

VANCOUVER FRASER PORT AUTHORITY  
WSP PROJECT NUMBER: 20M -00758-00

# FRASER SURREY PORT LAND – TRANSPORTATION IMPROVEMENTS NESTING BIRD SURVEY REPORT

MAY 14, 2021

CONFIDENTIAL





# FRASER SURREY PORT LANDS – TRANSPORTATION IMPROVEMENTS NESTING BIRD SURVEY REPORT

VANCOUVER FRASER PORT AUTHORITY

FINAL REPORT

PROJECT NO.: 20M-00758-00  
CLIENT REF:#20-0173  
DATE: MAY 14, 2021

WSP  
840 HOWE STREET, SUITE 1000  
VANCOUVER, BRITISH COLUMBIA

T: 604-631-9694  
WSP.COM



May 14, 2021

Confidential

Vancouver Fraser Port Authority  
Senior Construction Project Specialist  
100 The Point, 999 Canada Place  
Vancouver, B.C.  
V6C 3T4

**Attention: Vinil Reddy, M.Sc., MBA, PMP, P.Eng., ENV SP**

Dear Madam/Sir:

**Subject: Fraser Surrey Ports Land Transportation Improvement –  
Nesting Bird Survey and Assessment Report.  
Client ref.:**

WSP is please to submit our Nesting Bird Survey Assessment Report for your review and consideration. The Nesting Bird Survey Assessment Report presents the preliminary survey and assessment of nesting birds, for the proposed activities for the construction and operations of the Fraser Surrey Port Lands Transportation Improvement Project.

We look forward to working with you on this Project to ensure successful and compliant delivery of services.

Yours sincerely,

A handwritten signature in black ink that reads 'R. Smedley'. The signature is written in a cursive, flowing style.

Rosalyn Smedley, M.Sc., R.P.Bio.  
Biologist

WSP ref.: 20M-00758-00

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# SIGNATURES

## PREPARED BY



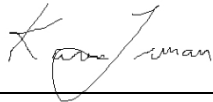
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Rosalyn Smedley, M.Sc., R.P.Bio  
Biologist

14 May 2021

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Date



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Karen Truman, B.Sc., R.P.Bio  
Wildlife Biologist

14 May 2021

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Date

## APPROVED<sup>1</sup> BY



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Michael Taylor, BLA, MRM  
Team Lead , Ecology & EIA

14 May 2021

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Date

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# CONTRIBUTORS

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# 1 INTRODUCTION

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## 1.1 PROJECT BACKGROUND AND RATIONALE

As a component of the Greater Vancouver Gateway 2030 Program, the Fraser Surrey Port Lands – Transportation Improvements (FSPL-TI) Project (the “Project”), includes an options confirmation review and preliminary engineering design of new or upgraded transportation infrastructure within the City of Surrey FSPL. The Greater Vancouver Gateway 2030 Program is the Gateway Transportation Collaboration Forum’s strategy for smart infrastructure investment in removing bottlenecks impeding the growth of trade, while addressing community impacts on good movement and population growth. The primary purpose of the Project is to improve the road network within FSPL and ease congestion in the general area.

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## 1.2 PROPOSED WORKS

The three main components of the FSPL-TI project include:

1. At- Grade Railway Crossing Updates: With extensive amounts of un-signalized railroad crossings along Timberland Road North, vehicles drivers experience stop-go movements as they approach crossings which add delays to already slow-moving traffic in the area. Upgrading the at-grade rail crossings at FSPL will improve the safety and efficiency of road users driving within FSPL.
2. New Roadway Connection for Timberland Road South to Robson Road: Re-alignment of the Robson Road-Timberland Road North corridor with the introduction of the Timberland Road South as the main access road within FSPL will enable most road users to avoid conflicts with at-grade rail crossing along the existing Timberland Road North. Road widening along Timberland Road South, including a new signalized intersection at Timberland Wye is proposed as part of this Project. The project will also provide the long-term rail footprint in the area for trains servicing the planned future terminals. With majority of truck traffic being directed to the new road alignment, this eases up traffic flow on the existing Timberland Road.

Changing the inbound container truck movements by providing a dedicated truck auxiliary lane, complete with Vehicle Access Control System (VACS) gates will manage inbound truck traffic into DP Word Fraser Surrey (DPWFS) container gate and streamline traffic flow.

3. Pavement Rehabilitation and Pavement Markings along Robson Road: Rehabilitation of Robson Rd to address pavement and drainage issues which contributes to the overall operation of the road corridor and maintenance costs at FSPL. Enhancement of pavement markings along Robson Rd will allow for better lane usage.

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## 1.3 OBJECTIVES

The objectives of the Nesting Bird Survey report is to:

- Assess the nesting birds using non-intrusive methods to determine the presence of birds in the project site.
- Describe existing conditions of nesting birds within the project site.
- Describe potential impacts, and proposed mitigation measures.



A detailed project description and methodology for desktop review and field site visit are available in the Biophysical Survey and Assessment Report. The Biophysical Report also provides a full description of project effects and proposed mitigation measures. This document provides a summary of that information as it pertains to nesting birds.

## 2 ASSESSMENT OF NESTING BIRDS

During a preliminary site visit conducted on the 16 December 2020, chance wildlife was noted including the presence of nests. Any chance encounters were noted and photographed using Avenza maps. A follow-up wildlife survey including a bird nesting survey was conducted on April 20, 2021 as this timing was more suitable for bird surveys. The survey entailed non-intrusive methods such as observation of birds, nests and calls. The April 20<sup>th</sup> site visit recorded resident bird species and some early migrants/nesters however may not have included all breeding birds therefore a desktop assessment was conducted to identify potential bird species groups that may use the Project site.

## 3 EXISTING CONDITIONS

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### 3.1.1 DESTOP REVIEW

#### 3.1.1.1 RARE/SENSITIVE WILDLIFE AND ASSOCIATED WILDLIFE HABITAT

Following a review of the Project site characteristics, historical observations and available information sources, it appears that there is minimal potential for rare/sensitive wildlife species to use the Project area. However, the Project overlaps the northern limits of a secured CDC mapped area, identified as Object ID: 38160 (Figure 1), and a request was set to the CDC to clarify if the proposed Project needs to address potential effects on the masked species. The results of this information request was that the project would not interact with the secured species.

Due to the proximity of the Fraser River and forested areas, there is the potential for various bird species to visit the Project area. It is highly unlikely that rare or sensitive bird species inhabited the Project footprint and 100 m buffer due to limited habitat and on-going disturbance. The Provincial *Wildlife Act* provides protection for the eggs and active nests of all birds during breeding season. Section 34 of the *Act* states "A person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests or destroys:

- (a) a bird or its egg;
- (b) the nest of eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl; or
- (c) the nest of a bird not referred to in paragraph(b) when the nest is occupied by a bird or its egg."

By default, protection of nests includes the protection of the trees containing them. Subsections 34(a) and (c) have generally been interpreted to protect the active nests of all birds during breeding season, which can begin in February and continue through August 15. The nests of the six birds listed in subsection (b) of the Provincial *Wildlife Act* are protected regardless of the time of year, or whether or not they are active. At the Federal level the *Migratory Birds Convention Act (MBCA)* (1994) provides similar protection for all migratory birds, during the breeding season in the Lower Mainland which is approximately March 1 to August 31 (Birds Canada, 2020). The majority of bird species not covered under the MBCA are covered under the *Wildlife Act*.



The City of Surrey has an inventory of vegetation communities and their habitat suitability ranking for wildlife based on the habitat type of the mapped polygon (Figure 2). The ecological value was identified as very high, moderate high, moderate, low and very low. The higher end of the rankings was found on the more natural environments including creeks and their riparian areas, and forested parks. The lower valued habitat occurred in rights-of-way and open space parks. The higher ranked habitat suitability polygons occur in the southern portion of the Project area however most of it is located outside the Project footprint.

The City in cooperation with the BC Nature Wildlife Tree Stewardship program maintains a database of bald eagle nests. An eagle nest tree is noted south of the Project area near the Alex Fraser Bridge on the south bank of the Fraser and another on the south bank of the Fraser River across the northern end of Annacis Island. Two former nests were identified at the Project site by the BC Nature Wildlife Tree Stewardship program however the status of the nests was that they were no longer present due to the nests being blown down.

### 3.1.1.2 IMPORTANT BIRD AREAS

The Boundary Bay - Roberts Bank - Sturgeon Bank (Fraser River Estuary) Important Bird Area (IBA BC017) is a large interconnected mix of marine, estuarine, freshwater and agricultural habitats that includes the waters of Sturgeon Bank, between the north and south arms of the Fraser River, and Roberts Bank, south of the south arm of the Fraser River. This IBA is rated as follows: globally significant for Congregatory Species, Waterfowl Concentrations, Colonial Waterbirds/Seabird Concentrations, Shorebird Concentrations; continentally Significant for Congregatory Species; and Nationally Significant for Threatened Species, Congregatory Species, Wading Bird Concentrations. Threats to IBA BC017 associated with the Project would be limited to direct and indirect effects on the aquatic environment associated with construction activities and improved / increased traffic.

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### 3.1.2 SITE VISIT

During the December and April site surveys, two bald eagle nests were observed at or near the Project site (Figure 3A,B). No activity was noted at either nest however a detailed nest watch was not conducted. (Photo 1).



Photo 1: Bald Eagle nest located near the entrance to Fraser Grain Terminal

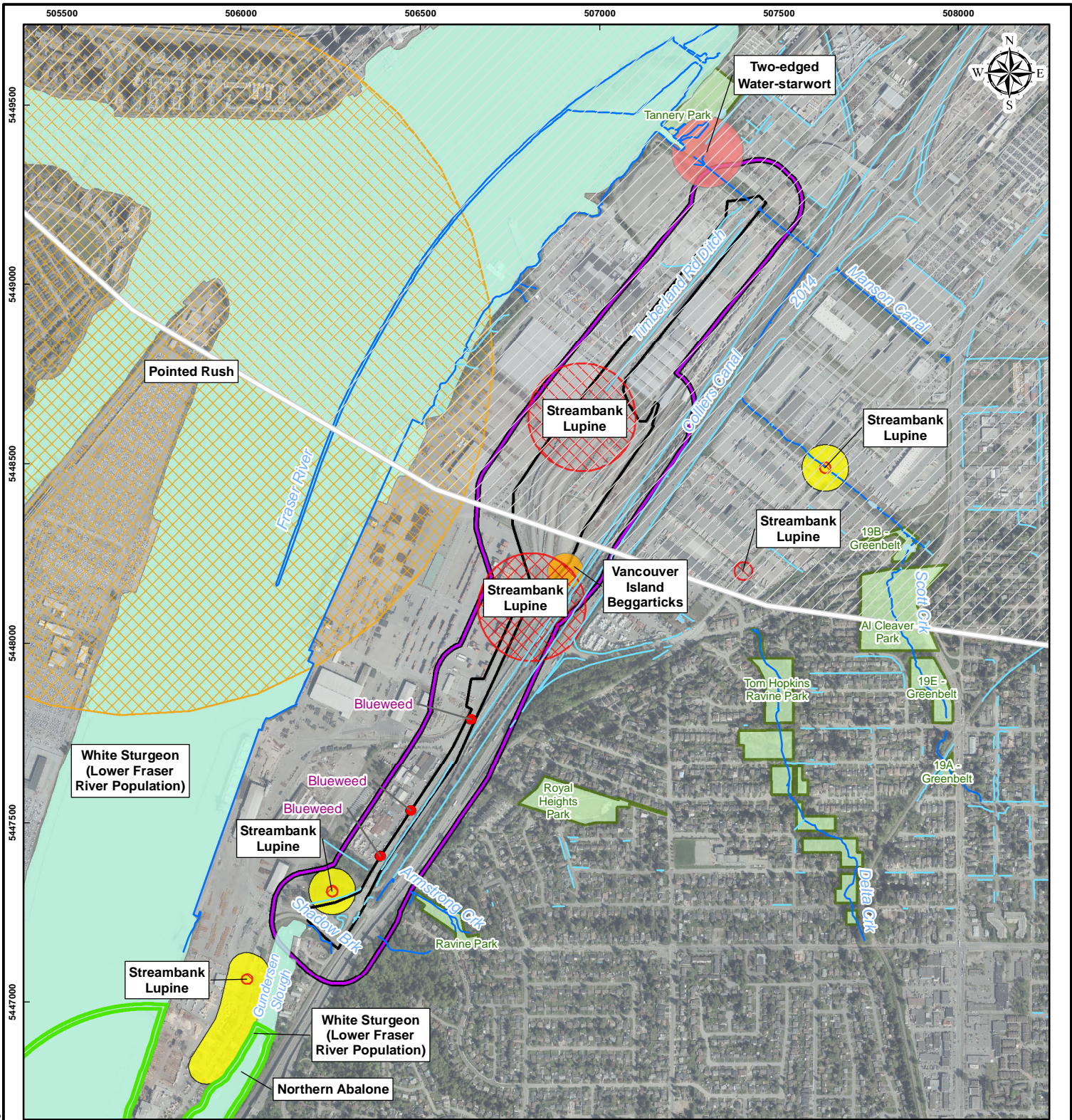


During the April survey, nine species were observed (Table 1). None of the observed species are provincially or federally listed. These species are fairly tolerant of developed and disturbed habitat areas that were found at the Project site. The habitat present consisted mostly of tall shrub structural stage with some small isolated patches of forest. In addition, there was truck traffic throughout the day that contributed a constant source of noise and dust to the nearby habitat areas.

**Table 1 - Bird Species Encountered during April 20, 2021 Survey**

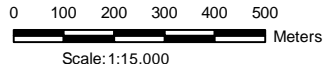
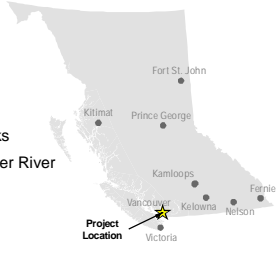
<b>Common Name</b>	<b>Latin Name</b>	<b>Status*</b>	<b>Location</b>
Tree swallow	<i>Tachycineta bicolor</i>	Migratory	Throughout site
Red-winged blackbird	<i>Agelaius phoeniceus</i>	Year-round resident	Along ditch embankments
Northwestern crow	<i>Corvus caurinus</i>	Year-round resident	Throughout site
Killdeer	<i>Charadrius vociferus</i>	Year-round resident	Outside IDC yard
Song sparrow	<i>Melospiza melodia</i>	Year-round resident	Shrubby areas
Pine siskin	<i>Spinus pinus</i>	Year-round resident	Throughout site
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	Year-round resident	Shrubby areas
House sparrow	<i>Passer domesticus</i>	Year-round resident	Shrubby areas
Bald eagle	<i>Haliaeetus leucocephalus</i>	Year-round resident	Throughout site

A pair of killdeer were observed copulating outside the IDC yard in an area of gravel with some herbaceous cover and could use other areas of the Project site where this habitat is present including parking lots and roadsides. This species can also use gravel rooftops for breeding sites. The remainder of the species observed could also use the Project site as a breeding site however would be located within the shrub or forested areas of the Project site. Later migrant species not detected during the survey could also use the gravelly areas, shrub and forested areas of the Project site.



**Legend**

- Populated Place
- IAPP Invasive Plant (Blueweed)
- Ditch
- Creek and River
- ▭ Project Area (100m)
- ▭ Study
- ▭ Parks
- ▭ Streambank Lupine Critical Habitat
- ▭ Waterbody
- ▭ Wetlands
- ▭ CDC Masked Sensitive
- CDC Non Sensitive
- ▨ Pointed Rush
- ▨ Streambank Lupine
- ▨ Two-edged Water-starwort
- ▨ Vancouver Island Beggarticks
- ▨ White Sturgeon (Lower Fraser River Population)
- ▨ DFO Aquatic Species at Risk Distribution 2019
- ▨ Northern Abalone



References:  
 Data BC - BC Catalogue  
 Open Government License  
 (http://www.data.gov.bc.ca/)  
 NRCAN Geogatis  
 Open Government License  
 (http://geogatis.cgdi.gc.ca/)

CLIENT: Vancouver Fraser Port Authority	
PROJECT: Fraser Surrey Port Lands - Transportation Improvements Preliminary Design Services	
TITLE: <b>Rare / Sensitive Species, Critical Habitat and Invasive Species</b>	
DATE: June 11, 2020	PROJECT NO: 20M-00758-00
<b>Figure 1</b>	
GIS FILE: 01-01-004_Enviro_Feature.mxd	
COORDINATE SYSTEM: NAD 1983 UTM Zone 10N	ANALYST: MY
	REVIEWED: SB

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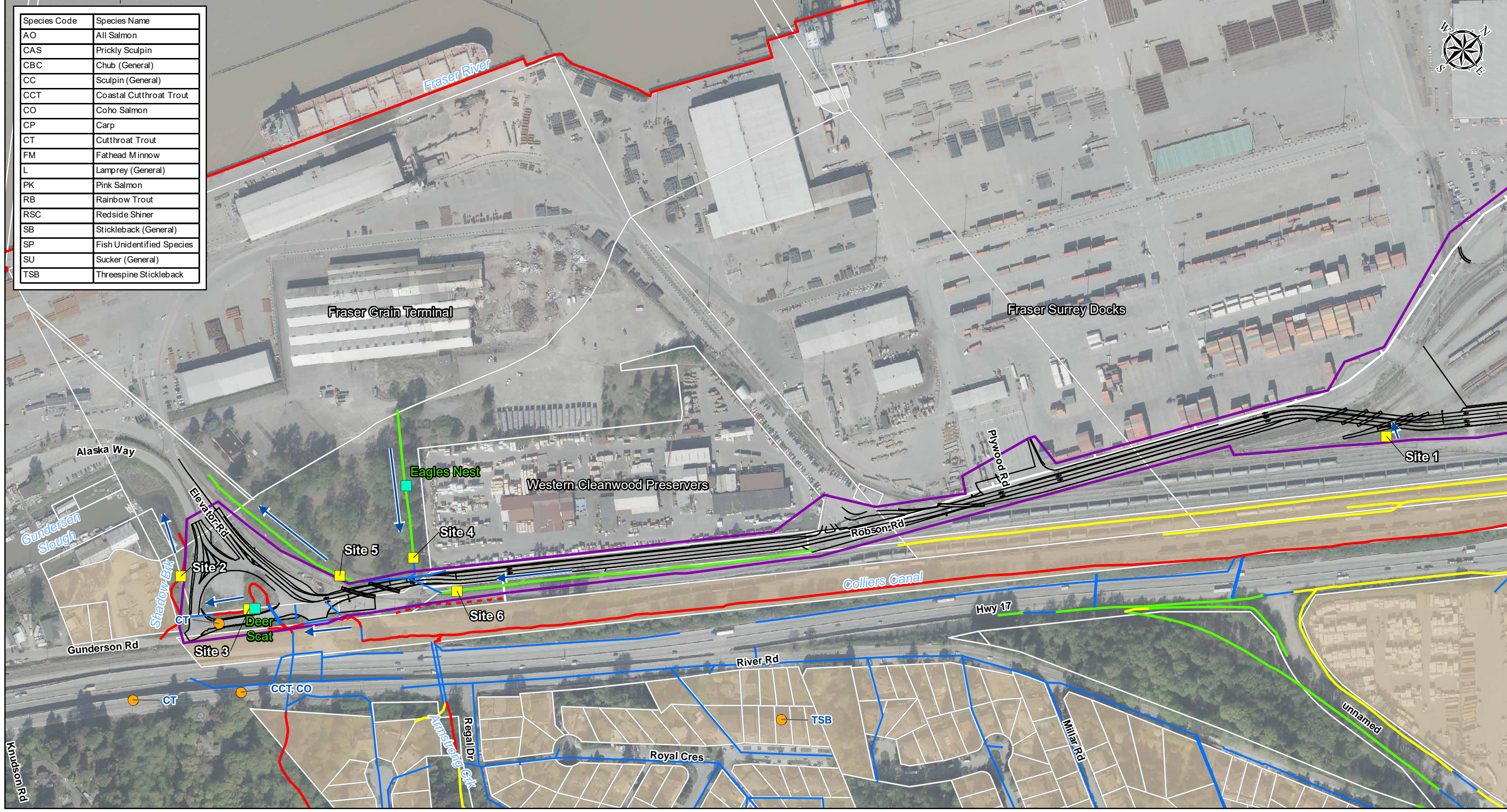
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Species Code	Species Name
AO	All Salmon
CAS	Prickly Sculpin
CBC	Chub (General)
CC	Sculpin (General)
CCT	Coastal Cutthroat Trout
CO	Coho Salmon
CP	Carp
CT	Cutthroat Trout
FM	Fathead Minnow
L	Lamprey (General)
PK	Pink Salmon
RB	Rainbow Trout
RSC	Redside Shiner
SB	Stickleback (General)
SP	Fish Unidentified Species
SU	Sucker (General)
TSB	Threespine Stickleback



- Legend**
- FISS Point
  - Aquatic Site
  - Wildlife Location
  - Flow Direction
  - Drainage Main
  - Parcel
  - Private Lands
  - Project Design Linework
  - Study Area

Watercourse (Fish Classification) - City of Surrey

- A
- AO
- B
- C
- Unknown

Scale: 1:3,500

0 50 100 Meters

Notes: Fish Classification

Class A: Inhabited by fish year-round or potentially inhabited by fish year round. Considered 'streams' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Considered fish habitat as defined by the Federal Fisheries Act

Class B: Provides food/nutrient value to downstream fish habitat. No fish potential present at any time of the year. Considered a 'stream' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Considered fish habitat by the defined by the Federal Fisheries Act

Class C: A water feature that is not considered a 'stream' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Not considered fish habitat as defined by the Federal Fisheries Act. No fish potential present at any time of the year.

References:  
 Data BC - BC Catalogue  
 Open Government License  
 (http://www.data.gov.bc.ca/)  
 NRCAN Geogratis  
 Open Government License  
 (http://geogratis.gc.ca/)

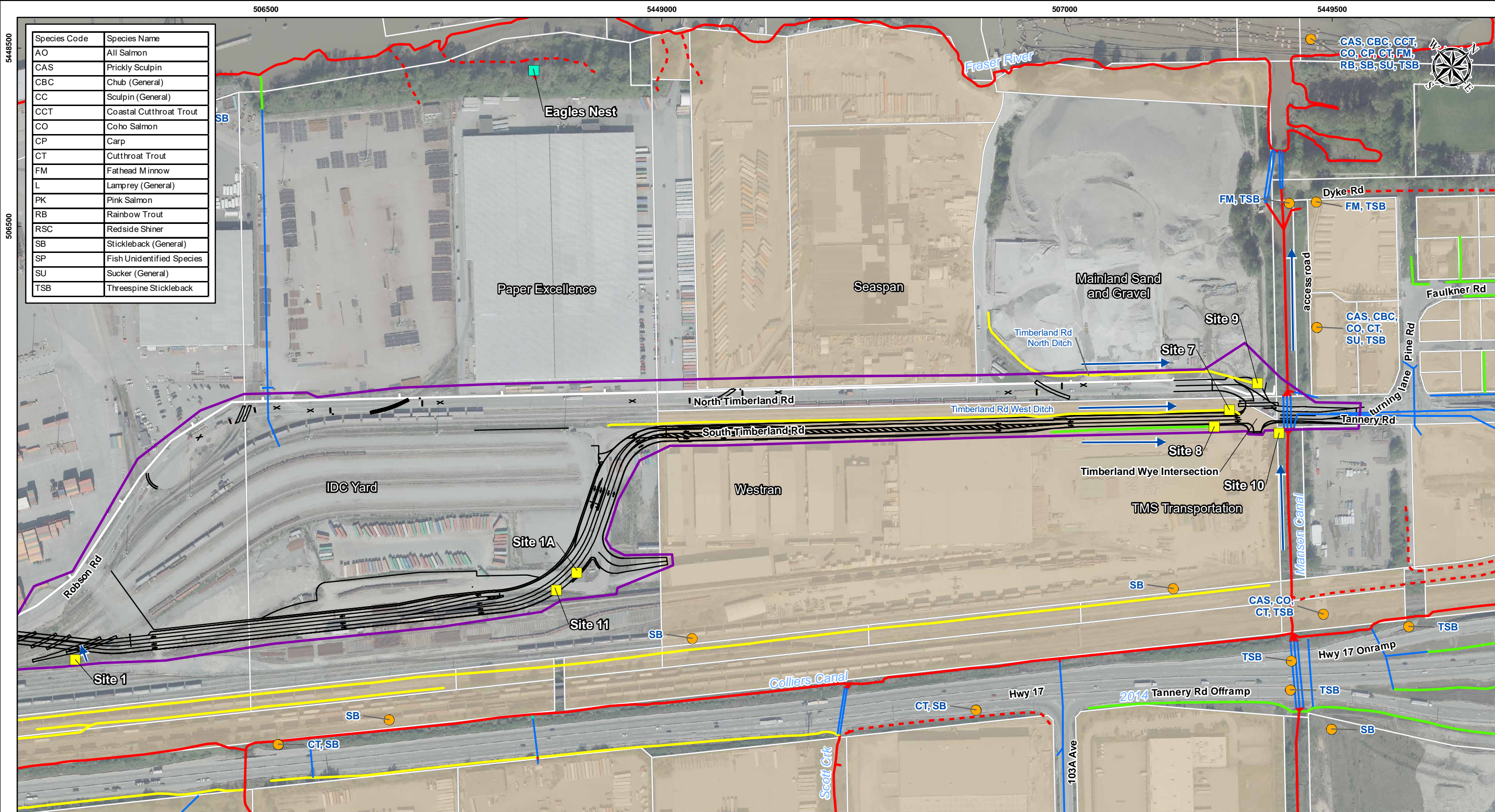


PROJECT:  
 Fraser Surrey Port Lands - Transportation Improvements  
 Preliminary Design Services

TITLE:  
**Project Location and  
 Assessment Area**

CLIENT:  
 PORT of vancouver Vancouver Fraser Port Authority

DATE: May 14, 2021	ANALYST: MY	REVIEWED: RS	<b>Figure 3A</b>
GIS FILE: 02-01-001_Assessment_Area_v2.mxd			
PROJECT NO: 20M-00758-00			
COORDINATE SYSTEM: NAD 1983 UTM Zone 10N			



Species Code	Species Name
AO	All Salmon
CAS	Prickly Sculpin
CBC	Chub (General)
CC	Sculpin (General)
CCT	Coastal Cutthroat Trout
CO	Coho Salmon
CP	Carp
CT	Cutthroat Trout
FM	Fathead Minnow
L	Lamprey (General)
PK	Pink Salmon
RB	Rainbow Trout
RSC	Redside Shiner
SB	Stickleback (General)
SP	Fish Unidentified Species
SU	Sucker (General)
TSB	Threespine Stickleback

- Legend**
- FISS Point
  - Aquatic Site
  - Wildlife Location
  - Flow Direction
  - Drainage Main
  - ▭ Parcel
  - ▭ Private Lands
  - Project Design Linework
  - ▭ Study Area

**Watercourse (Fish Classification) - City of Surrey**

- A
- - - AO
- B
- C
- Unknown

Notes: Fish Classification

Class A: Inhabited by fish year-round or potentially inhabited by fish year round. Considered 'streams' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Considered fish habitat as defined by the Federal Fisheries Act

Class B: Provides food/nutrient value to downstream fish habitat. No fish potential present at any time of the year. Considered a 'stream' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Considered fish habitat by the defined by the Federal Fisheries Act

Class C: A water feature that is not considered a 'stream' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Not considered fish habitat as defined by the Federal Fisheries Act. No fish potential present at any time of the year.

Class A(O): Inhabited by fish primarily during the over-wintering period or potentially inhabited by fish during the over-wintering period with access enhancement. Considered a 'stream' as defined by the Provincial Water Sustainability Act and Riparian Areas Protection Regulation. Considered fish habitat as defined by the Federal Fisheries Act

Scale: 1:3,500

**References:**  
 Data BC - BC Catalogue  
 Open Government License  
 (http://www.data.gov.bc.ca/)  
 NRCAN Geogratis  
 Open Government License  
 (http://geogratis.gc.ca/)



PROJECT:  
 Fraser Surrey Port Lands - Transportation Improvements  
 Preliminary Design Services

TITLE:  
**Project Location and Assessment Area**

CLIENT:  
 PORT of vancouver Vancouver Fraser Port Authority

DATE: May 14, 2021

ANALYST: MY

REVIEWED: RS

**Figure 3B**

GIS FILE:  
 02-01-001\_Assessment\_Area\_v2.mxd

PROJECT NO:  
 20M-00758-00

COORDINATE SYSTEM:  
 NAD 1983 UTM Zone 10N



# 4 POTENTIAL PROJECT EFFECTS AND MITIGATION MEASURES

## 4.1 POTENTIAL EFFECTS AND PROPOSED MITIGATION

### VEGETATION CLEARING TIMING WINDOWS FOR THE PROTECTION OF NESTING

The noise from construction vehicles and clearing of vegetation, including groundwork in minimally vegetated areas, has the potential to result in the mortality of birds nesting in the vicinity of the Project. Clearing of vegetation, including trees and shrubs can also result in the loss of habitat for birds. Where possible, avoid clearing and/or grubbing operations for construction during the regional breeding bird nesting period as defined by Environment and Climate Change Canada and Birds Canada (Birds Canada, 2021) to minimize the risk of any contravention of the *Migratory Birds Convention Act* and *BC Wildlife Act* provisions. A summary of potential effects on bird nest is provided in Table 2, along with proposed mitigation.

If clearing cannot be avoided, then a pre-clearing bird nest survey must be completed by a Qualified Environmental Professional (QEP). Bird nest surveys should be completed within the first 3-4 hours after sunrise and should not be undertaken during periods of inclement weather (heavy rain) or under windy conditions (Beaufort Scale > 2). The QEP must have sufficient experience with bird biology and identification. Survey length will depend on QEPs assessment of habitat and should include an area of 30 m outside of the clearing and grubbing area if applicable. Observed nests that are in good condition must be considered active until an assessment can determine the status. A no work buffer zone will be placed around any active nests and the QEP will determine the set back. The buffer zone will depend on a number of factors including; surrounding vegetative cover, species sensitivity, existing disturbance and the type of construction activity. The survey will occur before any vegetation clearing or ground works are to occur, and vegetation removal or groundwork must initiate within 48 hours of the end of the survey. If an active nest is present, a management plan can be completed to ensure that this nest is not disturbed by the construction.

If project work is to occur around active nests of the following species groups within the project areas a management plan and monitoring will be required:

- For raptors, no active nests within 100 m from the working area;
- Songbirds; no active nests within 50 m from the working area;
- Waterbirds; no active nest within 60 m from the working area.

Bald eagle, peregrine falcon, osprey and great blue heron nests and their nest trees are protected year-round, and a QEP should confirm that these species are not nesting in the areas where vegetation will be removed.

**Table 2 - Summary of potential effects from project activities and their proposed mitigation**

Component	Potential Effect	Mitigation	Residual Effect
Birds	Loss of habitat due to vegetation clearing or groundwork during construction	Avoid ground disturbance where possible and stage clearing areas. Clearly flag all areas that will be undisturbed prior to clearing works. Replant vegetation with native seed mixes and plants.	Loss of 17,46 m <sup>2</sup> of terrestrial area.
	Mortality due to vegetation clearing	Conduct a bird nest surveys prior to construction, by a QEP. Work within the timing windows for birds.	None anticipated if mitigations measures are properly implemented.
	Sensory disturbance from construction vehicles and increased traffic during operations.	A QEP will monitor any active nests prior to construction and during construction to determine if there is a disturbance. Mitigation measures to reduce sensory effects will be implemented.	None anticipated if mitigations measures are properly implemented.





## REFERENCES

Bird Studies Canada. 2021. Important Bird and Biodiversity Areas of Canada, Site ID: BC017 Available at: <https://www.ibacanada.ca/maps/sites/BC017.pdf> and <https://www.ibacanada.ca/site.jsp?siteID=BC017> . Accessed June 2021.

Birds Canada. 2021. Nesting Query Calendar. Available at: <https://www.birdscanada.org/apps/rnest/index.jsp> . Accessed June 2021.