the wealthiest Aboriginal groups on the west coast due to their fishery, which they used to trade with others (PMV, 2015b; TMEP, 2014a). They describe their overall asserted territory as mainly a saltwater territory that "lacks large rivers with salmon runs" (PMV, 2015a). Semiahmoo previously reported that they primarily fished for salmon (coho and chum were the exception), using an offshore technique known as reef-netting. Reef-netting requires a specific set of conditions and there were only a limited number of areas within the Strait of Georgia where such conditions were available, including the waters off the Point Roberts Peninsula and Cannery Point, on the southeastern tip of this peninsula. Coho and chum, an essential winter food, were harvested by other means (e.g., fish traps) within their territory (Nicomekl and Campbell Rivers). Salmon was also harvested on the American Side of Boundary Bay (Dakota and California Creeks, Tongue Spit in Drayton Harbour) (PMV, 2015a).

Semiahmoo assert that they fished seasonally in the Fraser River at Tl'ektines and they prefer river salmon over ocean salmon. Their access to the fishery at Tl'ektines was gained through a series of marriage ties with Cowichan Tribes (BC and PMV, 2012; PMV, 2015a).

Semiahmoo First Nation has said they also harvested cod, eulachon, halibut, smelts, and sturgeon. Sturgeon was fished on the western aspect of Boundary Bay off of Point Roberts and Semiahmoo Bay and provided an "important substitute for other fisheries" (PMV, 2015a). Conservation concerns prohibit retention of sturgeon.

Herring was taken at the south end of Birch Bay, and smelts were taken to the west of Tongue Spit. Semiahmoo report consuming eulachon but it is uncertain if it was directly harvested or obtained through trade with other Nations. Halibut and cod have been referenced by Semiahmoo. However, it is not certain if the species were harvested or obtained through trade (BC and PMV, 2012; PMV, 2015a).

Marine Invertebrates

Crab, a common food source, was harvested at Semiahmoo Bay, Drayton Harbour, and in Boundary Bay. Semiahmoo have said that they were once able to hand-pick crab from eelgrass at low tide "by the armload" (PMV, 2015a). Semiahmoo First Nation continues to harvest crabs for FSC purposes, targeting Dungeness, graceful, and red rock varieties. Harvest has typically ranged from June through December, although there have been years where no openings have been reported (2009, 2012, 2013, 2014), and other years where the harvest has been open year-round (2010) (DFO 2009b, 2011, 2013, 2014a, 2015a).

Semiahmoo and other Aboriginal groups shared the shellfish at Boundary Bay, characterized as once one of the most productive shellfish harvesting locations on the Pacific coast (BC and PMV, 2012; Norman, n.d.; PMV, 2015a). Semiahmoo previously stated clams (i.e., steamer, manila, butter) were once harvested at Boundary Bay. The area was closed to bivalve harvesting for over five decades due to contamination concerns, opening recently on the American side to restricted use. A sanitary and biotoxin closure remains in place in British Columbia (PMV, 2015a).

Semiahmoo previously expressed an interest in commercial shellfish harvesting, particularly of geoduck, and developing aquaculture and commercial harvesting of sea cucumber (PMV, 2015a). Semiahmoo report that they are not currently involved in the commercial salmon fishery.

Marine Vegetation

Semiahmoo reports that they exercise their rights, practices and culture throughout the broader resources area, which includes the Gulf Islands including San Juan Island, Vancouver Island, Washington State and the Salish Sea (CEAA 2019bk).

Semiahmoo harvested aquatic plants, including bulrushes, tule rushes, and grasses, used in the manufacture of mats. The mats were used for many purposes, including as housing material, beds, and for food preparation. Mats also served as a trade item, once used to secure halibut from the Nuu-chah-nulth Nations on Vancouver Island. Gathering sites for the aquatic plants included Burns Bog and the San Juan Islands; grasses used to bind the edges of maps were harvested in parts of the Fraser River valley (PMV, 2015a).

Marine Mammals

Semiahmoo also reported previously harvesting sea mammals, focusing primarily on seals (PMV, 2015a). They have expressed concerns regarding the effect of shipping on marine mammals (grey whale, humpbacks, sea lions) (PMV, 2015b; CEAA 2019bk).

Marine Birds

Ducks were hunted at Tongue Spit on Drayton Harbour north of Birch Bay, and at the mouths of Dakota and California creeks, which both drain into Drayton Harbour (BC and PMV, 2012; PMV, 2015a).

4.2.3.2.19.2 Cultural Practices and Sites

Semiahmoo have said that use of their traditional lands and resources, access to which they say is now limited, has a spiritual and sacred element not readily separated from practical considerations (EAO, 2017). Legendary stories are also integrated into this world view, which relay that people related to the first ancestors, who descended from the sky, were transformed by Khaals (the Transformer and mythical leader) into physical and biological elements of the landscape, and remain relatives of the Semiahmoo (EAO, 2017). The Semiahmoo therefore consider themselves as part of the landscape (their territory), and this landscape serves as their sacred place, history book, storehouse of raw materials, and training ground (EAO, 2017).

Semiahmoo First Nation has reported that they are seeking to restore or maintain, within their territory, the conditions necessary to promote the exercise of ancestral uses in the future (EAO, 2017, p. 435).

Semiahmoo have expressed concerns regarding food security, and the limited access they currently have to healthy and safe traditional food, particularly marine resources, within their asserted territory (PMV, 2015a; TMEP, 2014a). Semiahmoo has said that their ability to pursue a traditional economy has been limited due to the cumulative affects of land alienation and development within their asserted territory. They have noted that the cumulative affects of land alienation and increased water traffic on rivers and oceans has affected their traditional fishing. They have said that their Nation currently has few remaining Elders with knowledge of traditional harvesting methods to transfer to youth. This is resulting in the loss of this knowledge to future generations. Semiahmoo First Nation has stated that members are no longer able to practice traditional fishing such as clam harvesting due to contamination concern, resulting in a loss of this part of their tradition (PMV, 2015a; TMEP, 2014a). They also identify a link between their community members' high levels of chronic health issues and what they perceive as impediments to their traditional marine harvesting practices (PMV, 2015b).

Semiahmoo have reported use of a travel route through Active Pass to the Gulf Island and Victoria. They have emphasized it important for them to maintain access to the islands, where they have burial grounds (PMV, 2015b). Semiahmoo have previously noted concerns regarding shoreline erosion; particularly at Semiahmoo Bay where their community resides as well as the San Juan Islands and Gulf Islands, where burial grounds are located. They reference concerns about ship wake contributing to further erosion in these areas (PMV, 2015b).

4.2.3.2.20 Squamish Nation

On July 23, 1923, 16 Squamish-speaking tribes amalgamated to establish the Squamish Nation to “guarantee equality to all Squamish people and to ensure good government” (SN, 2013c). Squamish Nation is the largest First Nation in the Metro Vancouver Region in terms of the number of reserves, combined area of reserves, registered Indian population, and total member population on its reserves. Members live primarily at the North Vancouver reserves — Capilano IR 5, Mission IR 1, Seymour Creek IR 2 — and at four of nine reserves in the Squamish Valley (Metro Vancouver, 2018). The total registered population of Squamish Nation was 4,277 with 2,216 members living on their own reserves as of October 2019 (AANDC 2019u).

Members of Squamish Nation speak the Skwxwú7mesh Snichim (Squamish language). “Squamish Nation” is used often used to describe this group of Coast Salish people, who once referred to themselves as Skwxwú7mesh or “the Squamish People” (SN, 2013b), with their territory located in the Lower Mainland region of British Columbia (SN, 2013a).

Squamish Nation's sources of revenue include taxation, leases, and Squamish-owned businesses. For example, Squamish Nation Marine Group owns and operates the Mosquito Creek and Lynnwood Marinas. The Park Royal Shopping Centre, International Plaza, and Greater Vancouver Storage Sewage Plant are examples of existing tenants on Squamish Nation lands. Squamish Nation also intends to develop parcels of land at Seymour, Capilano, Kitsilano, Chekwelp, and Stawamus (SN, 2013d).

Squamish Nation's traditional territory as described in their Statement of Intent filed with the BC Treaty Commission (BCTC, 2009f), and illustrated in Figure 4.2-11 includes the:

Lower Mainland region of British Columbia from Point Grey on the south to Roberts Creek on the west; then north along the height of land to the Elaho River headwaters including all the islands in Howe Sound and

the Sound drainages; then southeast to the confluence of the Soo and Green Rivers north from Whistler; then south along the height of land to the Port Moody area including the entire Mamquam River and Indian Arm drainages; then west along the height of land to Point Grey.

The LSA and RSA do not overlap with Squamish Nation's described traditional territory.

The summary of Squamish Nation Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project.

4.2.3.2.20.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Fish

Squamish Nation previously reported that their people have always fished, for personal and commercial purposes (NEB, 2014a, 2014b). Eulachon, herring, smelt, lingcod, rockfish, sturgeon, perch, and flounder were taken in saltwater (NEB, 2014a; SN, 2001a).

Squamish Nation currently obtains its FSC sockeye by contracting a seine boat that harvests sockeye in the Johnstone Strait (outside their territory and traditional fishing area). Squamish Nation members have expressed a desire to fish like their ancestors did and access the Lower Fraser River. Squamish has taken steps to re-establish their historical connections to the lower Fraser River (DFO, 2015a; SN, 2014). They state that the increase they seek in their allocation must take priority over the general commercial and recreational allocations (SN, 2014). Squamish Nation does not report harvesting marine fish in the LSA.

Marine Invertebrates

They also harvested varieties of clams (i.e., littleneck, butter, horse, geoduck, manila) basket cockles, chitons, crab (i.e., Dungeness, red rock), mussels, northern abalone oysters, red and green sea urchins, and scallops (NEB, 2014a; SN, 2001a).

Marine Vegetation

Squamish Nation has not provided information describing use of marine vegetation in the LSA or RSA.

Marine Mammals

Squamish Nation has not provided information describing use of marine vegetation in the LSA or RSA.

Marine Birds

The Squamish Nation has identified the Strait of Georgia as a harvesting location for ducks and geese, as well as areas along the Fraser River (TMEP, 2013; NEB 2014a).

4.2.3.2.20.2 Cultural Practices and Sites

Squamish Nation reports that they are part of a larger group of Aboriginal groups working to protect the health of the Salish Sea. They intend to play a greater role in marine planning and addressing cumulative effects of development and as part of that process are working to address the long-term sustainability of the Salish Sea (NEB 2014a).

Squamish Nation has previously discussed the loss of resources within their asserted territory (NEB 2014a). They have said that the loss of eulachon has meant the loss of a part of Squamish culture. They are no longer able to harvest clams and depend on their Snuneymuxw cousins for clams and oysters. Squamish Nation members have discussed the fact that they can no longer teach their grandchildren or great grandchildren how to dig clams, harvest crabs, or dry seaweed (NEB 2014a).

Waterways have been and remain important travel routes for Squamish Nation when harvesting marine resources, crossing the Salish Sea to visit relatives or participate in ceremonies, and when transferring cultural knowledge (NEB 2014a).

4.2.3.2.21 Stz'uminus First Nation

Stz'uminus First Nation, along with Cowichan Tribes, Halalt First Nation and Penelakut Tribe, are represented by the CNA on collective interests on matters outside of treaty negotiations. As speakers of the Island dialect of Halkomelem (Hul'q'umi'num), these four CNA members, along with Ts'uubaa-asatx and Lyackson First Nation, refer to themselves collectively as Hul'qumi'num Mustimuhw (HTG, 2005b).

Stz'uminus First Nation is based in southeast Vancouver Island. Their main community is located on Chemainus No. 13 in Ladysmith. As of October 2019, Stz'uminus First Nation had 1,356 registered members, of which 742 lived on reserve (AANDC 2019v). Neither the LSA or RSA overlaps any of Stz'uminus First Nation's current or former reserve lands.

Stz'uminus First Nation was at one time, affiliated with the HTG, along with the other CNA members and Ts'uubaa-asatx and Lyackson First Nation. The HTG assert a core territory, or title lands, and a wider marine or fishing territory, as described in its Statement of Intent to the BC Treaty Commission (BCTC, 2009a). The HTG asserts title over core areas (BCTC, 2009a). The LSA and RSA overlap HTG's broader marine or fishing territory as shown in Figure 4.2-7.

Stz'uminus First Nation reports that there are locations of importance along the South Arm of the Fraser River. The closest locations of importance to the Project are the ancestral village and resource sites known as Tl'uqtinus, on the north shore opposite the Project site on Tilbury Island, and Xwulit'sum, at Canoe Pass. Cowichan Tribes, Halalt First Nation, Penelakut Tribe, and Stz'uminus First Nation consider both locations as ancestral village and resource sites. In November 2014, Cowichan Tribes, Stz'uminus First Nation, Penelakut Tribe, and Halalt First Nations filed an Amended Notice of Civil Claim seeking a declaration of Aboriginal title to an area described as the Tl'uqtinus Lands and fishing rights to the South Arm of the Fraser River. It is noted that the Tl'uqtinus Lands, as claimed, are on the north shore of the South Arm of the Fraser River across from Tilbury Island and this Aboriginal title claim does not overlap the LSA and RSA.

4.2.3.2.21.1 Marine Resource Use

Stz'uminus First Nation, Halalt First Nation, and Cowichan Tribes rely on the marine environment to provide resources to sustain their people and culture. The Cowichan Nation has recorded and asserted named places, dwellings, canoe travel routes, stories, camping sites, fishing sites, hunting sites, and gathering sites within the area assessed for the RBT2 project (CEAA 2019 o). Cowichan Nation members transmit culture to younger generations through practices of harvesting marine resources and celebration of water, lands and animals with songs and prayers. Cowichan Nation members value overall ecosystem health, biodiversity, and integrity to ensure that there are enough resources to share among their communities and have a sustainable economy (CEAA 2019 z).

Marine Fish and Fish Habitat

Marine Fish

Stz'uminus Nation reports its continued use and reliance on the ocean and its marine resources to sustain its members and culture; harvesting a wide variety of fish and marine life. The Cowichan, Chemainus, and Fraser Rivers, in their asserted territory, also continue to have a vital role Stz'uminus' way of life, where they harvest trout (i.e., brown, rainbow and cut throat), steelhead, and salmon (i.e., chum, coho, chinook, sockeye, and pink (SFN, 2015; TMEP, 2014a). Sockeye was considered a "big delicacy" for Stz'uminus people (NEB, 2014c). They identify a number of fishing sites, including Strait of Georgia (sockeye, halibut, Pacific cod and lingcod), east of Galiano Island (sockeye), southeast off Robert's Bank (spring, pink, and sockeye), Sidney to Steveston Cannery to Campbell River (clams), Roberts and Sturgeon Banks (salmon), and the south fork of Fraser River onto Roberts Bank (sockeye and sturgeon) (TMEP, 2014a).

Stz'uminus assert they used Tl'uq'tinus on the South Arm of the Fraser River as a base for resource harvesting (see previous section) (SFN, 2014, 2015). Species harvested historically on the South Arm of the Fraser River included sockeye and pink salmon, sturgeon (qwtaaythun), shellfish, and marine mammals; dried clams and other foodstuffs (e.g., camas) were also traded to other Aboriginal groups living in and around the area. The Stz'uminus also used other habitation sites in the area, including ones at Steveston (BC and PMV 2012, NEB 2014b, SFN 2014, 2015, TMEP 2014a). Stz'uminus reports its members continue to visit the Fraser River, and its delta, and to fish there (SFN, 2015). Stz'uminus Nation, along with other member Nations of CNA, has been endeavouring to restore former fisheries within the Fraser River through DFO. Most recently they have been seeking allocation increases on the Lower Fraser River, and are also pursuing area change requests (DFO 2015a).

Stz'uminus First Nation reports that they have Aboriginal communal fishing licences for a variety of species, including salmon (sockeye, coho, pink, chum, and chinook), as well as for herring spawn on kelp or boughs, Pacific herring, and groundfish (SFN 2015). The Stz'uminus First Nation's Fisheries Agreement with DFO includes the marine waters surrounding Saltspring, Prevost, Valdes, Thetis, Penelakut and Galiano Islands, and extends into the Strait of Georgia towards Roberts Point and Lulu Island (WLNG, 2015). DFO records for communal FSC licences in the Fraser River downstream of the Port Mann Bridge do not suggest that any of the CNA, individually or collectively, has had access to the FSC fisheries in this area in the last five years (PMV 2015a, DFO 2015a, b, c). Notwithstanding the preceding statement, current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by CNA member Nations previously has been discussed as occurring within the

PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18) (PMV, 2015a).

Stz'uminus First Nation, Cowichan Tribes and Halalt First Nation also note that the increase in vessel traffic related to the RBT2 project, which will follow the same shipping lanes of those calling at the Project will pass through their fishing areas (CEAA 2019z, p. 13).

Stz'uminus as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP) engages in a commercial fishing business. Species harvested through this enterprise are halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP, 2014, 2015).

Stz'uminus First Nations, along with Cowichan Tribes and Halalt First Nation, expressed concerns to the RBT2 panel regarding potential erosion effects from vessel wake on their harvest areas, especially around Saturna and Tumbo islands. They report that the reefs around Tumbo Island are particularly important for fishing and refuge (CEAA, 2019m,z).

Marine Invertebrates

Stz'uminus Nation reports that they have Aboriginal communal fishing licences for a variety of species, including crab (Dungeness and red rock) prawn, clams (manila native littleneck, butter), and Pacific oyster (SFN 2015).

Stz'uminus First Nation have recorded shellfish harvesting activities on South Pender, Saturna and Tumbo islands. They expressed concerns to the RBT2 panel that erosion from vessel wake could impact these harvest areas (CEAA, 2019z)

Stz'uminus assert they used Tl'uqti'num on the South Arm of the Fraser River as a base for resource harvesting, including shellfish (SFN, 2014, 2015).

Stz'uminus as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP) engages in a commercial fishing business. Shellfish species harvested through this enterprise are crab (one Area H licence) and prawn (two local / coast wide licences) (HFLP, 2014, 2015).

Marine Vegetation

Stz'uminus First Nation members harvested seaweed and plants and medicines that grow near the ocean, many of which are still gathered today. Marine plants are important for food, social, and ceremonial purposes and are shared throughout the community at cultural events and celebrations. The practice of marine plant harvesting is also critical to the transfer of knowledge and culture to younger generations (CEAA, 2019av). Stz'uminus First Nation has previously identified seaweed gathering sites along the shores of Vancouver, Richmond, and within the lower Fraser River (TMEP, 2014a).

Stz'uminus First Nation, along with Cowichan Tribes and Halalt First Nation, expressed concerns to the RBT2 panel regarding potential erosion effects from vessel wake on intertidal and foreshore areas where they harvest marine plants and medicines (CEAA, 2019z).

Marine Mammals

Killer whales (*q'ullhanumutsun*) and, in particular, the SRKW are important to the Cowichan Nation culture. Killer whales are depicted in visual art, stories and songs, are represented in the landscape (e.g., the Sea Wolf petroglyph, which protects Stz'uminus people) are important in teachings related to kin relations (CEAA 2019z).

Traditional knowledge indicates that all whales have use and cultural significance to Cowichan Nation. Community knowledge indicates that grey whales and humpbacks have been returning to the inner waters of the Strait of Georgia. Previously assumed to be extirpated, the return is particularly significant as they provide opportunities to educate younger generations and share knowledge, which is integral to cultural health and wellbeing (CEAA 2019z).

Marine Birds

Stz'uminus First Nation previously reported hunting birds, including ducks, geese, grebes and murre. Hunting sites include, but are not limited to, Strait of Georgia, Dunsmuir, Galiano, Lasqueti, Parker, and Saltspring Islands, and Porlier Pass (TMEP, 2014a). Stz'uminus First Nation expressed concerns to the RBT2 panel regarding potential effects on Western Sandpiper (CEAA, 2019z).

4.2.3.2.21.2 Cultural Practices and Sites

As is the case with other Coast Salish groups, areas used for traditional purposes, such as fishing, hunting, or gathering sites, are regarded as sacred. Features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG, 2015).

Waterways have been and remain important travel routes for Stz'uminus First Nation when harvesting marine resources (WLNG, 2015), and accessing gathering sites within Richmond and Vancouver (TMEP, 2014a). The Strait of Georgia (TMEP, 2014a), and the Fraser River has been identified by the Hul'qumi'num Mustimuhw, (which includes Stz'uminus) as the main transportation corridor, connecting the Island Hul'qumi'num communities to their relatives on the Mainland (HTG, 2005b). CNA members have collectively said that journeys to their members in the U.S.A. have been affected by shipping traffic, and have raised concerns regarding the safety of community members when undertaking traditional practices on the water (PMV, 2015b). Stz'uminus has also identified a number of trails, including a trail at Steveston as being important (TMEP, 2014a).

Stz'uminus First Nation previously discussed concerns regarding declining fish stocks, stating that many members continue to use marine resources as part of their main diet, as well as for cultural (e.g., celebrations at the longhouse, traditional burnings, war canoe races, Aboriginal Day) and educational purposes (PMV, 2015b). Stz'uminus First Nation has also stressed that the importance of marine and freshwater resources to its members as evidenced in their active participation in the remediation of their local waters, and in their continued efforts to gain greater access and control over their asserted traditional lands, waters, and resources (SFN, 2015). Stz'uminus, along with other members of the CNA, previously reported that for the last generation they have been working to restore their access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. They have also expressed concern regarding the contaminants and the sustainability of vital habitats that are necessary to support their members (PMV, 2015a). More specifically, Stz'uminus previously noted that the "traditional berries and plants at Ti'uqtinus, like the fish and other resources in the Fraser River, depend on the health of the Fraser ecosystem and the Salish Sea" (SFN, 2015).

4.2.3.2.22 Tsawwassen First Nation

Tsawwassen First Nation (TFN) are Coast Salish, an Aboriginal people, and speak a dialect of the Hun'qum'i'num language (TFN et al., 2010). TFN is a modern Treaty Nation pursuant to the Tsawwassen First Nation Final Agreement (TFNFA) with Canada and British Columbia, which is a constitutionally protected comprehensive land claims agreement that came into effect on April 3, 2009. Under the TFNFA, TFN acquired 725 hectares of treaty settlement lands, including 290 hectares of former reserves and 370 hectares of former Provincial Crown Land (TFN et al., 2010), none of which overlaps the LSA or RSA. These Tsawwassen Lands, located on the upland areas between the ferry terminal at Tsawwassen and the container port at Roberts Bank, are owned by and under the jurisdiction of TFN; an additional 62 hectares of fee simple land near Boundary Bay and on the Fraser River (along Canoe Pass) are owned by TFN, but are under the jurisdiction of the City of Delta (EAO and Port of Vancouver, 2012). Figure 4.2-12 illustrates Tsawwassen Treaty Lands and the larger territory. As of October 2019, there are 382 registered TFN members, of whom 187 live on Tsawwassen Lands (AANDC 2019ab).

Chapter 15 of the TFNFA describes the duties of both the federal and provincial governments for Environmental Assessment and ensures that the Tsawwassen First Nation will be provided complete information about a project and its effects and will be consulted on those effects. It also states that no project may proceed on Tsawwassen Lands without consent from the Tsawwassen First Nation (TFN et al., 2010).

In addition to fee simple interests, the TFNFA secures harvesting rights to TFN in areas located within the broader Tsawwassen Territory, which is defined in the TFNFA as the area of land that Tsawwassen identified in its Statement of Intent to the British Columbia Treaty Commission, and included as a map in Appendix A to the agreement (TFN et al., 2010). This territory is bordered on the northeast by the watersheds that feed into Pitt Lake, down the Pitt River to Pitt Meadows, where they empty into the Fraser River. It includes Burns Bog and part of New Westminster, following the outflow at the Fraser River just south of Sea Island. From Sea Island, it cuts west across the Salish Sea to Galiano Island and includes all of Salt Spring, Pender, and Saturna islands. From there, the territory continues northeast to include the Point Roberts Peninsula and the watersheds of the Serpentine and Nicomeckl rivers. Harvesting rights under the TFNFA are limited by measures necessary for conservation, public health, or public safety.

The LSA and RSA overlaps with Tsawwassen Territory and is situated in or near several harvesting areas defined in the TFNFA relating to fishing and migratory bird harvesting. The LSA and RSA intersects with the Tsawwassen Fishing Area, where TFN has the right to harvest fish and aquatic plants and within the Tsawwassen Migratory Bird Harvest Area, where TFN has the right to harvest migratory birds.

The summary of Tsawwassen First Nation Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project, and material submitted for Trans Mountain Pipeline Expansion and Robert's Bank Terminal 2, including submissions made during the CEAA panel hearings for Robert's Bank Terminal 2, including their closing remarks in August 2019 (CEAA 2019ab).

4.2.3.2.22.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Fish

Marine resources are primarily addressed in Chapter 9 of the TFNFA (Canada et al, 2010c). Under the TFNFA, “fish” are defined as fish, intertidal bivalves and other shellfish, crustaceans, and marine animals (excluding cetaceans), the parts of these fish, as well as their eggs, sperm, spawn, larvae, spat, juvenile stages and adult stages. “Intertidal bivalves” are further defined as clams (manila littleneck, butter, horse, soft-shell, varnish clams), blue mussels, cockles, and oysters.

The Tsawwassen Fishing Area, which applies to fish and aquatic plants but excludes intertidal bivalves, takes in all or portions of PFMA Subareas 29-6 through 29-14 and 29-17. These subareas cover the waters of the main arm of the Fraser River westerly of the power lines downstream of the Port Mann Bridge, the waters of the North Arm of the Fraser River from the junction of the Main Arm downstream to the Arthur Laing Bridge, the Middle Arm of the Fraser River, the South Arm of the Fraser River, and parts of the waters of the Strait of Georgia and Boundary Bay (Canada et al, 2010a, Appendix J-1; PMV, 2015a).

The right to harvest fish allows designated members of the Tsawwassen First Nation to exercise the right for domestic purposes and to trade or barter those fish among themselves or with other Aboriginal people resident in British Columbia (Canada et al, 2010b, Chapter 9). Domestic allocations for sockeye, chum, pink, chinook, and coho salmon, which are centrally important to the Tsawwassen First Nation, are calculated using formulas described in the TFNFA (Canada et al, 2009; PMV, 2015a).

While commercial fishing by Tsawwassen Members, either under a general commercial fishery licence or a Tsawwassen First Nation Harvest Agreement licence, is not treaty protected, the TFNFA does provide that Tsawwassen will be advised appropriately of any proposal to establish new emerging commercial fisheries in PFMA 14 through 20, 28, and 29 and will be consulted on the process for entry into and determining allocations for those fisheries (Chapter 9, paragraphs 106-107, cited in (PMV, 2015a). TFN is concerned that the adverse impacts to emerging fisheries are potentially significant have not yet been adequately examined (CEAA 2019b)

Marine Invertebrates

Intertidal bivalve harvesting has been recorded at Galiano, Mayne, Samuel, Saturna and Tumbo islands (TMEP, 2014b).

Tsawwassen report that they harvest shellfish, including Dungeness crab, for food, social and ceremonial purposes. Dungeness crab harvesting primarily occurs from April to November (TFN, 2014). There were four licences issued for Tsawwassen FSC crab harvest, which spanned the time period from January 1 to December 31, 2013. Species targeted included Dungeness, graceful, and red rock crab species, however Tsawwassen crab harvesters only kept Dungeness crabs (Blakley et al., 2014). Tsawwassen report that since 2010 they have been operating a live holding tank to aid in the distribution of crab to their members throughout the year, and to prepare for events such as Elder gatherings (Blakley et al., 2014; PMV, 2015a). The Tsawwassen Harvest Agreement also allows for the commercial harvesting of crab in Management Areas I and J (Canada et al, 2010d). (Blakley et al., 2014).

Shrimp and prawn may be harvested for domestic purposes at any time of year under the TFNFA (Canada et al, 2010c, 2010a). Tsawwassen members report an interest in harvesting prawn on the eastern side of the Strait of Georgia. In areas where crabbing currently occurs (i.e., Roberts Bank and Boundary Bay), shrimp (copepods) have been caught as by-catch, along with other marine invertebrates such as sea pens, octopus, and amphipods (PMV, 2015a).

Intertidal bivalves may be harvested for FSC purposes in the Tsawwassen Intertidal Bivalve Fishing Area, which lies in PFMA 18 and includes the shorelines around Galiano Island, Mayne Island, Samuel Island, Saturna Island, and Tumbo Island (Canada et al, 2010c). Tsawwassen First Nation is in consultation with HTG and other Aboriginal groups to discuss terms and conditions governing intertidal bivalve fishing in areas of overlap with the traditional territories of those Nations (Blakley et al., 2014). There was no harvest of intertidal bivalves in the designated areas since the TFNFA came into effect (Blakley et al., 2010, 2011, 2012, 2013, 2014).

Tsawwassen previously reported that from Sturgeon Bank south to Point Roberts, clams, cockles, mussels, oysters and abalone were once harvested by their members for food and other purposes such as trade and ceremonial regalia. Boundary Bay was considered an important harvesting area for bivalves, especially clams, cockles, and oysters, while scallops and sea cucumbers were taken from Boundary Bay through to Canoe Passage. Tsawwassen Elders report barnacles, which were harvested by being scraped from rocks, have reduced in size over the years. They also note that abalone, along with a large oyster bed (lying just south of the B.C. Ferries Terminal), began to disappear after development in the Roberts Bank area (i.e., Roberts Bank terminals and B.C. Ferry Terminal). Tsawwassen Elders have also reported that they stopped harvesting shellfish from the area before DFO put in place the existing biotoxin and sanitary closures (prohibiting harvesting of edible bivalves in several areas, including PFMA 29), restricting them from harvesting what was formerly a core of their diet along the eastern side of the Strait of Georgia (PMV, 2015a).

Tsawwassen reports that it become more reliant on crab for its FSC fishery, thus Tsawwassen is highly concerned about any adverse effects on crab populations, health or habitat (CEAA 2019ab). For RBT2, Tsawwassen commissioned an independent crab study that reported potential for significant adverse effects on TFN's ability to harvest crab in the RBT2 project area (CEAA 2019ab).

Marine Vegetation

Aquatic plants (including attached and detached kelp and seaweeds) may be harvested for domestic purposes in the Tsawwassen Fishing Area at any time of day or year. The TFNFA specifically defines these plants as all benthic and detached algae, brown algae, red algae, green algae, golden algae and phytoplankton, and all marine and freshwater flowering plants, ferns and mosses, growing in water or soils that are saturated during most of the growing season. Harvesting of these plants has not occurred since the TFNFA came into effect (Blakley et al., 2010, 2011, 2012, 2013, 2014).

Marine Mammals

Marine mammals, including porpoise, seals, and sea lions, were once harvested by the Tsawwassen within the mouth and estuary of the Fraser River. With the exception of porpoise, a cetacean, these marine mammals fall within the category of fish under the TFNFA. Tsawwassen have not stated whether these species are currently harvested for traditional purposes or if they desire to do so in the future (PMV, 2015a).

Tsawwassen expressed concern about possible impact to species of primary importance to its culture, including SRKW, during the RBT2 panel hearings. In particular, they were concerned about possible destruction of critical habitat and impacts from vessels on killer whales (CEAA 2019ab).

Marine Birds

Tsawwassen have previously noted that it is “difficult to overstate the value of migratory birds to Tsawwassen” (TFN, 2014). Historically, they hunted and traded waterfowl with their neighbours. They report that the presence of migratory birds throughout their traditional territory is acknowledged in the naming of places, including the western foreshore of Boundary Bay which is known to Tsawwassen as Tunuxun, a Hunqum’i’num word meaning “ducks” (TFN, 2014).

The TFNFA does not identify specific species and harvesting sites (except Burns Bog for wildlife). Tsawwassen First Nation hunters have previously identified preferred migratory bird harvesting areas, particularly for ducks and geese, including the south side of Lulu Island, the small islands, sloughs, marshes, and tidal flats of the Lower Fraser River, as well as the tidal flats at Boundary Bay (BC and Canada, 2006, 2008a; PMV, 2015a). Wildlife harvesting, including migratory birds, has been recorded at Galiano, Saltspring, Mayne, Pender and Saturna islands (TMEP, 2014b).

Ducks and geese remain an essential winter food and source of feathers, used for ceremonial purposes. Tsawwassen previously reported that birds are no longer as abundant as they once were, with some species, such as the pheasant, now scarcely found and others, such as geese, preferring Boundary Bay over Roberts Bank to nest (PMV, 2015a). They identify the following factors as impeding access to preferred areas: development, privatization of lands, dangers related to discharging firearms in public areas, and the George C. Reifel Migratory Bird Sanctuary on Westham Island’s northwestern tip. Tsawwassen previously noted that a reduction in opportunities to harvest migratory birds has both economic and cultural (e.g., transference of cultural knowledge) consequences (TFN, 2014).

At present, the Tsawwassen First Nation is not harvesting any migratory bird species for which a conservation risk has been identified. Harvesting of migratory birds is permitted throughout the year (Canada et al, 2010a, Chapter 11).

4.2.3.2.22.2 Cultural Practices and Sites

The right to practice the culture of the Tsawwassen First Nation, as well as use of the Hən̓q̓əm̓iḥ əm̓ language, is identified in Chapter 14 of the TFNFA (Canada et al. 2010b - Appendix O-3, PMV 2015a).

Tsawwassen previously emphasized that they have always been a “fishing people” (TFN, 2014) and participation in fishing is an integral element of their culture. They have said that salmon, Dungeness crab, and eulachon not only provide sustenance to Tsawwassen members, they are also of cultural and economic importance. Tsawwassen notes that diminishing fish stocks, increasing harvesting restrictions and higher costs related to having to travel farther have impacted their harvesting activities. They underscore the importance of their continued ability to fish, along with and the value of fishing and associated activities to continued community morale and cohesion. For example, some of these traditional activities, such as spending time with Elders in the smokehouse, no longer occurs, as the last smokehouse was demolished when Highway 17 was expanded (PMV, 2015a; TFN, 2014).

4.2.3.2.23 Tseil-Waututh Nation

Tseil-Waututh Nation is located in North Vancouver, on the shore of Burrard Inlet, approximately 2 km east of the north end of the Second Narrows Bridge, at Burrard Inlet IR 3. Tseil-Waututh Nation established this site as its principal winter village in the 1830s, relocating from a site at Belcarra (on the east shore of Indian Arm) that had been occupied for the previous 2,000 years (TWN, 2016). Two other reserves, Inlailawatash IR 4 and Inlailawatash IR 4A, are located on Indian Arm. Of 608 registered members, 291 resided on reserve as of September 2019 (AANDC 2019s). Neither the LSA nor the RSA overlap any current or former Tseil-Waututh Nation reserves.

Tseil-Waututh are Coast Salish people who speak Hənq̓əmiñəm, the “downriver” dialect of “Halkomelem,” and are closely related to, but politically separate from, the nearby nations of the Skwxwú7mesh (Squamish) and xʷməθkʷəy̓əm (Musqueam) and other speakers of the same dialect (FPHLCC, 2018a).

Tseil-Waututh Nation’s asserted traditional territory extends approximately from Mount Garibaldi in the north, the 49th parallel and beyond to the south, west towards Gibsons and east towards Coquitlam Lake (TWN, 2009a). Tseil-Waututh Nation has established a Consultation Area that encompasses the area for which documented Tseil-Waututh use and occupancy information exists and within which the Tseil-Waututh Nation seeks consultation on proposed land and resource policies, plans, and developments for the purpose of assessing potential effects (TWN, 2009a). Tseil-Waututh’s Consultation Area is illustrated in Figure 4.2-13.

Tseil-Waututh Nation established an Economic Development Department in 1992. The Nation owns and operates several businesses, including Takaya Developments Ltd. (real estate development), Takaya Tours (cultural tourism), TWN Wind Power Inc. (small wind turbine distribution), Inlailawatash Limited Partnership, which offers natural resource management services in tree and vegetation management; ecosystem restoration; archaeological and cultural services; GIS, mapping and information management and renewable resource services, and SPAL General Constructors, a project management company co-owned with Tsawwassen First Nation (TWN, 2014).

The summary of Tseil-Waututh Nation Current Use relies on the EAC Application for the WesPac Tilbury Marine Jetty Project, and material submitted for Trans Mountain Pipeline Expansion and Robert’s Bank Terminal 2, including submissions made during the CEAA panel hearings for Robert’s Bank Terminal 2, including their oral submission in June 2019 (CEAA 2019ac).

4.2.3.2.23.1 Marine Resource Use

Marine Fish and Fish Habitat

Marine Fish

Marine resources were and remain central to Tseil-Waututh for subsistence and cultural life. Fishing was once the basis of their entire economy and way of life, including structuring their seasonal round and relationships with other Aboriginal groups.

The foreshore and marine waters of their asserted territory provided marine and intertidal resources, particularly salmon, a food staple, small fish (e.g., herring, eulachon, smelt), shellfish (all bivalves and crabs), and a variety of groundfish, such as cod, flounder, halibut, lingcod, rockfish, sole and others (BC and PMV, 2012; TWN, 2016b).

Tsleil-Waututh Nation continues to undertake annual salmon and crab food, social, and ceremonial (FSC) fisheries for the community with harvests dependent on seasonal run sizes and conservation measures (TWN, 2016b).

Sockeye salmon do not run in the tributaries of Burrard Inlet, the location of the main Tsleil-Waututh community. Tsleil-Waututh previously reported that their ancestors historically accessed sockeye on the South Arm of the Fraser River through kinship ties. Tsleil-Waututh seasonal round required families to travel from Burrard Inlet to the Fraser River to harvest fish. In late spring, they harvested eulachon and in summer, they harvested sockeye and chinook salmon. The fish were preserved and brought back to Burrard Inlet to be consumed later (CEAA 2019ac).

As noted earlier, Tsleil-Waututh maintains its reliance on salmon and to a much lesser extent small fish (e.g., eulachon, herring), identifying salmon as central to their cultural, social, and ceremonial practices. Tsleil-Waututh Nation currently holds a fishing allocation for Fraser River sockeye, chinook, chum, and pink, and an Indian River allocation of pink and chum. Tsleil-Waututh fishers work with, or work on Musqueam fish boats to harvest most of their Fraser sockeye (Morin 2015).

Tsleil-Waututh fish for FSC purposes under communal licences issued by DFO. The Pacific Fisheries Management Area (PFMA) subareas to which these licences apply include 28-11, 28-12, 28-13, 28-14, 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, and 29-17. Subareas within PFMA 28 apply to eastern Burrard Inlet and Indian Arm; the subareas within PFMA 29 encompass the Fraser River downstream of the Port Mann Bridge and into the Strait of Georgia (PMV, 2015a).

Tsleil-Waututh report that they continue to harvest their salmon allocations in August according to Tsleil-Waututh's allocation and the timing of the Aboriginal fishing openings (Morin, 2016). Tsleil-Waututh are also likely to harvest chum in the late fall during the run.

Marine Invertebrates

Tsleil-Waututh participates in commercial fisheries through Salish Seas Limited Partnership, a business owned jointly with the Musqueam Indian Band and Sliammon First Nation and one that currently derives economic benefit from commercial salmon and other fisheries. Species harvested commercially through this enterprise include crab in Crab Management Area I in the Strait of Georgia, as well as prawn, halibut, and herring (PMV, 2015a) (Morin 2015). Tsleil-Waututh report the harvest of prawns occurs around the entrance to Howe Sound around Bowen Island, with much of southern Howe Sound identified as a priority harvest area for prawn (WLNG, 2015).

Marine Vegetation

Tsleil-Waututh report harvesting aquatic plants such as seaweed, but specific harvest areas have not been provided (BC and PMV, 2012; TWN, 2016b).

Marine Mammals

Seals, porpoises, and sea lions were also harvested, along with aquatic plants such as seaweed. Marine mammals harvested were highly valued with the oil from the animals used for dipping other food items such as dried berries and roe. (BC and PMV, 2012; TWN, 2016b).

Killer whales also hold cultural importance to Tsleil-Waututh Nation. As reported to the RBT2 panel, Waut-salk II, a prominent leader was killed in 1840 and laid to rest in Indian Arm. When James Sla-holt collected Waut-salk II's

remains and other bones and transported them to the Tsleil-Waututh Nation cemetery, two killer whales escorted the canoe. Since then, Tsleil-Waututh people associate killer whales in Burrard Inlet with death in the community (CEAA 2019ac:32).

Marine Birds

Tsleil-Waututh Nation has identified grebe as a culturally important bird species. However, Tsleil-Waututh Nation does not report harvesting marine birds in, or near, the LSA.

4.2.3.2.23.2 Cultural Practices and Sites

Tsleil-Waututh Nation's primary Aboriginal fish allocation is Fraser River sockeye. Sockeye, a traditional food, is reported to be a central component of every burning, celebration, funeral, gathering and meal. Tsleil-Waututh Nation has previously voiced its concerns regarding their access to healthy salmon, stating that a loss of this traditional food "would possibly sever the remaining link of Tsleil-Waututh to their traditional subsistence economy" (Morin 2015:399).

Tsleil-Waututh has said that the practice of harvesting and preparing traditional foods is central to cultural transmission among Tsleil-Waututh members. For example, the harvesting of clams was once a practice where Tsleil-Waututh youth were taught to harvest and maintain healthy clam populations (Morin 2015). Tsleil-Waututh Nation previously reported that one of their key goals "is to expand its participation in all planning and development processes that take place on their traditional territory so that the once-abundant resources can be restored, protected and used on a sustainable basis and so our culture can continue to thrive" (TWN, 2010).

The waterways within Tsleil-Waututh's asserted territory were the principal means of travel between sites, summer camps, and hunting, fishing, and gathering locations. Canoe routes were used to access sites such as ʔəq̓t̓nəs (on the north shore of the Fraser River opposite Deas Island); kwy-yowka (on the south shore of Lulu Island), and ɾəl̓q̓sən (on the northern end of Westham Island) within the seasonal round of land and resource use. Tsleil-Waututh previously identified two historic canoe routes connecting Roberts Bank to Boundary Bay, Canoe Passage, the South Arm of the Fraser River, Sturgeon Bank, and two fishing villages, one opposite Deas Island in the Fraser River (associated with ʔəq̓t̓nəs) and the other at Cannery Point, on the southeastern corner of Point Roberts peninsula (PMV, 2015a).

4.2.4 Methodology for Assessment of Potential Project Effects

A summary of the effects assessment methodology as it relates to the Current Use VC is provided below.

Potential Project effects to the Current Use VC and sub-components are linked to the transit of Project-related vessels through the international shipping lanes within the MSA. As described in Section 1.0, Introduction, vessel frequency in the MSA is assumed to be 236 annual vessel movements. This is equivalent to one vessel call approximately every 3 days.

4.2.4.1 Potential Project Interactions

Marine shipping may lead to changes to the Current Use VC, or more specifically, how Aboriginal peoples are affected by marine shipping. Potential interactions between marine shipping components and activities on the Current Use VC have been identified and are rated in Section 4.2.5.1. The interaction ratings as follows have been applied:

- **Potential interaction** – may result in a potential effect on the Current Use VC these interactions have been carried forward in the assessment;
- **Negligible interaction** – neither detectable nor measurable and not anticipated to influence the short or long-term viability of the VC or Subcomponent, these interactions have not been carried forward in the assessment; and
- **No interaction** – these interactions have been justified but are not carried forward in the assessment.

To focus the assessment on those interactions of greatest importance, interactions resulting in no effect or a negligible (undetectable or unmeasurable) effect have not been carried forward for assessment. For those Project interactions carried forward in the assessment, the potential effects, both adverse and beneficial (if any) arising from those interactions, will be described. Mitigation measures that are expected to reduce or eliminate an adverse effect on the Current Use VC or enhance a benefit will be described.

Through the Project EA process, WesPac has committed to the following mitigation measures that are applicable to Current Use in the MAA:

- M6.2-1 Implementation of TERMPOL Recommendations
- M6.2-2 Compliance with Maritime Regulations and Legislation

In addition, WesPac has committed to follow up monitoring to evaluate and report on compliance with requirements of the *Canada Shipping Act* and other applicable regulations that address marine access and marine use issues (see Project EAC Application Section 14.4.7). The movement of LNG carriers and bunkering vessels will be monitored by radar using the AIS System and by personnel in the marine operations centre at the Project site. Additional monitoring of vessels will also be conducted by Marine Communications and Traffic Services (MCTS) and BC Coastal Pilots. This monitoring will apply to Project-related vessels in the LSA and MAA between Sand Heads and the 12-nautical mile limit, in addition to Project-related vessels assessed as part of the Project EAC Application.

Effectiveness of mitigation measures to reduce or eliminate potential adverse effects are characterized using the following criteria:

- **High Effectiveness** – the mitigation measure is expected, once implemented, to significantly improve or eliminate the effect or improve the condition of the VC.

- **Moderate Effectiveness** – the mitigation measure is expected, once implemented, to moderately improve the effect on a VC or moderately improve the condition of the VC.
- **Low Effectiveness** – the mitigation measure may provide no or little change in the effect on a VC, the effectiveness of the mitigation measure is unknown or untested, or no improvement to the condition of the VC.

Effectiveness of proposed mitigation has been considered in assessing the significance and likelihood of potential residual effects.

4.2.4.2 Characterization of Potential Residual Project Effects

Residual effects are characterized using specific criteria for each VC as defined in the EAO’s Guideline for the Selection of Valued Components and Assessment of Potential Effects (EAO 2013). Definitions for residual effects criteria, developed with specific reference to the Current Use VC are presented in Table 4.2-6. Effects that are negligible prior to mitigation measures are not carried forward to the assessment of residual effects or cumulative effects.

Table 4.2-6: Criteria Used to Characterize Residual Effects on the Current Use VC

Criteria	Description	Definition
Magnitude	Expected size or severity of the residual effect	<p>Negligible—a change that is not detectable nor measurable and would not noticeably affect the VC or a Subcomponent.</p> <p>Low—a small but detectable change from baseline conditions that is within historic norms and within the system’s or community’s capacity to respond.</p> <p>Moderate—a demonstrable change from baseline conditions that is within historic norms and within the system’s or community’s capacity to respond.</p> <p>High—a demonstrable change from baseline conditions that is beyond historic norms and beyond the system’s or community’s capacity for effective response.</p>
Geographic Extent	Spatial scale over which the residual effect is expected to occur	<p>Site-specific — effects limited to the specific location of a transiting vessel</p> <p>LSA/MAA — effects limited to the Local Assessment Area/Marine Assessment Area</p>
Duration	Length of time over which the residual effect is expected to persist	<p>Short-term—effect present for less than the full operational phase of the project up to 2053</p> <p>Long-term— effects extend beyond the year 2053 but have an end point</p> <p>Permanent - effects are those that have no end point</p>

Criteria	Description	Definition
Frequency	How often the residual effect is expected to occur	Infrequent — effect occurs once or rarely over the specified duration Frequent — effect occurs repeatedly over the specified duration Continuous — effect occurs continuously over the specified duration
Timing	Whether the period in which the residual effect occurs coincides with sensitive timing, periods, or windows for the VC	Yes —effect could potentially coincide with Aboriginal FSC or domestic fishery openings or other marine harvesting No —effect would not coincide with Aboriginal FSC or domestic fishery openings or other marine harvesting
Reversibility	Whether or not the residual effect can be reversed once the physical work or activity causing the effect ceases	Reversible – effect can be reversed Partially Reversible – effect can be reversed partially Irreversible – effect is permanent
Context	Is the VC sensitive or resilient to Project-related stressors	Resilient —affected area, Aboriginal users and resources have capacity to respond to adverse effects through combination of collaborative planning, arrangements and agreements, and/or compensation. Not resilient —limited capacity to effectively respond to adverse effects due to constraints for establishing collaborative planning, arrangements and agreements, and/or compensation.

MSA = Marine Shipping Assessment; VC = valued component.

For the Current Use VC, the analysis to determine the likelihood of a residual effect occurring is based on a review of available information and professional judgement. When assessing likelihood, the following criteria have been applied and are defined to clarify interpretations:

- **Low**—Past experience and professional judgement indicates that a residual effect is unlikely but could occur.
- **Moderate**—Past experience and professional judgement indicates that there is a moderate likelihood that a residual effect could occur.
- **High**—Past experience and professional judgement indicates that a residual effect is likely to occur.

Characterization of likelihood was based on professional judgement considering the available qualitative and quantitative data for each potential residual effect.

The determination of significance of potential residual effects for Current Use was based on the residual effects rating assigned, likelihood of a potential residual effect occurring, a review of background information, consultation with Aboriginal groups, government agencies, and other experts, and professional judgement.

The determination of significance of residual Project effects on Current Use was based on the residual effects characteristics (specifically magnitude, geographical extent, and duration), as well as the social context within which the effect is predicted to occur. Specifically:

- Magnitude is an important factor in identifying the extent to which Aboriginal Current Use resources would continue to be available.
- Geographical extent is an important factor in identifying the area of Aboriginal Current Use resource use that would be affected.
- Duration is an important factor in identifying the length of time for which Aboriginal Current Use resource use would be affected, and whether the change would be considered permanent.
- Social context is important in relation to the future Aboriginal resource use environment and ability for people and communities to adapt to changes (resiliency) through agreements, infrastructure, and marine resource use opportunities.

The significance rating framework integrates a qualitative understanding of the Current Use context, including the resilience of Aboriginal marine resource users to cope with potential Project-induced changes and effects. Each residual Project effect and cumulative effect has been rated as negligible, not significant, or significant, as follows:

- **Negligible**—Potential residual effects determined to be negligible are those that do not result in a measurable change to identified indicators for Current Use.
- **Not significant**—Potential residual effects determined to be not significant are those that result in a measurable change, but do not meet the definition of significant.
- **Significant**—Potential residual effects are considered significant if they are high in magnitude, long-term or permanent in duration, and of any geographic extent, whereby the effect would cause the capacity of affected Aboriginal resource users, and/or the marine use environment in the LSA, to be exceeded on an ongoing and consistent basis, with available system resources unlikely to respond in a timely manner.

4.2.4.3 Confidence and Risk

The level of confidence for each predicted residual Project effect is discussed to characterize the level of uncertainty associated with both the significance and likelihood determinations. Level of confidence is based on expert professional judgement based on the following criteria:

- **Low** – judgement hampered by incomplete understanding of cause-effect relationships or lack of data;

- **Moderate** – reasonable understanding of cause-effect relationships and adequate data; or
- **High** – good understanding of cause-effect relationships and ample data.

Factors affecting confidence in the predictions made in the Current Use assessment include the following:

- Availability and accuracy of baseline data (e.g., availability of spatial and quantitative data of marine vessel numbers using the Project area; availability of relevant baseline data from Aboriginal groups);
- Level of understanding of the drivers of change in indicators and associated effects on assessment endpoints; and
- Certainty associated with the effectiveness of proposed impact management measures.

4.2.5 Assessment of Potential Project Effects

4.2.5.1 Project Interactions

This section considers the interactions and potential effects of Project-related vessels transiting through the international shipping lanes within the MAA associated with the Project on Current Use, including those related to intangible cultural heritage. As described in Section 1.0 (Project Description), the Project is anticipated to generate 118 vessel calls per year (236 ship movements per year), or an average of two to three ship movements every five days.

Table 4.2-7: Potential Project Interactions with the Current Use of Lands and Resources for Traditional Purpose

Marine Shipping Activity (Until 2053)	Interaction	Nature of Interaction and Rationale for Interaction Rating
Vessel Transit	Potential interaction	<ul style="list-style-type: none"> ■ Project-associated shipping activities, including wake, could temporarily displace and affect Current Use areas and access to preferred resources
Vessel Transit	Negligible interactions	Change in the availability of preferred resources for Current Use: <ul style="list-style-type: none"> ■ Marine fish (including invertebrates) and fish habitat: Negligible residual effect in productivity and sustainability of harvestable fish populations (as identified in Section 3.2, Marine Fish) would result in a negligible Project effect on availability and presence species harvested for FSC or domestic or Aboriginal economic opportunity purposes
	Potential interaction	Change in the availability of preferred resources for Current Use, including concern for species of cultural importance to Aboriginal groups: <ul style="list-style-type: none"> ■ Marine mammals

Marine Shipping Activity (Until 2053)	Interaction	Nature of Interaction and Rationale for Interaction Rating
Vessel Transit	Negligible interaction	Change in the Quality of the Current Use experience: Negligible residual effect on atmospheric noise (as identified in Section 4.5 of the Project EAC Application), negligible residual effect on vessel wake (as identified in Section 3.1 Vessel Wake); and a negligible residual effect to visual quality (as identified in Section 4.3 Visual Quality) from transiting vessels would result in a negligible effect to the quality of the Current Use effect. Quality of Current Use is also tied to the loss of culture associated with the loss of ability to engage in traditional cultural activities and resource harvesting.
Vessel Transit	Negligible interaction	No significant residual effects on the Quality of Current Use resources as identified in Section 4.5 Human Health, where resources consumed by Aboriginal groups will not be affected by expected Project emissions.

4.2.5.2 Potential Project Effects

This Section considers the interactions and potential effects of marine shipping associated with the Project on Current Use, including those related to intangible cultural heritage. Potential Project effects will be described as they pertain to each First Nation, or Aboriginal group as considered in Sections 4.2.5.2.3.1 through 4.2.5.2.3.22 above for some indicators.

To support the effects assessment analysis in this section a summary of Project-associated vessel movements and characteristics is briefly described (further information is included in Section 1.5.1 of the MSA). There are currently an estimated 22,500 to 111,300 vessel movements (including pleasure craft with AIS devices) in segments of the Salish Sea included in the MSA per year, as such shipping from the Project would incrementally increase this by 0.6% on average (0.2% to 1.1% depending on segment; Table 4.2-8). LNG Carriers will be used to ship LNG to predominately international markets. LNG Carriers are substantially larger than LNG Bunker vessels with an overall length of 250 m. LNG Bunker vessels will be used to transport LNG to fuel other vessels or to transport smaller quantities of LNG to predominately coastal markets. They will have an overall length of 120 m.

Table 4.2-8: Project-related vessel movements

Vessel movements	A	A1	B	C	D
Project-related	236	236	236	236	236
All vessels ¹					
Baseline (2017)	45,435	49,717	111,327	21,207	22,466
Baseline + Project-related	45,671	49,953	111,563	21,443	22,702
Increase due to Project	0.5%	0.5%	0.2%	1.1%	1.1%

The assessment of effects on Current Use relies upon biophysical disciplines assessment (Marine Fish and Fish Habitat, Marine Mammals, Marine Birds) and pathway components. As indicated in Section 3.2 Marine Fish and Fish Habitat, Section 3.3 Marine Mammals, and Section 3.5 Marine Birds, differential effects of Project- associated marine shipping on species or locations was not identified within the MSA. As a result, differential effects on availability of Preferred Current Use Resources on specific Aboriginal groups cannot be discerned. For effects pathways that rely upon the biophysical discipline assessment, a general assessment (i.e., not First Nation specific) for some indicators is provided. Specifically, the change in Availability of Preferred Current Use Resources and Quality of Preferred Current Use Resources are assessed for all Aboriginal groups. Where information is available, concerns for specific resources has been considered.

The assessment of effects of Project-associated marine shipping of indicators of Quality of Current Use Experience and Access to Preferred Locations for Current Use are assessed for each Aboriginal group. Sections below describe differential effects for Aboriginal groups.

4.2.5.2.1 Change in Availability of Preferred Current Use resources

Resources that have been identified by Aboriginal groups in the preceding sections have been considered in the biophysical assessments.

Marine resources considered in Section 3.2, Marine Fish and Fish Habitat, include species such as marine vegetation (e.g., estuarine grasses, eelgrass, marsh species, and kelp), salmon, herring, eulachon, and marine invertebrates such as shellfish (including crabs) that are important species to Aboriginal groups for traditional purposes in the MSA.

Aboriginal groups report some interactions for certain species between current vessel transit and the availability of some marine species. Tsawout First Nation has previously indicated ship wakes are affecting eelgrass, which provides important habitat for other important marine species. Lyackson First Nation have been concerned with the effects of noise from marine vessels on sturgeon, herring, and basking shark. Tseycum First Nation has observed that the shoreline crab habitat on the southeast shore of Sidney Island, along the shipping lanes in Haro Strait, is being lost to erosion at a rapid rate.

Aboriginal groups have commented that there have been declines in previously abundant marine species due to a range of causes such as industrial and agricultural development and overharvesting for commercial and recreational purposes. Pollution has also affected the availability of invertebrates, fish and marine vegetation. Aboriginal groups have commented on the reduced availability of preferred species in the current baseline conditions.

While Aboriginal groups are experiencing reduced availability for preferred marine vegetation, invertebrates, and marine fish used for traditional purposes Section 3.2 Marine Fish and Fish Habitat indicates that the Project is expected to have a negligible effect on resource availability for marine fish, seafood, and vegetation harvesting. As a result, the Project-related vessel activities are not expected to have a measurable effect on the availability of these species for Current Use.

Section 3.3, Marine Mammals considers the effects of Project-associated marine shipping on species of concern and species that are important for cultural purposes, either spiritually, as part of legends, or species that are currently used or desired for future hunting purposes.

As indicated in Section 3.3 Marine Mammals representative marine mammal species assessed include orcas, humpback whale, and Stellar sea lion. Species identified as currently hunted include seals, sea lions, and porpoise. Majority of the Aboriginal groups have indicated that marine mammals hunting was an activity that occurred in the past and has been reduced or halted due to population decline, restrictions imposed on harvesting, and preference for other species. Species were hunted for a range of reasons that include food, spiritual, skills training, medicinal, and for cultural materials. Species include seals (harbour seal, hair seal, northern fur seal), sea lions, whales (humpback, gray, right and orca), porpoise, and sea otter. Pacheedaht First Nation and Ditidaht First Nation have both described their cultural identity as whalers and wish to resume this practice if populations recover.

Orcas have been identified as having ongoing importance in oral history and traditions for many First Nations. Marine mammals in general are seen as measures of marine environmental health. Malahat Nation continue to view whales as a current cultural practice. Several First Nation note that orcas have been in decline and note that they have not returned in several years. Aboriginal groups are concerned about the effects of vessel transit noise and vessels strikes on the orca population.

Effects on Aboriginal groups would be expected if there were effects to populations of marine mammals such that their availability for cultural purposes such as harvesting or other cultural purposes would be compromised.

As indicated in Section 3.3, Marine Mammals, residual effects from Project-related vessel transit are expected for humpback whales and Steller sea lions. Similarly, vessel strikes from vessels, if they occur, would adversely affect humpback whales and Steller sea Lions. The effect is not expected to affect population survival or recovery of these species. An effect on the availability of these species for Current Use is not anticipated.

Section 3.3, Marine Mammals indicates that changes in underwater noise from Project-associated vessel transit would result in a residual adverse effect on southern resident killer whales (SRKW). The residual effect is small and is not expected to affect SKRW survival or recovery. The effect on SRKW is not expected to affect the availability for current or preferred future use of this species.

The marine waters around the Southern Gulf Islands, San Juan Islands, and Victoria that overlap with shipping lanes are areas where Aboriginal groups frequently observe SKRW and derive their cultural connection to this species. For there to be a measurable change in the presence of marine mammals which would affect the number of sightings by Aboriginal people, there would need to be significant behavioral responses (described in Section 3.3) that would lead to long-term avoidance of these areas or population-level effects that would cause the decline in the species. As indicated in Chapter 3.3, Marine Mammals, underwater sounds generated from Project vessels are expected to result in low and moderate severity behavioural responses by SRKW and other Marine Mammal subcomponents (e.g., minor changes in locomotion, minor or moderate individual and/or group avoidance of sound source; Southall et al. 2007) but not in high severity or significant behaviour responses (e.g., severe and/or sustained avoidance of sound source, long-term avoidance of area; Southall et al. 2007). It is noted that under the 2019 management measures to protect SRKW, all vessels, including Project vessels and whale watching vessels, must maintain a 400-m approach from all killer whales in their critical habitats. Vessels in transit are exempt from this prohibition (e.g., any vessel travelling directly from one point in the water to another) (Government of Canada, 2019a). Population-level effects to any Marine Mammal subcomponent (e.g., SRKWs, North Pacific humpback whales and Steller sea lions) as a result of underwater sound generated by Project vessels are not expected. In addition, vessel strikes to Marine Mammal subcomponents as a result of Project related vessel movements are not anticipated to result in population-level effects. As a result, no change in the availability of marine mammals for

viewing is expected, therefore the effect to the availability of this species for Current Use purposes is expected to be negligible

As described in the sections above, Aboriginal groups continue to use marine birds throughout the MSA. Aboriginal groups have noted the decline in bird species in the MSA over time and particularly in species of cultural importance such as surf scoter (black duck), which are preferred for ceremonial uses (Tsawout First Nation, Ditidaht First Nation and others). Surf scoter and other ducks, brant, and loons are becoming more difficult to find and are hunted less often or Aboriginal groups must expend more resources in terms of time, cost and distance to find them. Some species, such as swan, are no longer hunted.

As indicated in Section 3.5, Marine Birds, effects to species important to Aboriginal groups considered effects from vessel wake and habitat loss, atmospheric visual disturbance and underwater noise, and collisions from Project-associated vessel traffic in transit. Effects from Project-associated vessel transit are not expected to have effects on marine bird populations. Since there is no effect on bird populations, there is no anticipated effect on the availability of marine birds for Current Use and the Project-related vessels are not expected to contribute the current baseline conditions for Aboriginal groups.

4.2.5.2.2 Quality of Preferred Current Use Resources

As described in the Sections 4.2.5.2.2 through 4.2.5.2.4, Aboriginal groups have noted concerns in the quality (including perceived quality) of their marine resources used for traditional purposes. Aboriginal groups have stated that many of their resources are contaminated and as a result they no longer consume them. Effects to the quality of these resources are attributed to industrial and residential expansion, agricultural contamination from run-off, and plastic and other debris in the ocean.

Aboriginal groups have noted that shellfish are often the most polluted as several intertidal areas throughout the MSA experience closures due the sanitary concerns or red tide. Semiahmoo First Nation has requested a depuration plant for shellfish to improve harvesting and consumption of species harvest from Boundary Bay. Tseycum First Nation has described a possible fungus (“black stuff”) on shellfish and a possible cancer on salmon.

Pauquachin First Nation note that sanitary restrictions or closures, and avoidance of other areas because of perceived contamination, have resulted in a reduction of areas within the MSA where they can still harvest. CNA and other Aboriginal groups note they must travel farther from their communities to acquire clean resources where alternatives are available and when they can afford to do so. Many Aboriginal groups report trading to acquire resources that are no longer available or to offset the reduce quantity of resources. Semiahmoo First Nation note that industrial expansion and the consequent contamination has resulted in the loss of traditional harvesting in Boundary Bay and the loss of traditional knowledge about harvesting methods.

Water Quality was not included as a VC for the MSA as no interactions were identified between water quality and marine shipping. However, Section 4.5, Human Health, indicates that existing levels of contaminants in edible marine resources within the MSA are below thresholds of concern for human health, despite existing sanitary closures. The results of the human health assessment also indicates that since only low incremental emissions of contaminants of potential concern and particulate matter are expected from Project-associated shipping (based on Section 3.4, Air Quality) the uptake of contaminants in shellfish and finfish from an increase in marine shipping is

expected to be negligible. Adverse health effects from consumption of these resources are not expected as a result of an increase in Marine shipping associated with the Project.

4.2.5.2.3 Access to Preferred Current Use Locations

The following sections address Aboriginal group-specific effects to access to preferred Current Use locations from Project-associated vessel transit. Effects on the Current Use access to preferred locations is individual to First Nations.

4.2.5.2.3.1 Ditidaht First Nation

Ditidaht First Nation, like other First Nations along the shipping route, report interactions between existing shipping vessel transit and Current Use locations, such as marine travel ways and marine harvesting, particularly Aboriginal FSC fin-fishing area at Swiftsure Bank that is shared by Pacheedaht First Nation, at the western end of the MSA (Segment D). This fishing area, which lies in Canadian waters of the MSA, is intersected by the outbound shipping lane,

Project-associated shipping activities may increase the frequency with which Ditidaht fishing vessels or boats may need to temporarily change position in a fishing area or change course when transiting a shipping lane. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Ditidaht fishing and seafood harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lane or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Ditidaht FSC and economic opportunity fishing and harvesting vessels, and only within the shipping lanes. It is not anticipated that every vessel movement will interfere with Current Use fishing since not all bunkering vessels will transit as far as Swiftsure Bank. Considering the small number of Project-associated vessels relative to current and projected vessel traffic in the MSA (with a single vessel movement anticipated in outbound lanes at 1.5 times per week) these changes would create a small effect on fish and seafood harvest activity at Swiftsure Bank and are anticipated to be negligible.

Current Use and access for fishing vessels may also be affected by wake produced by Project-associated vessels due to requirements for adjusting course or change of speed and temporary disturbance of use from wake effects. As identified in Section 3.1 Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wakes produced by the Project-associated shipping activity will not be distinguishable from existing conditions. Therefore, the potential effect of Project-associated marine vessel transit on area use and access for Current Use fishing for the Ditidaht First Nation is anticipated to be negligible.

4.2.5.2.3.2 Pacheedaht First Nation

Pacheedaht First Nation and Ditidaht First Nation share an FSC fishing area at Swiftsure Bank, at the westernmost end of the MSA (Segment D), that is closed to commercial and recreational fin-fishing. This fishing area, which lies in Canadian waters of the MSA, is intersected by the outbound shipping lane. Pacheedaht First Nation report as a

result of Buoy J and the inbound and outbound shipping lanes being moved north, existing shipping traffic in the outbound shipping lanes has changed their method of access to while in an exclusive Aboriginal FSC fin-fishing area. They say that they are now using expensive charter boats to fish in the area, as they report these boats are equipped with radar or are otherwise better prepared than community boats to avoid interactions with approaching ships.

Project-associated shipping activities may increase the frequency with which Pacheedaht fishing vessels or boats may need to temporarily change position in a fishing area or change course when transiting a shipping lane. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Pacheedaht fishing and seafood harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lane or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Pacheedaht First Nation FSC and economic opportunity fishing and harvesting vessels, and only within the shipping lanes. It is not anticipated that every vessel movement will interfere with Current Use fishing since not all bunkering vessels will transit as far as Swiftsure Bank. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, these changes would create a small effect on fish and seafood harvest activity at Swiftsure Bank and are anticipated to be negligible.

Current Use and access for fishing vessels may also be affected by wake produced by Project-associated vessels due to requirements for adjusting course or change of speed and temporary disturbance of use from wake effects. As identified in Section 3.1 Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wakes produced by the Project-associated shipping activity will not be distinguishable from existing conditions. Therefore, the potential effect of Project-associated marine vessel transit on Current Use fishing area use and access for the Pacheedaht First Nation is anticipated to be negligible.

4.2.5.2.3.3 Maa-nulth First Nations

The Maa-nulth First Nations include Huu-ay-aht First Nations, Ka:yu:kth/Che:k:tlas7eth First Nations, Toquaht Nation, Uchucklesaht Tribe, and Yuulu?il?atl:th (Ucluelet) First Nation. A portion of the proposed shipping lanes overlap with Maa-nulth Barkley Sound domestic fishing area. The Maa-nulth Treaty Society has expressed concern about the effects of shipping on their treaty area, including areas that do not overlap with the MSA (i.e., past J Buoy). Maa-nulth Treaty Society has emphasized that large shipping vessels travel from J Buoy (at the edge of the Marine Shipping Area) west and northwest through a large portion of their Treaty Fishing Area. As Maa-nulth have noted, the trajectories of vessels appear to be consistent with international shipping trade routes from the Pacific Northwest to Asia. These vessels can restrict the times and locations in which Maa-nulth can exercise rights within the Treaty Fishing Area.

Under the Maa-nulth Treaty, the right to harvest fish allows each Maa-nulth First Nation to also harvest marine plants, as described in the Marine Resource Use section for food, social and ceremonial or non-commercial purposes.

There is a very small area of overlap between Maa-nulth Barkley Sound domestic fishing area and the MAA. However, the outbound route for Project-related shipping is proposed to remain outside of the Barkley Sound domestic fishing area. Project-associated shipping activities may occasionally result in Maa-nulth First Nation fishing vessels or boats needing to temporarily change position or change course when transiting a shipping lane. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels. Project-associated shipping may occasionally result in Maa-nulth fishing and marine harvesting vessels needing to temporarily give right of way to Project-associated vessels or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Maa-nulth First Nations domestic fishing and harvesting vessels, and only within the shipping lanes. It is not anticipated that every vessel movement will interfere with Current Use fishing since not all bunkering vessels will transit to J-Buoy. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA these changes would create a small effect on fish and seafood harvest activity near the Maa-nulth Barkley Sound domestic harvest area and are anticipated to be negligible.

Maa-nulth Treaty Society has expressed concern about vessels transiting through their domestic fishing areas once they leave J-Buoy. They report having seen an increasing number of vessels and that this has become a concern for fishers and potential impacts on harvesters and the resources being harvested. While this concern is acknowledged, it is beyond the scope of this assessment and requires input with regulatory agencies to address. It is not expected that Project-related shipping from this Project will contribute to this effect in a measurable way.

Current Use and access for fishing vessels may also be affected by wake produced by Project-associated vessels due to requirements for adjusting course or change of speed and temporary disturbance of use from wake effects. As identified in Section 3.1 Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wakes produced by the Project-associated shipping activity will not be distinguishable from existing conditions. Therefore, the potential effect of Project-associated marine vessel transit on Current Use fishing area use and access for the Maa-nulth First Nations is anticipated to be negligible.

4.2.5.2.3.4 Pauquachin First Nation

Identified Pauquachin First Nation marine harvesting areas that overlap with, or are adjacent to, the Project's shipping route include areas around Haro Strait, parts of the Juan de Fuca Strait, Race Rocks, Constance Bank, Discovery Island, and North and South Pender Islands. Pauquachin First Nation indicated that existing vessel traffic within the MSA factors into route planning for harvesting on the eastern side of the Strait of Georgia at Point Roberts, which they access via Active Pass (Segment A). Project-associated shipping activities may increase the frequency with which Pauquachin fishing vessels or boats may need to temporarily change position in a fishing area or change course when transiting a shipping lane. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Pauquachin fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lane or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Pauquachin FSC or domestic fishing and marine harvesting vessels, and only within the

shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller Pauquachin vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on guided sport fishing and recreational fishing and seafood harvesting vessels activity and are anticipated to be negligible.

Area use and access for Pauquachin First Nation harvesting vessels may be subject to vessel wake produced by Project vessels due to adjusting course or changing speed and temporary disturbance of use. As described in Section 3.1, Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wake produced by the Project shipping are not distinguishable from existing conditions.

Therefore, the potential effects of Project-associated marine vessel transit to area use and access to locations for traditional resources use for Pauquachin First Nation are anticipated to be negligible.

4.2.5.2.3.5 Tsawout First Nation

Tsawout First Nation report intensively harvesting salmon hundreds of locations that line the shipping lanes through Segments A and B of the MSA, as well as in other areas within and beyond the MSA. Examples within the MSA includes sites around Tumbo Island and Saturna Island (e.g., East Point), along the southern shores of Saturna Island and the Pender Islands, in the channel between Moresby Island and the Pender Islands (i.e., Swanson Channel), around Sidney Island, James Island, and the D'Arcy Islands, east and south of Coal Island, and from Saanichton Bay south and west to Port Renfrew (in Segment D)

Lingcod and rockfish are taken at multiple sites throughout the Boundary Passage and Haro Strait area. Within the MSA, these sites include off the southern ends of Saturna Island, South Pender Island, and Moresby Island, including a reef that links the Pender Islands to Moresby Island, and surrounding Sheep Island, Domville Island, Forrest Island, Gooch Island, Coal Island, and Halibut Island, and others Tsawout First Nation has reported that one of the most important cod harvesting locations lies around D'Arcy Island southwest to Big Zero Island (Zero Rock) and Little Zero Island (Little Zero Rock), off Cordova Bay.

Traditional duck took place at Boat Pass and Mitchell Bay in the San Juan Islands, Saanichton Bay, Saanich Inlet, and in the waters surrounding Sidney Island, James Island, and D'Arcy Islands. Several contemporary hunting locations have also been identified for the area surrounding Sidney Island and James Island, with a heavy cluster of sites from Saanichton Bay south towards Cordova Bay, as well as sites adjacent to the shipping lanes on the south side of Saturna Island and south and west of South Pender Island.

Project-associated shipping activities may increase the frequency with which Tsawout First Nation fishing vessels or boats may need to temporarily change position in a fishing area or change course when transiting a shipping lane. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Tsawout fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Tsawout FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the

familiarity of smaller Tsawout vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect Tsawout First Nation harvesting activity and are anticipated to be negligible.

Area use and access for Tsawout First Nation harvesting vessels may be subject to vessel wake produced by Project vessels due to adjusting course or changing speed and temporary disturbance of use. As described in Section 3.1, Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wake produced by the Project shipping are not distinguishable from existing conditions.

Therefore, the potential effects of Project-associated marine vessel transit to area use and access to locations for traditional resources use for Tsawout First Nation are anticipated to be negligible.

4.2.5.2.3.6 Tsartlip Indian Band

Tsartlip Indian Band fish at Active Pass at the northwest side of Mayne Island; in Swanson Channel and Boundary Pass near the west side and the southern tip of North Pender Island; the southern tip of South Pender Island; and at Race Rocks sites on the far side of the Strait of Georgia running from Bowen Island to Point Roberts. They fish at Roberts Banks and Sturgeon Banks, from south of Burrard Inlet at Point Grey to the international border, at Stuart Island, along the southwestern side of San Juan Island, and running the length of the international border from southeast of Saturna Island to west of San Juan Island. Tsartlip Indian Band also has fishing sites on the far side of the Strait of Georgia running from Bowen Island to Point Roberts, at Roberts Banks and Sturgeon Banks, from south of Burrard Inlet at Point Grey to the international border, at Stuart Island, along the southwestern side of San Juan Island, and running the length of the international border from southeast of Saturna Island to west of San Juan Island.

Other harvesting sites include in Saanichton Bay, between San Juan and Sidney islands, from Moresby over to Pender, around Gooch and Sidney Islands, at East Bay, from East Point to Taylor's Beach on Saturna Island, in the Straits, near Stuart Island, and on a reef that links Pender and Moresby Islands.

Contemporary duck hunting activities occur on the eastern waters of Sidney Island, Sidney Spit, Sidney Channel, the water surrounding James Island, the spit at Tsawout, and Saanichton Bay. These areas are sometimes accessed by marine vessel.

Project-associated shipping activities may increase the frequency with which Tsartlip fishing vessels or boats may need to temporarily change position in a fishing area or change course when transiting a shipping lane, particularly at restriction locations. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Tsartlip fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Tsartlip Indian Band FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller Tsartlip vessel operators with navigation procedures and regulations

in the LSA and RSA, these changes would not create a measurable effect on Tsartlip Indian Band traditional harvesting for fish, ducks or other marine species and the effect is considered negligible.

Area use and access for Tsartlip Indian Band harvesting vessels may be subject to vessel wake produced by Project vessels due to adjusting course or changing speed and temporary disturbance of use. As described in Section 3.1, Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wake produced by the Project shipping are not distinguishable from existing conditions.

Therefore, the potential effects of Project-associated marine vessel transit to area use and access to locations for traditional resources use for Tsawout First Nation are anticipated to be negligible.

4.2.5.2.3.7 Malahat First Nation

Malahat First Nation has not made information available for an assessment of effects to access to current use locations.

4.2.5.2.3.8 Tseycum Indian Band

Tseycum Indian Band currently harvest fish in Segment B, in Saanich Inlet, Prevost Passage, Swanson Channel, Haro Strait, and the Gulf Islands. They also fish for sockeye in Segment B, including within Boundary Passage between Moresby Island and Stuart Island, between Prevost Island and Galiano Island, at Pender Bluffs and in the vicinity of Swanson Channel and along the international shipping lane. Tseycum Indian Band also fish in Henry Island, Stuart Island, Spieden Island, Pearl Island, and San Juan Island in the U.S.A.

Project-associated shipping activities may increase the frequency with which Tseycum fishing vessels or boats may need to temporarily change position in a fishing area or change course when transiting a shipping lane, particularly at restricted locations in the international shipping lane. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Tseycum fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Tseycum Indian Band FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of vessel operators with navigation procedures and regulations in the LSA and RSA these changes would not create a measurable effect on Tseycum Indian Band traditional harvesting for fish, and the effect is considered negligible.

Area use and access for Tseycum Indian Band harvesting vessels may be subject to vessel wake produced by Project vessels due to adjusting course or changing speed and temporary disturbance of use. As described in Section 3.1, Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wake produced by the Project shipping are not distinguishable from existing conditions.

Therefore, the potential effects of Project-associated marine vessel transit area use and access to locations for traditional resources use for the Tseycum Indian Band are anticipated to be negligible.

4.2.5.2.3.9 Songhees First Nation

Songhees First Nation has provided little information on areas that may be used for the current use of lands and resources for traditional purposes. Songhees has provided information on an important cultural site - Tl'ches. Tl'ches is located a few kilometres off of the District of Oak Bay and consists of a small archipelago of islands that are rich with marine resources. Located at Chatham and Discovery Islands, access would be by boat, canoe or small watercraft. It is not anticipated that Songhees First Nation would experience effects to access and use of these locations as access is not within shipping lanes.

4.2.5.2.3.10 Esquimalt Nation, Scia'new First Nation and T'sou-ke First Nation

Esquimalt Nation, Scia'new First Nation and T'sou-ke First Nation have requested that their information, if provided in previous studies, not be reproduced in subsequent reports. An assessment of effects to their locations for Current Use purposes has accordingly not been completed.

4.2.5.2.3.11 Cowichan Tribes

Cowichan Tribes' current FSC licence allows them to harvest all five species of salmon, herring, herring spawn, and all the species of groundfish in Pacific Fishery Management Area (PFMA) Subareas 29-3, 29-6, 29-7, 29-9, and 29-10 and several of these subareas overlap the LSA/RSA. Fishers have reported that they have to move to accommodate larger commercial vessels.

Notwithstanding the preceding statement, current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by CNA member Nations has been previously discussed as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18).

Project-associated shipping activities may increase the frequency with which Cowichan Tribes fishing vessels or boats may need to temporarily change position in a fishing area (such as PMFA 17 and 18, depending on where within these PMFAs they are fishing) or change course when transiting a shipping lane, particularly at restricted locations. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Cowichan Tribes fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Cowichan Tribes FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA these changes would not create a measurable effect on Cowichan Tribes traditional harvesting for fish, ducks or other marine species and the effect is considered negligible.

Area use and access for Cowichan Tribes harvesting vessels may be subject to vessel wake produced by Project vessels due to adjusting course or changing speed and temporary disturbance of use. As described in Section 3.1, Vessel Wake, predicted wake will be within the natural wave range conditions, and except in calm conditions, wake produced by the Project shipping are not distinguishable from existing conditions.

Therefore, the potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Cowichan Tribes are anticipated to be negligible.

4.2.5.2.3.12 Halalt First Nation

The Halalt First Nation Fisheries Agreement with DFO encompasses Cowichan Lake watershed and the marine waters surrounding Saltspring, North Pender, Saturna, Mayne and Galiano Islands, and extends into the Strait of Georgia towards Roberts Point and Lulu Island. Halalt First Nation, as part of the CNA, previously reported that for the last generation they have been revitalizing access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. CNA members have collectively said that journeys to their members in the U.S.A. have been affected by shipping traffic, and they have raised concerns regarding the safety of community members which undertaking traditional practices on the water.

Halalt First Nation notes that the increase in vessel traffic related to the RBT2 project, which will follow the same shipping lanes of those calling at the Project will pass through their fishing areas. However, as described above, Project-associated vessels will represent a 1.1% or less increase in vessel movements within the MSA, from existing baseline conditions.

Project-associated shipping activities may increase the frequency with which Halalt First Nation fishing vessels or boats may need to temporarily change position in a fishing area (such as PMFA 17 and 18, depending on where within these PMFAs they are fishing) or change course when transiting a shipping lane, particularly at restricted locations. As described in **Section 4.1** according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Halalt First Nation fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Halalt First Nation FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessels movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on Halalt First Nation traditional harvesting for fish or other marine species and the effect is considered negligible. The potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Halalt First Nation are anticipated to be negligible.

4.2.5.2.3.13 Kwantlen First Nation

Kwantlen First Nation has not reported resource use in the MSA. Effects to Kwantlen First Nation locations for Access for Current Use are not anticipated.

4.2.5.2.3.14 Lake Cowichan First Nation (Ts'uubaa-astatx)

Lake Cowichan First Nation has not provided any harvesting information that indicates that their access to Current Use locations will be affected by the Project-related shipping.

4.2.5.2.3.15 Lyackson First Nation

Lyackson First Nation reported to the RBT2 review panel that they have historically and currently use the RBT2 project area, including the shipping lanes, for fishing and other harvesting activities. Lyackson fishers have estimated that more than 50% of their salmon harvest relies on transit of the Salish Sea between Le'eyqsun, and the Fraser River. Lyackson First Nation identified some of the reasons certain Lyackson members no longer make the trip to the Fraser, including large ship traffic, declines in reliable salmon and other fish, "restrictive administrative requirements," and increasing costs. Lyackson harvest crab in PMFA 14, 16 to 19 and Subarea 29-5. Information on how frequently Lyackson First Nation members continue to journey to these fishing areas was not available in the sources reviewed.

Project-associated shipping activities may increase the frequency with which Lyackson First Nation fishing vessels or boats may need to temporarily change position in a fishing area (such as PMFA 14, 16 and 19 or Subarea 29-5) or change course when transiting a shipping lane, particularly at restricted locations. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Lyackson First Nation fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Lyackson First Nation FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on Lyackson First Nation traditional harvesting for fish or other marine species and the effect is considered negligible. Potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Lyackson First Nation are anticipated to be negligible.

4.2.5.2.3.16 Musqueam Indian Band

Areas in which Musqueam harvest salmon for FSC purposes (and sale of those salmon in years where returning numbers allow) is permitted in PFMA subareas 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, and 29-17. Musqueam has reported fishing values in the LSA of (as outlined in the Musqueam's KUS prepared for the RBT2 panel hearings), which overlaps with the shipping channels in the Project's LSA and MSA. Musqueam

participants stated in the KUS interviews that fishing in the ocean and the Fraser River was important to them and they reported fishing “over wide swaths of the ocean”. Identified important fishing areas included the shallow shelf found west of Vancouver, and the area around Roberts Bank and Canoe Pass. In 2013 and 2014, and 2015 Musqueam were licenced to harvest crab (targeting Dungeness, graceful and red rock) within the Musqueam Crab Area and prawn in PFMA sub-areas 29-2, 29-3, and 29-4 through the year.

Project-associated shipping activities may increase the frequency with which Musqueam Indian Band fishing vessels or boats may need to temporarily change position in a fishing area in some of the areas identified above or change course when transiting a shipping lane, particularly at restricted locations, if they are fishing at those locations. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Musqueam Indian Band fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Musqueam Indian Band FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on Musqueam traditional harvesting for fish or other marine species such as crabs and the effect is considered negligible. Potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Musqueam Indian Band are anticipated to be negligible

4.2.5.2.3.17 Penelakut Tribe

Penelakut Tribe expressed concerns to the RBT2 panel that increased vessel traffic would increase navigational conflicts for Penelakut members travelling across the Salish Sea to harvesting sites at Roberts Bank. CNA member groups report harvesting marine vegetation, specifically seaweed, in the Strait of Georgia, including around the southern Gulf Islands and San Juan Islands. Penelakut report harvesting specifically around Salt Spring Island.

Project-associated shipping activities may increase the frequency with which Penelakut vessels may need to temporarily course when transiting a shipping lane, particularly at restricted locations, or if they are fishing at those locations. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Penelakut Tribe fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Penelakut FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA,, these changes would not create a measurable effect on Penelakut Tribe traditional harvesting for fish or other marine species such as crabs and the effect is considered negligible. Potential effects of Project-associated marine vessel

transit on area use and access to locations for traditional resources use for the Penelakut Tribe are anticipated to be negligible

4.2.5.2.3.18 Semiahmoo First Nation

Semiahmoo First Nation report very little current harvesting within the MSA. Semiahmoo First Nation continues to harvest crabs for FSC purposes, targeting Dungeness, graceful, and red rock varieties at Boundary Bay and Drayton Harbour whenever harvesting is open. Semiahmoo have reported use of a travel route through Active Pass to the Gulf Island and Victoria. Semiahmoo has emphasized the importance of maintaining this travel route for cultural purposes.

Project-associated shipping activities may increase the frequency with which Semiahmoo vessels may need to temporarily course when transiting a shipping lane, particularly at restricted locations. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Semiahmoo First Nation vessels may need to temporarily give right of way to Project-associated vessels while or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will rarely affect travel for Semiahmoo First Nation within the shipping lanes as they travel to the Gulf Islands or Victoria, considering the small number of Project-associated vessels movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, would not create a measurable effect on Semiahmoo travel routes and the effect is considered negligible. Potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Semiahmoo First Nation are anticipated to be negligible.

4.2.5.2.3.19 Squamish Nation

Squamish Nation have not reported current use within the MSA. Effects on access to preferred locations for Current Use have not been identified.

4.2.5.2.3.20 Stz'uminus First Nation

Stz'uminus First Nation fish in the Strait of Georgia (sockeye, halibut, Pacific cod and lingcod), east of Galiano Island (sockeye), southeast off Robert's Bank (spring, pink, and sockeye), Sidney to Steveston Cannery to Campbell River (clams), Roberts and Sturgeon Banks (salmon), and the south fork of Fraser River onto Roberts Bank (sockeye and sturgeon). They continue to travel to areas surrounding Saltspring, Prevost, Valdes, Thetis, Penelakut and Galiano Islands, and extends into the Strait of Georgia towards Roberts Point and Lulu Island for shellfish harvesting. Stz'uminus First Nation, Cowichan Tribes and Halalt First Nation also note that the increase in vessel traffic related to the RBT2 project, which will follow the same shipping lanes of those calling at the Project will pass through their fishing areas. Hunting continues at sites in the Strait of Georgia, Dunsmuir, Galiano, Lasqueti, Parker, and Saltspring Islands, and Porlier Pass. Stz'uminus First Nation says that journeys to their members in the U.S.A. have been affected by shipping traffic.

Project-associated shipping activities may increase the frequency with which Stz'uminus First Nation vessels may need to temporarily course when transiting a shipping lane, particularly at restricted locations, or if they are fishing at those locations. As described in Section 4.1, according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Stz'uminus fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Stz'uminus FSC or domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on Stz'uminus traditional harvesting for fish or other marine species and the effect is considered negligible. Potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Stz'uminus First Nation are anticipated to be negligible.

4.2.5.2.3.21 Tsawwassen First Nation

Domestic allocations for sockeye, chum, pink, chinook, and coho salmon, which are centrally important to the Tsawwassen First Nation, are calculated using formulas described in the TFNFA PFMA. Tsawwassen harvest in Subareas 29-6 through 29-14 and 29-17. The Tsawwassen Harvest Agreement also allows for the commercial harvesting of crab in Management Areas I and J. Intertidal bivalves may be harvested for FSC purposes in the Tsawwassen Intertidal Bivalve Fishing Area, which lies in PFMA 18 and includes the shorelines around Galiano Island, Mayne Island, Samuel Island, Saturna Island, and Tumbo Island. Wildlife harvesting, including migratory birds, has been recorded at Galiano, Saltspring, Mayne, Pender and Saturna islands.

Project-associated shipping activities may increase the frequency with which Tsawwassen First Nation vessels may need to temporarily course when transiting a shipping lane, particularly at restricted locations, or if they are fishing at those locations. As described in **Section 4.1** according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Tsawwassen fishing and harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Tsawwassen domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on Tsawwassen traditional harvesting for fish or other marine species and the effect is considered negligible. Potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Tsawwassen First Nation are anticipated to be negligible.

4.2.5.2.3.22 Tsleil-Waututh Nation

Tsleil-Waututh fishers work with, or work on Musqueam fish boats to harvest most of their Fraser sockeye. Tsleil-Waututh fish for FSC purposes under communal licences issued by DFO. The PFMA subareas to which these licences apply include 28-11, 28-12, 28-13, 28-14, 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, and 29-17 some of which may overlap the MSA. Subareas within PFMA 28 apply to eastern Burrard Inlet and Indian Arm; the subareas within PFMA 29 encompass the Fraser River downstream of the Port Mann Bridge and into the Strait of Georgia.

Project-associated shipping activities may increase the frequency with which Tsleil-Waututh Nation vessels may need to temporarily course when transiting a shipping lane, particularly at restricted locations, or if they are fishing at those locations. As described in Section 4.1 according to navigation procedures and regulations (e.g., Collision Regulations), smaller vessels and fishing vessels are required to give right of way to other vessels navigating within a narrow passage or channel. Project-associated shipping may increase the frequency with which Tsleil-Waututh Nation harvesting vessels may need to temporarily give right of way to Project-associated vessels while fishing within the shipping lanes or change course when transiting within the shipping lane. However, it is anticipated that Project-associated shipping will only add temporary displacement on area use and access for Tsleil-Waututh domestic fishing and marine resource harvesting vessels, and only within the shipping lanes. Considering the small number of Project-associated vessel movements relative to current and projected vessel traffic in the MSA, and the familiarity of smaller vessel operators with navigation procedures and regulations in the LSA and RSA, these changes would not create a measurable effect on Tsleil-Waututh traditional harvesting for fish or other marine species and the effect is considered negligible. Potential effects of Project-associated marine vessel transit on area use and access to locations for traditional resources use for the Tsleil-Waututh Nation are anticipated to be negligible.

4.2.5.2.4 Quality of Current Use Experience

Changes in the experience of Current Use such as sensory disturbance from noise or light, or perceived increase in risks to safety, can lead to changes in the how Aboriginal groups use an area, including reducing their use or avoiding an area altogether. These changes in experience can result in cultural practices that are tied to the use of locations and resources, including intangible cultural heritage considerations. Aboriginal groups require use of areas and resources to be able to pass on environmental knowledge, language, cultural laws or regulation, stories and spiritual beliefs and the general transmission of Aboriginal traditional knowledge. These aspects of use form and maintain cultural identity.

Aboriginal groups have stated that there are pre-existing effects on areas that they use. Pacheedaht First Nation and Ditidaht First Nation have identified the movement north of Buoy J and the inbound and outbound shipping lanes north as affecting their use at Swiftsure Bank in the exclusive Aboriginal FSC fin-fishing area (Segment D). As a result of existing shipping traffic in the outbound shipping lanes, these two nations have changed how they access this area due to their sense of safety being compromised. Nation members are now using more expensive charter boats to fish because these boats are equipped with radar or are better prepared to manage interactions with approaching ships. Their concern with safety in this fishing area has resulted in Nation members no longer taking their children out fish harvesting, resulting in the inability to pass on important cultural knowledge at that location.

Tseycum Indian Band has indicated that the curve between Moresby Island and Stuart Island at Boundary Passage and Haro Strait is congested with commercial fishing boats, sailboats, regattas, commercial ships, as well as Aboriginal fishers. This area is known for incidents, particularly in summer. This area is recognized in various navigational and marine shipping reports as a higher incident risk area within the MSA due to the narrow channel bounded by a rocky shore.

Cowichan Nation Alliance members have collectively said that journeys to their members in the U.S.A. have been affected by shipping traffic and have raised concerns regarding the safety of community members when undertaking traditional practices on the water.

At Turn Point, special operating procedures are in place that require ships traveling north in the inbound lane in Haro Strait and west in the outbound lane in Boundary Pass to adjust their course, so they do not arrive at Turn Point at the same time. This precautionary area and others at specific points along the shipping lanes are intended to reduce the frequency of accidents. In addition to Collision Regulations and precautionary areas, a number of other mechanisms are in place to reduce the frequency of accidents, including but not limited to traffic separation zones, and mandatory pilotage for LNG vessels moving in either direction through Segment B and Segment A (i.e., shipping lanes in Haro Strait, Boundary Passage, and the Strait of Georgia) between the Victoria Pilot Station and the Project, as described in Section 5.0 Accidents and Malfunctions, Mitigation Measures. With the implementation of the above safety procedures, a detectable or measurable change in safety risk during Current Use activities as a result of Project-associated shipping, based on statistical data, is not expected.

While Aboriginal group concerns around existing pollution are focussed on the quality of marine resources and do not specifically cite air quality, Current Use of the marine environment by Aboriginal people within the MSA could expose them to air emissions as a result of Project-associated shipping. Section 3.4 Air Quality reports that estimated concentrations of criteria air contaminants due to emissions from large marine vessels will be lower in 2030, with or without the contribution of Project-associated ship emissions, than in 2015 prior to the implementation of the North American Emission Control Area. Section 4.5 Human Health reports that, due to the full implementation of the North American Emission Control Area in 2015, estimated criteria air contaminant concentrations are expected to decline from existing conditions to future conditions with marine shipping associated with the Project. Therefore, airborne concentrations for contaminants of potential concern from the increase in emissions from marine shipping associated with the Project are expected to remain below the ambient air quality standards and objectives. Changes in air quality as a result of Project-associated shipping are therefore expected to have a negligible effect on the quality of the Current Use experience.

Aboriginal groups reported the presence of sites of importance throughout the MSA. These sites of importance help define the cultural landscapes of each Aboriginal group. Cultural landscapes are a key component in how lands and resources are used and experienced.

Semiahmoo First Nation, Tsartlip First Nation, Tseycum First Nation Lyackson First Nation and Tsawout First Nation and Songhees First Nation have expressed concern about the erosion of shorelines and beach areas that have affected their use of these areas for important cultural purposes, and have specifically identified shipping traffic a contributing factor or cause of erosion. Generally, for the most part, general (as opposed to site-specific) locations of sites of importance identified as affected by such erosion were identified by these Aboriginal groups generally (e.g., the Gulf Islands). Burial grounds were said to be among these sites of importance.

As reported in Section 3.1, Vessel Wake, the increase in wave energy and power due to Project-related vessel wake are identified as being both very small in comparison to the existing wave climate at the potentially affected shorelines. Most of this increase in wave energy and power occurs near Victoria / Discovery, Chatham, Chain, and Trial Islands; but since this area has the most energetic natural wave environment it is also the least likely to observe vessel wake at its shorelines. Additionally, this increase in wave energy and power at potentially affected shorelines is very small in comparison to the existing wave climate through the shipping areas assessed. Therefore, the effect of vessel wake erosion caused by Project shipping is assessed as being negligible in comparison to baseline conditions.

4.2.5.3 Summary of Effects

The effect of Project- associated marine vessel transit on access to preferred Current Use areas, and the quality of the Current Use experience in or near shipping lanes is considered negligible. No effects on the availability of Preferred Current Use Resources and the Quality of Current Use resources were identified.

4.2.5.4 Summary of Transboundary Effects

As the existing conditions for Current Use are expected to be similar in US waters as described for Canadian waters (e.g., regulation and management of vessel traffic and the current use of resources), the potential effects from transiting vessels on Current Use are predicted to be similar as those described in Sections 4.2.3.2.13-4.3.2.1.22.

4.2.5.5 Mitigation Measures

As highlighted in **Section 4.1** two mitigation measures identified in the Project EAC Application, M6.2-1 Implementation of TERMPOL Recommendations and M6.2-2 Compliance with Maritime Regulations and Legislation, are also applicable to the Current Use VC and would also support safe navigation within the LSA and MAA. No measurable adverse effects on the Current Use VC are predicted to result from Project-associated vessel movements, and therefore no additional mitigation measures are suggested.

Consultation with Aboriginal groups on the MSA will consider the views of Aboriginal groups including views on mitigation measures, such as monitoring to verify assessment results of the Current Use of Lands and Resources Effects Assessment, and recommendations on Project-related marine shipping activity parameters.

4.2.5.6 Residual Project Effects

No measurable adverse effects on the Current Use VC are predicted to result from Project-associated vessel transits and residual effects were not identified.

4.2.6 Cumulative Effects Assessment

Project-related vessel movements are not expected to result in measurable changes in Current Use that are likely to interact cumulatively with changes caused by other projects or activities that have been or will be carried out. Consequently, an assessment of cumulative effects on the Current Use VC was not conducted.

4.2.7 Potential Impacts on Asserted or Established Aboriginal and Treaty Rights

4.2.7.1.1 Method and Approach

This section considers potential impacts of Project-related marine shipping on the ability of Aboriginal groups, as identified in Section 7.1.3 Identification of Aboriginal Groups, to exercise asserted or established Aboriginal or treaty rights in the MSA. The BC EAO is undertaking consultation with Schedule D Aboriginal groups, to obtain their views on potential adverse impacts on asserted or established rights as a result of Project-associated shipping.

The assessment of potential impacts on the exercise of asserted or established rights in the MSA relies on the summary of existing Current Use conditions of each Aboriginal group presented in Section 4.2.3.2. The rights assessment therefore also relies on the same indicators, assessment boundaries (i.e., traditional territories or otherwise defined areas of use), and information sources (including consultation with Aboriginal groups) as the Current Use assessment, and considers the results of that assessment as presented in the foregoing sections to support the analysis presented below. Concerns expressed by Aboriginal groups, where these concerns have been provided, in relation to the use of existing information to support the Current Use analysis in relation to Project-associated shipping therefore also extend to the analysis of asserted or established rights.

Aboriginal rights, including title, are asserted by the following Aboriginal groups:

- Ditidaht First Nation
- Pacheedaht First Nation
- Pauquachin First Nation
- Tsawout First Nation
- Tsartlip Indian Band
- Malahat First Nation
- Tseycum Indian Band
- Esquimalt Nation
- Songhees Nation
- Scia'new (Beecher Bay) First Nation
- T'sou-ke (Sooke First Nation)
- Cowichan Tribes;

- Halalt First Nation;
- Kwantlen First Nation;
- Lake Cowichan First Nation;
- Lyackson First Nation;
- Musqueam Indian Band;
- Penelakut Tribe;
- Semiahmoo First Nation;
- Squamish Nation;
- Stz'uminus First Nation;
- Tsawwassen First Nation; and
- Tsleil-Waututh Nation.

In addition to asserting Aboriginal rights, including title, the following Aboriginal groups also hold Douglas Treaty rights:

- Tsawout First Nation
- Tsartlip First Nation
- Tseycum First Nation
- Beecher Bay Indian Band (Scia'new First Nation)
- Esquimalt Nation
- Songhees First Nation
- T'Sou-ke First Nation

Malahat First Nation and Pauquachin First Nation are considered by the Government of Canada to assert Douglas Treaty rights (Canada 2015b,e).

Maa-nulth First Nations (Huu-ay-aht First Nations, Ka:'yu:'k't'h'/Che:k'tles7et'h First Nations, Toquaht Nation, Uchucklesaht Tribe, and Ucluelet First Nation) have established treaty rights pursuant to the Maa-nulth First Nations Final Agreement. Similarly, Tsawwassen First Nation has established treaty rights under the Tsawwassen First Nation Final Agreement.

The exercise of Current Use may not be co-existent with the exercise of asserted or established rights, and Current Use or the absence of Current Use may not be reflective of where Aboriginal and treaty rights exist or may be

exercised in the future. The assessment of potential impacts to asserted or established Aboriginal and treaty rights as a result of Project-associated shipping was based on the assumption that traditional use presently occurring in the MSA (i.e., Current Use) is an expression of the exercise of Aboriginal or treaty rights. Where traditional use was not identified as occurring at present within the MSA, but similar use was identified as practiced in the past within the MSA or protected under treaty, this use was assumed to be subject to potential impacts as a result of Project-associated shipping in much the same way as potential effects on Current Use. This assessment relies on publicly available information from previous studies, namely the Roberts Bank Terminal 2 Marine Shipping Supplemental Report the Trans Mountain Expansion Project, and that undertaken by WesPac for the EAC Application. This includes the results of consultations from previous projects, namely the Trans Mountain Expansion and Robert's Bank Terminal 2 projects, and that undertaken by WesPac for the EAC Application. Limited additional information has been obtained through consultation to assess the effect of Project-related marine shipping on Aboriginal and treaty rights.

4.2.8 Results of the Assessment of Effects to Aboriginal and Treaty Rights

Consultation and the identification of Aboriginal and Treaty rights that may be affected by the Project-associated shipping is ongoing by the BC EAO and WesPac. Consultation with respect to the MSA is summarized in Section 7.0, Aboriginal Consultation. Records to date do not identify specific concerns with respect to the effect on Aboriginal and treaty rights from the Project-related shipping.

WesPac recognizes that, as a result of prior cumulative effects on traditional use, Aboriginal groups ability to harvest and maintain levels of resource use are constrained and impeded and that this affects their ability to exercise their Aboriginal and treaty rights to the level that they undertook in the past and would like to pursue in the future. Their use in the shipping lanes has been impeded as a result of current shipping levels and could be further impeded by further shipping, including Project-associated shipping.

Project-related vessels will transit through the MSA through existing shipping lanes as determined by shipping regulations. As Aboriginal groups exercise their asserted or established rights in the shipping lanes they are affected in a similar manner by current vessel traffic moving through the designated shipping lanes. The relative degree to which Aboriginal may be more or less affected by potential interactions with Project-associated shipping traffic is, however, difficult to evaluate based on existing sources of information and the consultation specific to this Marine Shipping Assessment to date. The assessment of potential incremental impacts on the exercise of asserted or established rights is therefore presented at the level of all Aboriginal groups identified in the preceding sections rather than for each Aboriginal group individually (i.e., like the assessment of Current Use). This assessment acknowledges that each Aboriginal group is unique, but the assessment cannot discern meaningful differences in the effects given the circumstances that govern shipping.

Section 4.2.6 concludes that, while there is the potential for interactions between Project-associated increases in shipping traffic and Current Use activities (including potential use based on past use or agreed to under treaty), potential effects on Current Use within the MSA as a result of Project-associated vessel transit activities are considered negligible for access to preferred Current Use locations due to the availability and quality of preferred Current Use resources, and the quality of the Current Use experience (i.e., cultural practices) tied to those aspects of Current Use.

Similarly, the potential impacts of Project-associated increases in shipping traffic on the exercise of asserted or established Aboriginal or treaty rights within the MSA are not expected to be measurable for any Aboriginal group identified with respect to access to preferred locations for the exercise of asserted or established rights due to the availability and quality of preferred resources associated with the exercise of asserted or established rights, or cultural (including economic) activities that may be tied to the exercise of those asserted or established rights.

Should additional information regarding the exercise of asserted or established rights by Aboriginal groups within the MSA be received from Aboriginal groups, its relevance to the MSA will be considered, where and when appropriate.

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