



**Katzie First Nation**

# **ENVIRONMENTAL MANAGEMENT PLAN**

**Part 1: Management Framework**

**Version 1 – March 2020**

Version	Approved By	Date Approved	Comments
1.0			

---



# TABLE OF CONTENTS

<b>1.0</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Purpose.....	2
1.2	Scope.....	2
1.3	Organizational Structure .....	3
<b>2.0</b>	<b>Setting the Context.....</b>	<b>5</b>
2.1	Q̓í'c̓əy' .....	5
2.2	Regional and Local Context.....	9
2.3	Katzie Land Use, Servicing & Infrastructure.....	9
2.4	The Physical and Natural Environment .....	33
2.4.1	Topography.....	33
2.4.2	Biogeoclimatic Features.....	33
2.4.3	Water Features.....	49
2.4.4	Vegetation .....	49
2.4.5	Wildlife & Fish.....	49
2.5	Legislative Environment.....	50
<b>3.0</b>	<b>Methodology.....</b>	<b>52</b>
3.1	Literature Review .....	52
3.2	Site Visits.....	53
3.3	Community Engagement .....	53
3.4	Targeted Meetings.....	54
3.5	Environmental Management Priorities.....	54
<b>4.0</b>	<b>Implementation &amp; Administration .....</b>	<b>55</b>
4.1	Roles & Responsibilities .....	55
4.2	Schedule.....	57
4.3	Document Control.....	57
4.4	Amendments & Reviews.....	57
4.4.1	Amendments .....	57
4.4.2	Full Review .....	58
<b>5.0</b>	<b>Conditions for Success .....</b>	<b>59</b>
5.1	Effective Data Management & Tracking .....	59
5.2	Policy & Law Development .....	60
5.3	Education & Awareness .....	62
5.4	Capacity Building & Training.....	62
5.5	External Supports .....	63
<b>6.0</b>	<b>References .....</b>	<b>65</b>

## Figures

Figure 1-1. Katzie traditional territory .....	7
Figure 1-2. Overview of Katzie 1 .....	11
Figure 1-3. Overview of Katzie 2 .....	15
Figure 1-4. Overview of Katzie 3 .....	19
Figure 1-5. Overview of Katzie 4 .....	22
Figure 1-6. Overview of Katzie 5 .....	27
Figure 1-7. Overview of Barnston Drive East.....	29
Figure 1-8. Overview of Camp Lakewood.....	31
Figure 1-9. Topography, Floodplain, and Hydrology of Katzie 1 .....	35
Figure 1-10. Topography, Floodplain, and Hydrology of Katzie 2 .....	37
Figure 1-11. Topography, Floodplain, and Hydrology of Katzie 3 .....	39
Figure 1-12. Topography, Floodplain, and Hydrology of Katzie 4 .....	41
Figure 1-13. Topography, Floodplain, and Hydrology of Katzie 5 .....	43
Figure 1-14. Topography, Floodplain, and Hydrology of Barnston Drive East.....	45
Figure 1-15. Topography, Floodplain, and Hydrology of Camp Lakewood.....	47

## Tables

Table 1-1. Roles and responsibilities for EMP implementation and maintenance .....	55
--	----

## Appendices

Appendix 1-A	Overview of Federal & Provincial Environmental Legislation
Appendix 1-B	Reference First Nation Laws





## 1.0 INTRODUCTION

Katzie First Nation (Katzie) has developed this Environmental Management Plan (EMP) to support us in honouring our environmental responsibilities under the *Framework Agreement on First Nations Land Management (Framework Agreement)*. Under the *Framework Agreement*, land administration-related sections of the *Indian Act* no longer apply and Katzie has assumed responsibility for our reserve lands in terms of land and environmental management. The foundation for our land governance system is established through our Land Code, which replaces the land management provisions of the *Indian Act* and forms the basic laws on Katzie reserve lands.

With the responsibility for land and environmental management comes liability for our lands and what happens on them. The *Framework Agreement* requires Katzie to establish an Environmental Protection (EP) Regime to enable us to protect the health of our environment and our people and manage our liability risk. This EMP is a foundational part of Katzie's EP Regime. It serves to provide a holistic perspective in terms of environmental issues and management needs on Katzie lands and land holdings. It also sets the stage for other aspects of Katzie's EP Regime, including Katzie laws, policies, and administrative processes. It is intended to be visionary, goal-oriented, and based on the aspirations of both present and future community members. It is also intended to be complementary to the Katzie Land Use and Comprehensive Community Plans to support a holistic yet integrated approach to community planning.

On March 29th, 2017, our members voted "Yes" to a community Land Code. The Indian Act has long enforced restrictions to our way of life. Through the ratification of the Land Code, 34 land-related limitations are avoided. This is of great importance as it brings us closer to rightfully governing our lands through environmental stewardship, and ultimately closer to cultural and economic self-sufficiency. Our people are stewards of the land. Creating a safe environment ensures that our connection to nature remains strong. Preserving our watershed (trees, plants, the Fraser River, other water sources, the air and all its natural inhabitants) for future generations is important as it is deeply connected to our cultural roots.

*-Katzie Comprehensive Community Plan*

## 1.1 Purpose

The purpose of the EMP is to inform and guide Katzie in terms of identifying and developing strategies to address existing environmental issues on Katzie lands and land holdings, and identifying laws, policies, and protocols to minimize the potential for future environmental issues. Specifically, the EMP serves to:

- Describe current land uses, environmental features, and existing environmental issues or challenges on Katzie lands and land holdings;
- Identify community environmental management priorities and associated goals and objectives;
- Identify strategies and actions to support the goals and objectives;
- Establish environmental policies and procedures based on best management practices to prevent or minimize future environmental impacts on Katzie lands and land holdings;
- Clarify roles and responsibilities related to environmental management, as well as environmental planning and reporting procedures;
- Increase environmental awareness in the community; and
- Protect Katzie lands and their environmental features for future generations.

The EMP not only establishes long-term direction for environmental management on Katzie lands and land holdings but also identifies immediate environmental issues and strategies and actions to address them.

## 1.2 Scope

For the purpose of this EMP, **KATZIE LANDS** refer to Katzie reserves:

- Katzie Reserve 1 (Katzie 1)
- Katzie Reserve 2 (Katzie 2)
- Katzie Reserve 3 (Katzie 3)
- Katzie Reserve 4 (Katzie 4)
- Katzie Reserve 5 (Katzie 5)

The authority of the EMP lies with Katzie reserve lands. However, given that environmental features and issues are often complex and span jurisdictional areas and communities, Katzie leadership and the Katzie Lands Department aim to work collaboratively and respectfully with local municipal, regional, provincial, and federal bodies and land developers.

Katzie also holds two fee simple lots that have been included in the EMP<sup>1</sup>: Barnston Drive East in Surrey and Camp Lakewood in Maple Ridge, referred to as **KATZIE LAND HOLDINGS**. The EMP and Katzie laws and policies are not technically applicable to these lots since these are not considered reserve lands. However, Katzie also has liability risks in terms of potential adverse impacts on these lots, and effective environmental management and an understanding of relevant and applicable provincial laws and municipal bylaws is important to manage these risks. For these reasons, considerations for these lots in terms of relevant laws and bylaws and best environmental management practices are also included in the EMP. If Katzie chooses to add these lots to their reserve lands (through the Addition to Reserve process) in the future, then Katzie laws and the EMP and associated policies will apply to these lots as well.

---

<sup>1</sup> Katzie holds two additional fee simple lots (Lots 6 Chapel and Lot 7 Pub) at Osprey Village, near Katzie 1. At the time of EMP development, it was decided these lots would not be included in the plan; they will be included in the next amendment to the plan.

## 1.3 Organizational Structure

### Part 1: Environmental Management Framework

The following document is Part 1: Environmental Management Framework and the first of three components of the EMP. This component is intended to be internal and set the stage for the EMP by providing:

- 1) The current environmental setting on Katzie reserve lands and land holdings;
- 2) The approach used to develop the EMP series and associated environmental management priorities;
- 3) Key considerations in terms of conditions for success; and
- 4) A roadmap for implementation and administration of the EMP.

### Part 2: Component Plan Series

The accompanying Part 2: Component Plans provides individual EMPs based on the environmental management priorities identified in Part 1. Each individual EMP in the series provides a high-level overview of the current environmental context for the priority area and identifies: the goals and objectives for the priority area; relevant legislation, standards and best practices; and strategies and action items to support the goals and objectives for the priority area.

This component of the EMP is meant to inform and guide Katzie planning and operations with respect to environmental management now and in the future. It is intended to be an internal document used to guide Katzie actions, work plans, and operational planning.

### Part 3: Environmental Policies & Operating Procedures

The last component of the EMP is Part 3: Environmental Policies and Operating Procedures, which provides an overview of Katzie policies and operating procedures related to land and environmental management. This component of the EMP is meant to inform and guide activities of Katzie community members and any developers on Katzie lands and land holdings that have the potential to negatively impact the environment and the health of our people. It is intended to be the publically available component of the EMP.

Additional supporting documents have been provided as appendices. Hyperlinks to documents and references have been provided throughout the EMP, where possible, for convenience.









## 2.0 SETTING THE CONTEXT

### 2.1 Qí'cá'y

Qí'cá'y, the traditional territory of Katzie First Nation, is a vast and resource rich area that extends south from the headwaters of Pitt River to encompass Pitt Lake, Pitt River, portions of the Fraser River, and an area surrounding Boundary Bay. Qí'cá'y includes Alouette Lake, Rolley Lake, portions of Fort Langley and Hazelmore to the East, Pinecone Burke Provincial Park and all tributaries of Pitt River system to the north. Qí'cá'y includes the north shore of the Fraser River's South Arm, inland reaches of Boundary Bay, and portions of what is now Surrey, Delta, White Rock, and Cloverdale to the south and west (Katzie First Nation, 2007; [Figure 1-1](#)).

At least 10 family groups were living in Qí'cá'y prior to settler arrival. Main village sites were located at Munro Creek, Sturgeon Slough, and several sites along the Alouette River. During spring, summer, and fall months, Katzie people journeyed to gather resources throughout Qí'cá'y while living in houses and temporary shelters made from 'tule' mats. At least three main winter villages of cedar plank 'long houses' were present as late as the 1800s; one of these was located at the south end of Pitt Lake (now Katzie 4), another at what is now called Port Hammond (near Katzie 1), and the third was located directly across the Fraser River (now Katzie 2) in present day Langley (Katzie First Nation, 2017).

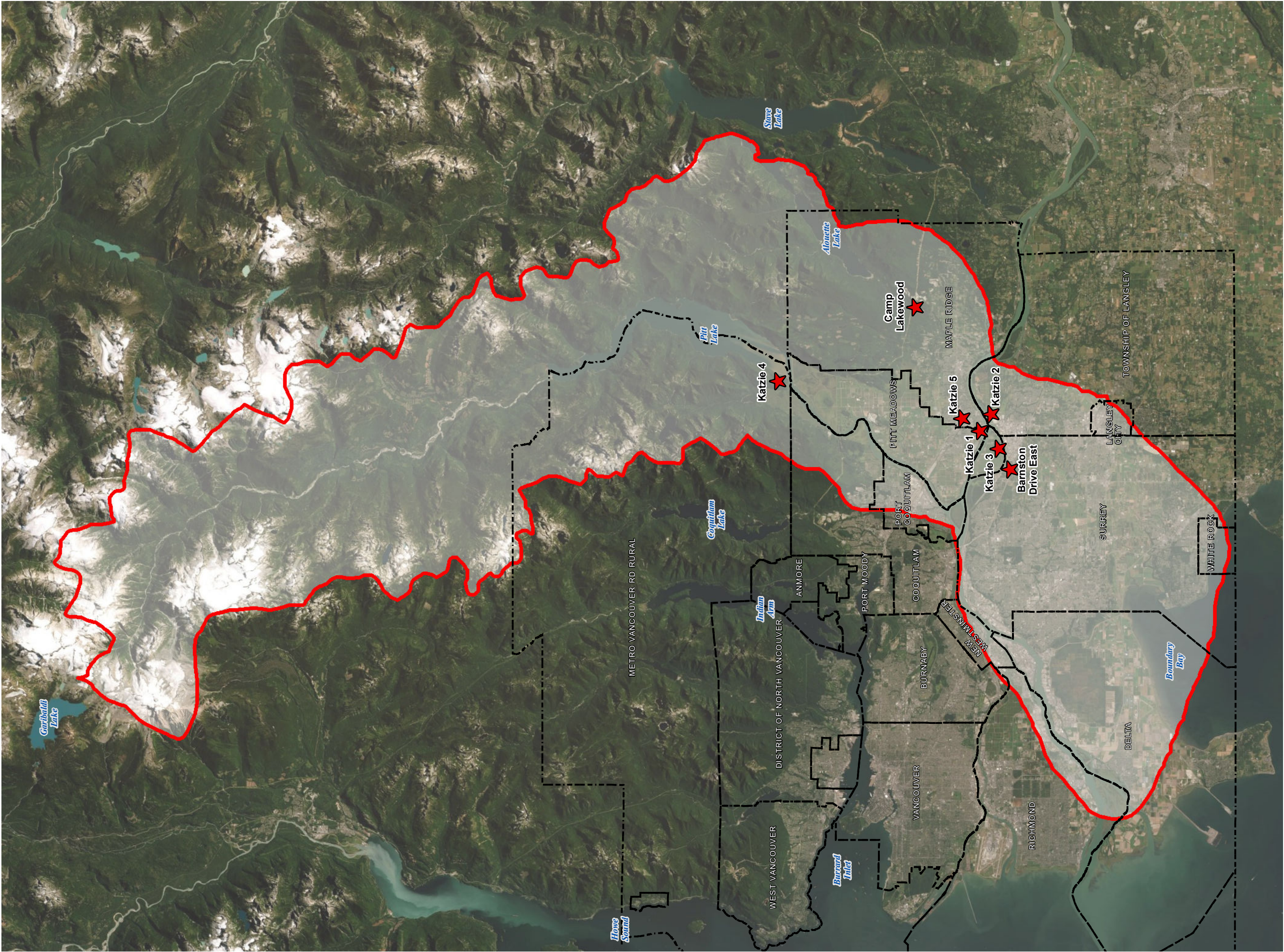
Katzie people are Coast Salish people who speak a downriver dialect of the Halq'eméylem language. The name "Katzie" is an Anglicization of qí'cá'y, which is the name of the village on the north bank of the Fraser River, near the current site of Port Hammond. It means "the land of the moss" (Katzie First Nation, 2007).

Katzie people believe good stewardship of the land and waters is based upon a deep and holistic approach to nature that embodies the inseparability of human and ecosystem health. Our oral histories say that our territory was created for the Katzie people, to manage the resources within it for the benefit of both the Katzie people and others. We have been bestowed a great responsibility for respectful stewardship. For Katzie, as for many indigenous communities, good stewardship of the land and its resources is a sacred duty (Katzie First Nation, 2017).









Katzie First Nation  
Environmental  
Management Plan

Figure 1-1. Katzie Traditional Territory



MAP DRAWING INFORMATION:  
ESRI Base Maps, Dillon Consulting,  
Metro Vancouver, DataBC

MAP CREATED BY: RB, CV, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

SCALE 1:315,000

0 2.25 4.5 9 13.5 Kilometers



- LEGEND**
- KATZIE RESERVE & FEE SIMPLE LANDS
  - KATZIE TRADITIONAL TERRITORY
  - MUNICIPAL

PROJECT: 18-7439 STATUS: FINAL DATE: 2019-07-05







Katzie peoples' first contact with Europeans is believed to have occurred with Simon Fraser's exploration of the Fraser River in 1809. In 1827, the Hudson's Bay Company established Fort Langley. Katzie First Nation's reserve lands were created during administration of Governor Douglas between 1861 and 1863. The sizes of Katzie's reserves were later significantly reduced and settler populations eventually took over territorial lands, the title to which was never ceded (Katzie First Nation, 2007). Today, Katzie's reserve lands consist of Katzie Reserves 1 through 5, as described in the [Section 2.3](#) below.

Oral history tells the story of how Katzie first learned to fish for eulachon (oolichan) in the Fraser River. Swaneset's wife showed Katzie how to make rakes from the hard wood and thorns of black hawthorn (*Crataegus douglasii*), and how to use the rakes to harvest oolichan as they gathered to spawn. One day, she opened one half of a gift box and out flew a flock of sea gulls. On the next day, she poured the contents from the other half of the box into the Fraser River, whereupon the contents turned into spawning oolichan (Katzie First Nation, 2017).

In 1994, Katzie entered into Treaty Negotiations with the Federal and Provincial government, and as of 2019 Katzie is taking a new approach that includes an incremental approach to self-government through negotiations with both the Federal and Provincial governments coordinated by the Treaty Commission. To date, topics such as wildlife, culture, heritage, environmental management, parks, and protected areas have been discussed in depth. On-going negotiation topics include community engagement, resource management, administration of justice and more.

## 2.2 Regional and Local Context

Katzie lands and land holdings are situated in the Metro Vancouver Regional District (Metro Vancouver), referring to lands that are west of the City of Abbotsford in the southwestern portion of the province. Metro Vancouver is the local government authority for the area and encompasses 21 municipalities, one Electoral Area and one Treaty First Nation. Katzie lands and land holdings are within the City of Pitt Meadows, Langley Township, City of Surrey, City of Maple Ridge, and Electoral Area A ([Figure 1-1](#)).

As of December 2018, Katzie has a registered population of 592, with approximately 51% living on Katzie lands (Statistics Canada, 2018). Katzie has a total reserve land base of approximately 335 hectares (ha) and an additional land holdings (i.e., Barnston Drive East, Camp Lakewood, Osprey Village<sup>2</sup>) base of approximately 16.2 ha.

Many lots on Katzie lands are under Certificates of Possession (CP), as described in the following section. It is important to note that the lands held under CPs are subject to the Katzie Land Code, the Katzie EMP, Federal laws, and any Katzie laws and policies.

## 2.3 Katzie Land Use, Servicing & Infrastructure

The following provides a high-level overview of Katzie lands and land holdings in terms of current and adjacent land uses, as well as servicing and associated infrastructure. For further details on land uses, servicing and infrastructure, as well as potential future uses, refer to the [KATZIE LAND USE PLAN \(2019\)](#).

---

<sup>2</sup> As noted previously in Section 1.2, the Osprey Village lots were not included in the EMP. It is expected they will be included in the next version of this EMP.

## Katzie 1



**KATZIE 1 (44.1 HA)** is located along the northern shore of the Fraser River and within the City of Pitt Meadows. It is the most populated of Katzie lands (approximately 60 residences) and hosts most of the facilities and administrative services for the community, primarily in the southwestern portion of the reserve. Commercial and industrial activities have or are currently operating in the northern and southeastern portions of the reserve. There are 49 active registered lots and 82 active CPs associated with Katzie 1 (Figure 1-2).

### SERVICING & INFRASTRUCTURE

- **Water & Sewer** – Servicing agreement with City of Pitt Meadows (January 2016)
- **Electricity & Heating** – Overhead electrical; buildings are generally heated with natural gas or electric heating but some homes use wood burning stoves or pellet stoves
- **Solid Waste** – Biweekly curbside garbage, recycling and compost pick up via private contractor; 8 large garbage bins and 1 large green bin for cardboard present year round and emptied as needed
- **Stormwater** – Open drainage channels, culverts at driveways, several lawn basins with flow to channels via piped leads, and 4 outfalls to the Fraser River (Urban Systems, 2015)
- **Emergency Services** – Fire hydrants present, fire services agreement with City of Pitt Meadows (January 2016)

**SURROUNDING LAND USES** include newer residential (Osprey Village) to the west and north, and light industrial uses to the east (as well as the Golden Ears Bridge). The reserve is bounded by the Fraser River to the south.







Katzie First Nation  
Environmental  
Management Plan

Figure I-2. Overview of Katzie I

**LEGEND**

**ZONING**

AGRICULTURAL

INSTITUTIONAL

COMMERCIAL

INDUSTRIAL

RESIDENTIAL

GREENSPACE & ENVIRONMENTAL AREAS

**BOUNDARIES**

KATZIE I

CERTIFICATES OF POSSESSION

LOT

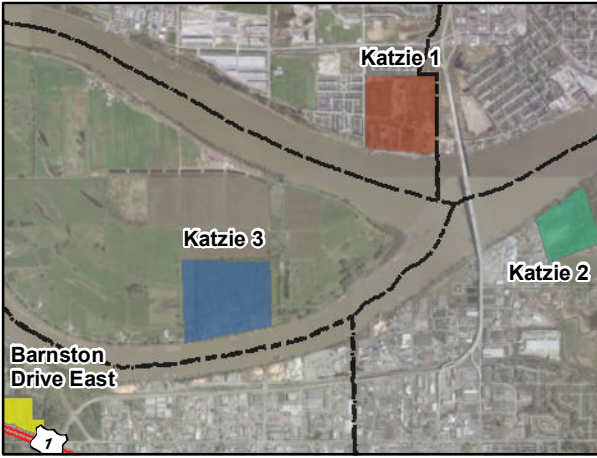
MUNICIPAL

**TRANSPORTATION**

ROAD

HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.

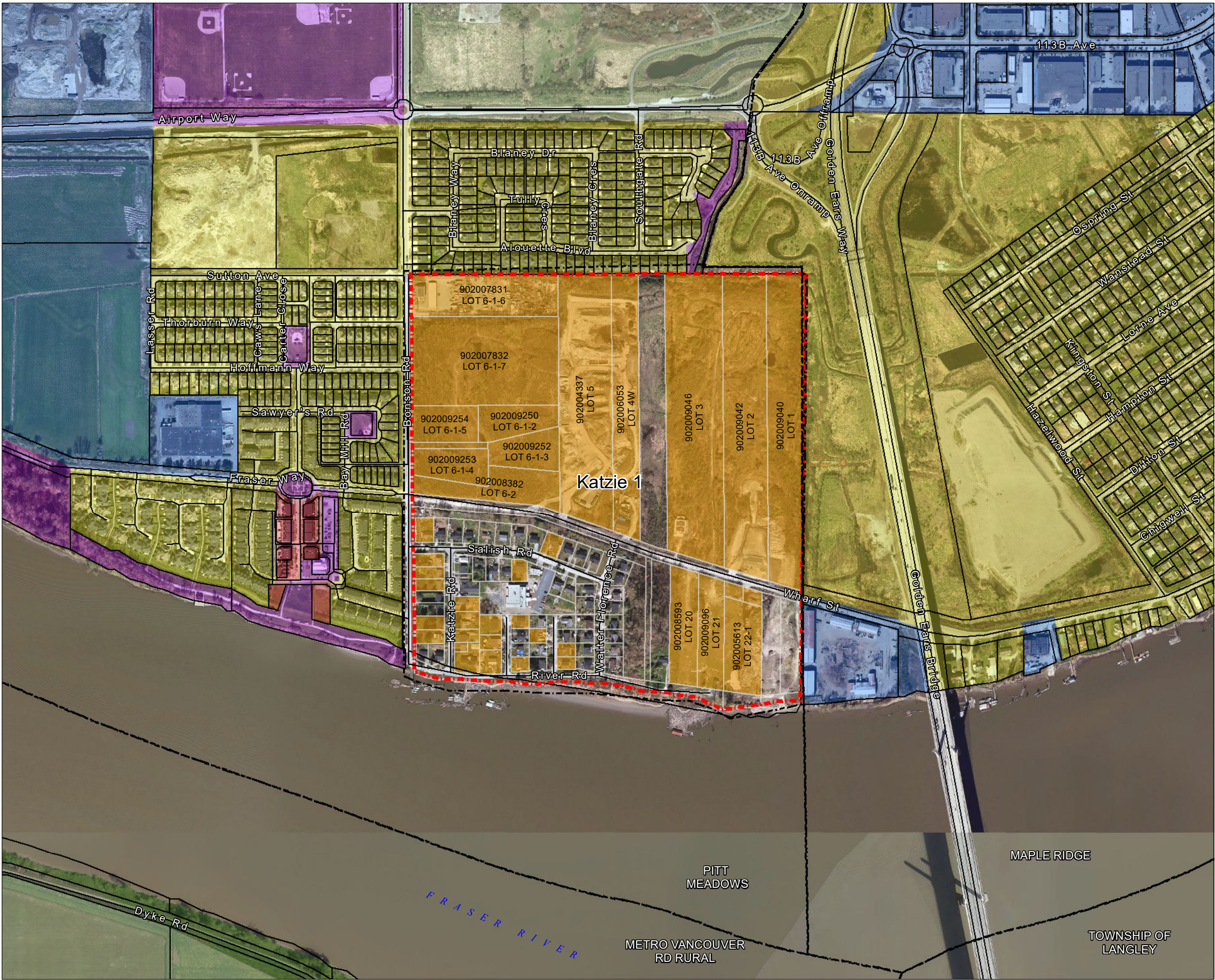


MAP DRAWING INFORMATION:  
ESRI Basemaps, DATABC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge, City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08











**KATZIE 2 (23.1 HA)** is located along the southern shore of the Fraser River, upstream (east) of Katzie 1, and within the Township of Langley. It consists of a small residential community (~14 residences) on the northern portion and undeveloped land on the southern portion, bisected by Yorkson Creek. There is one active registered lot and one active CP associated with Katzie 2 (Figure 1-3).

## SERVICING & INFRASTRUCTURE

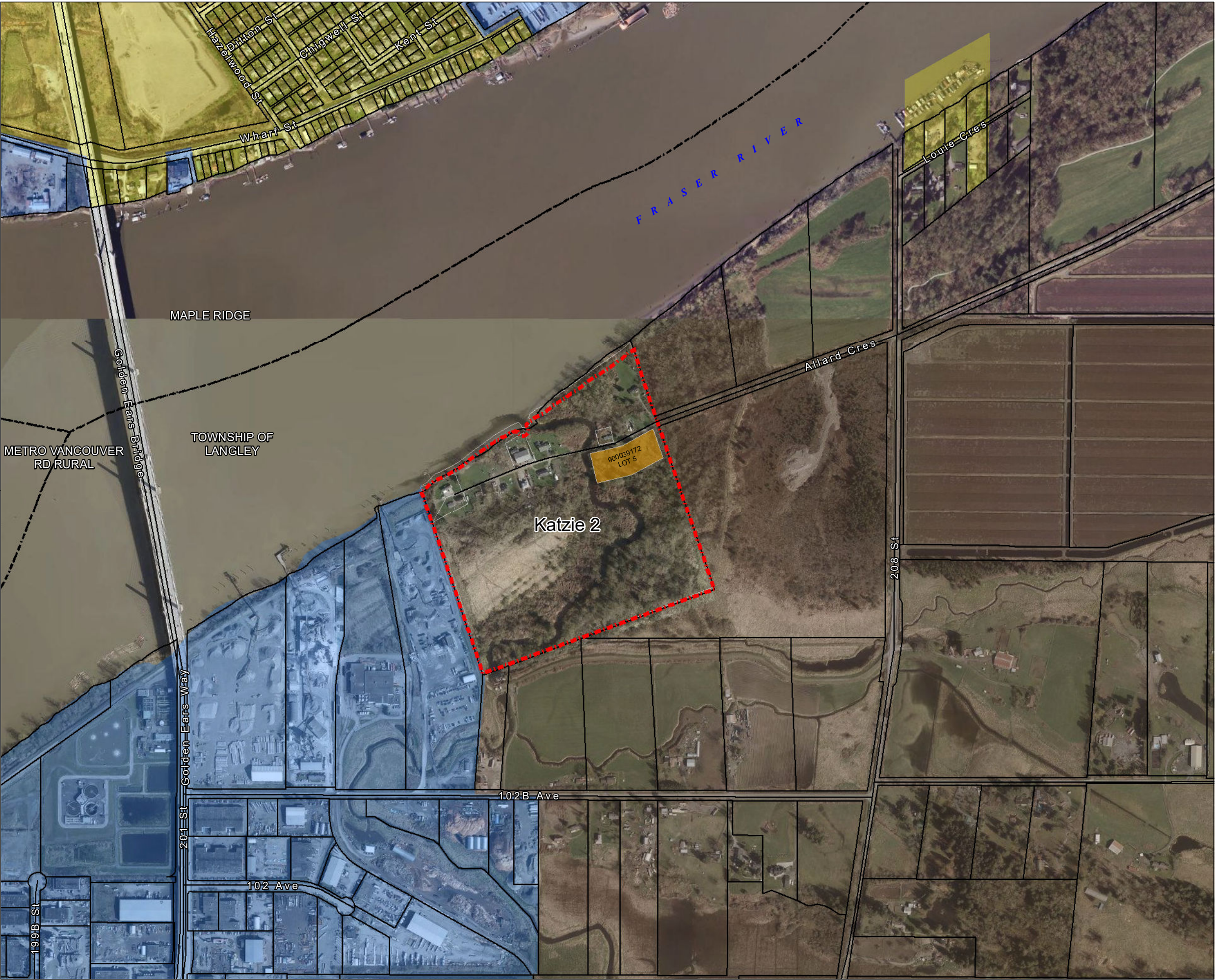
- **Water & Sewer** – Servicing agreement with Township of Langley (March 2016)
- **Electricity & Heating** – Overhead electrical; buildings are generally heated by propane or electric heating but some homes use wood burning stoves or pellet stoves
- **Solid Waste** – Biweekly curbside garbage, recycling and compost pick up via private contractor
- **Stormwater** – Ground infiltration or overland surface flow into the Fraser River via swales and land contouring
- **Emergency Services** – Fire hydrants present

**SURROUNDING LAND USES** include rural and agricultural uses to the east and south (including Agricultural Land Reserve (ALR) land), and industrial uses immediately to the west. The land to the south is cleared and presently used for farming; the land to the east along Yorkson creek is not currently used for agriculture and is heavily vegetated, with a couple of residences along Allard Crescent. Immediately west of Katzie 2 is a cement plant. A number of other heavy industrial operations are located between Katzie 2 and the Golden Ears Bridge. The reserve is bounded by the Fraser River to the north.









FILE LOCATION: G:\GIS\2018\187439 Katzie EMP\MXD\July 5\188155 Katzie Surrounding Zoning\_K2\_LU\_&\_COP.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-3. Overview of Katzie 2

**LEGEND**

**ZONING**

- INDUSTRIAL
- RESIDENTIAL
- RURAL

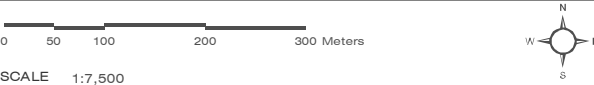
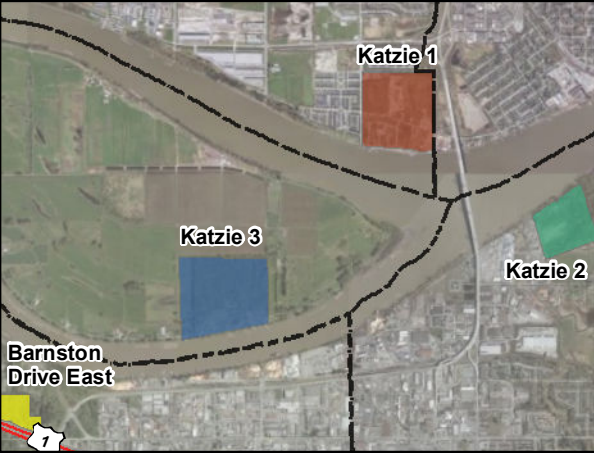
**BOUNDARIES**

- KATZIE 2
- CERTIFICATES OF POSSESSION
- LOT
- MUNICIPAL

**TRANSPORTATION**

- ROAD
- HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.



MAP DRAWING INFORMATION:  
ESRI Basemaps, DATABC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge, City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08









**KATZIE 3 (54.6 HA)** is located on the southern shore of Barnston Island, downstream (southwest) of Katzie 1 and within Electoral Area A of Metro Vancouver. It consists of a small residential community (~20 residences) on the southernmost portion and primarily undeveloped, vegetated land (largely treed) throughout the rest of the reserve. There are 44 active registered lots and 32 active CPs associated with Katzie 3 ([Figure 1-4](#)).

## SERVICING & INFRASTRUCTURE

- **Water** – Servicing agreement with City of Surrey and Vancouver Port Authority (October 2012)
- **Electricity & Heating** – Overhead electrical; buildings are generally heated by propane or electric heating
- **Sewer** – Individual septic systems (a mix of raised and below ground systems)
- **Solid Waste** – Biweekly curbside garbage, recycling and compost pick up via private contractor; several communal garbage and cardboard bins also available year round and emptied as needed
- **Stormwater** – Ground infiltration or overland surface flow into the Fraser River via swales and land contouring
- **Emergency Services** – Fire hydrants present with firefighting kits strategically places nearby

**SURROUNDING LAND USES** are primarily agricultural as the reserve is surrounding by ALR land to the east, north and west. This rural farming community has approximately 100 residents living on island in addition to the 49 residents on reserve (Statistics Canada, 2018). The reserve is bounded by the Fraser River (Parson's Channel) to the south; several sawmills and a crushed stone supplier is located on the other side of the channel.



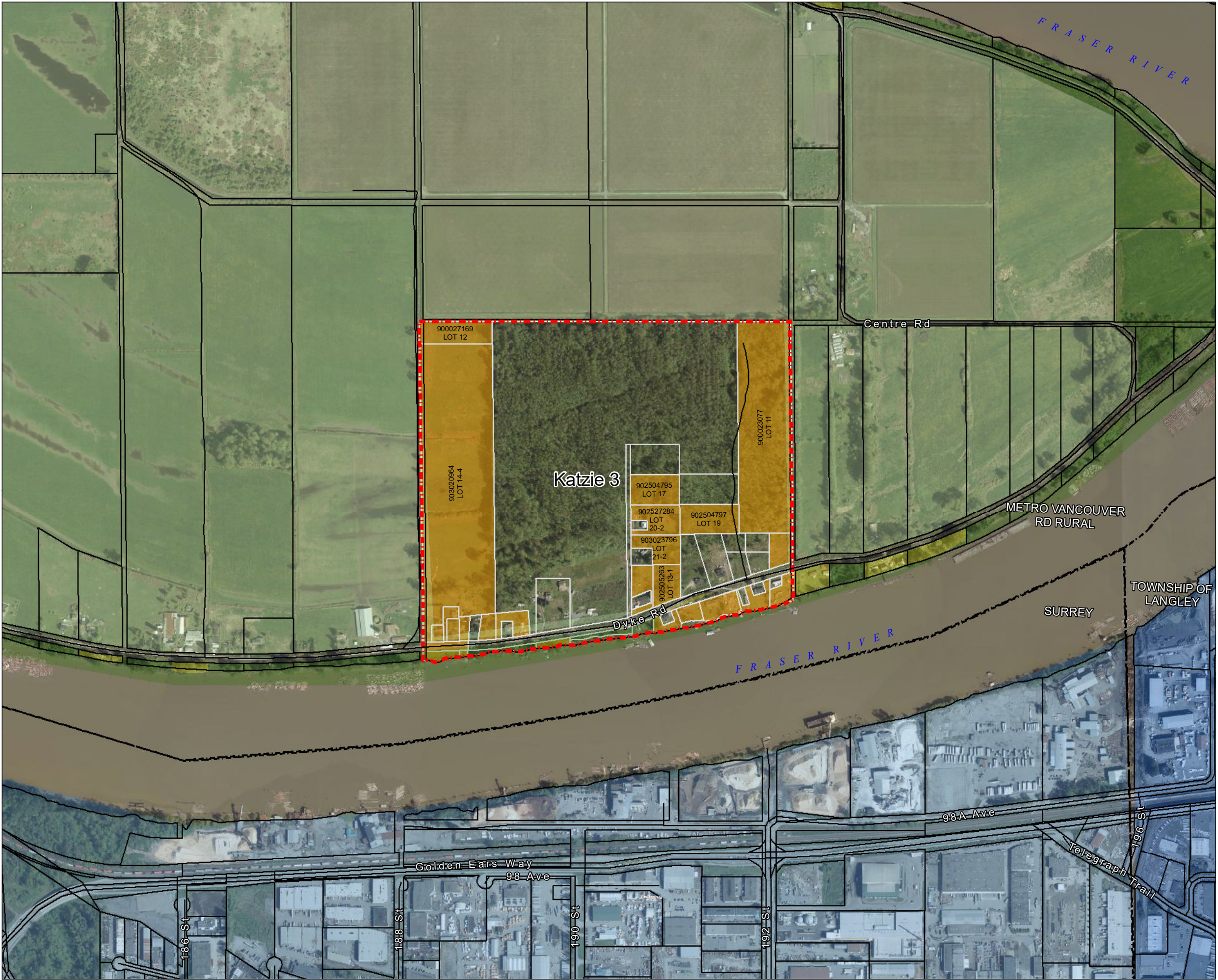


64 K

Tetōten  
Community  
Centre







Katzie First Nation  
Environmental  
Management Plan

Figure 1-4. Overview of Katzie 3

**LEGEND**

**ZONING**

- AGRICULTURAL
- INDUSTRIAL
- RESIDENTIAL
- GREENSPACE & ENVIRONMENTAL AREAS

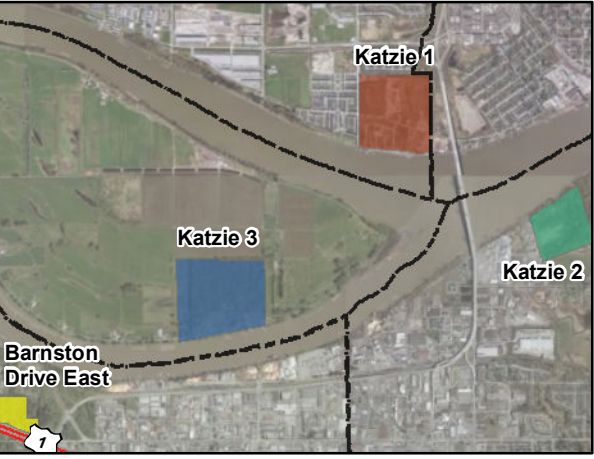
**BOUNDARIES**

- KATZIE 3
- CERTIFICATES OF POSSESSION
- LOT
- MUNICIPAL

**TRANSPORTATION**

- ROAD
- HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.



MAP DRAWING INFORMATION:  
ESRI Basemaps, DATARC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge, City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08







## Katzie 4



**KATZIE 4 (214 HA)** is located along the southwestern portion of Pitt Lake and within Electoral Area A of Metro Vancouver (Figure 1-5). The majority of land is undeveloped except for the southeastern portion which was leased out for 25 years for 28 recreational cabins until 2003; many cabins were abandoned or demolished. Katzie Wilderness Cabins operated for several years beginning in 2006; however, for various reasons a decision was made not to renew the lease. Approximately 16 cabins in various states remain. The reserve is now used for spiritual pursuits and is only accessible by way of boat, canoe, or kayak. There are 143 active registered lots (including 75 strata lots) and no CPs associated with Katzie 4 (Figure 1-5).

### SERVICING & INFRASTRUCTURE

- **Water** – No servicing or water wells
- **Electricity & Heating** – No servicing or infrastructure
- **Sewer** – No servicing; cabins generally used pit toilets but piped sewage also reported
- **Solid Waste** – No servicing
- **Stormwater** – Overland surface flow into Pitt Lake and Widgeon Creek
- **Emergency Services** – No servicing or infrastructure

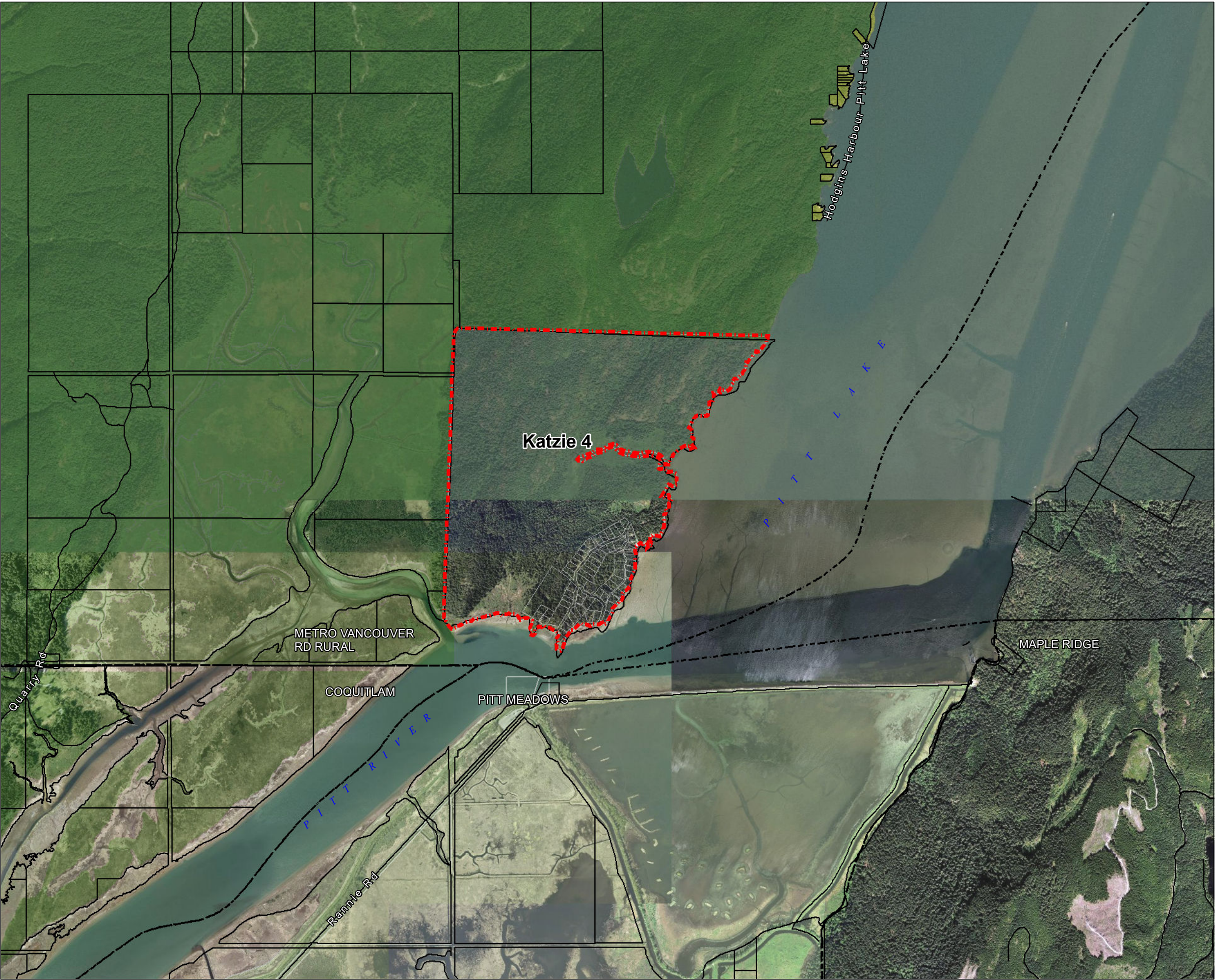
**SURROUNDING LAND USES** are primarily undeveloped wildlands that have been identified as conservation-recreation use areas (Metro Vancouver, 2017). The reserve is bounded by Pitt Lake to the east and the Pitt River to the south.











Katzie First Nation  
Environmental  
Management Plan

Figure 1-5. Overview of Katzie 4

LEGEND  
ZONING

- AGRICULTURAL
- GREENSPACE & ENVIRONMENTAL AREAS
- RESIDENTIAL

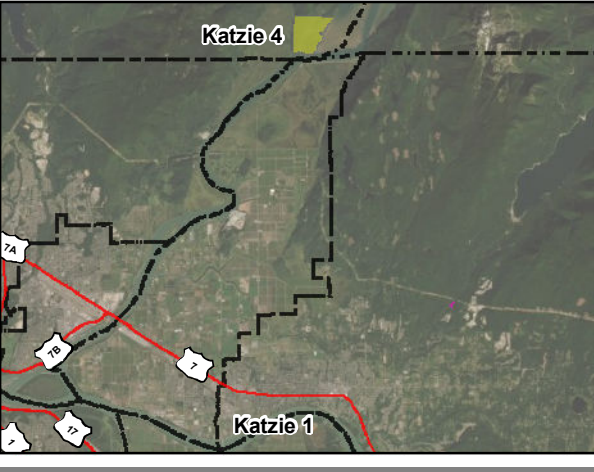
BOUNDARIES

- KATZIE 4
- CERTIFICATES OF POSSESSION
- LOT
- MUNICIPAL

TRANSPORTATION

- ROAD
- HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.



0 100 200 400 600 800 Meters  
SCALE 1:21,000

MAP DRAWING INFORMATION:  
ESRI Basemaps, DATABC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge, City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



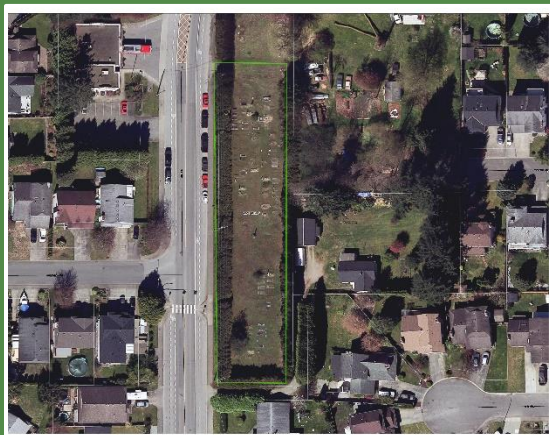
PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08





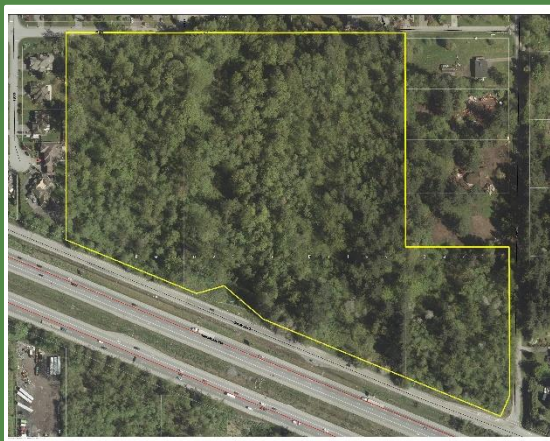


## Katzie 5



**KATZIE 5 (0.4 HA)** is located approximately 2 km northeast of Katzie 1 and within the City of Maple Ridge ([Figure 1-6](#)). The reserve serves as Katzie’s community cemetery. There is no servicing or infrastructure, and it is surrounded by residential lands and uses. There are no lots or CPs associated with Katzie 5.

## Barnston Drive East



**BARNSTON DRIVE EAST (9.9 HA)** is a fee simple and undeveloped property located within the City of Surrey ([Figure 1-7](#)). There is no servicing or infrastructure, and it is surrounded by residential lands and uses. Current land use designations, as indicated in the [Abbey Ridge Local Area Plan](#) (City of Surrey, 2017), include urban and medium density residential on the eastern and western portions of the reserve, and future neighbourhood park in the central portion, with potential road alignments on both the eastern and western portions.

## Camp Lakewood

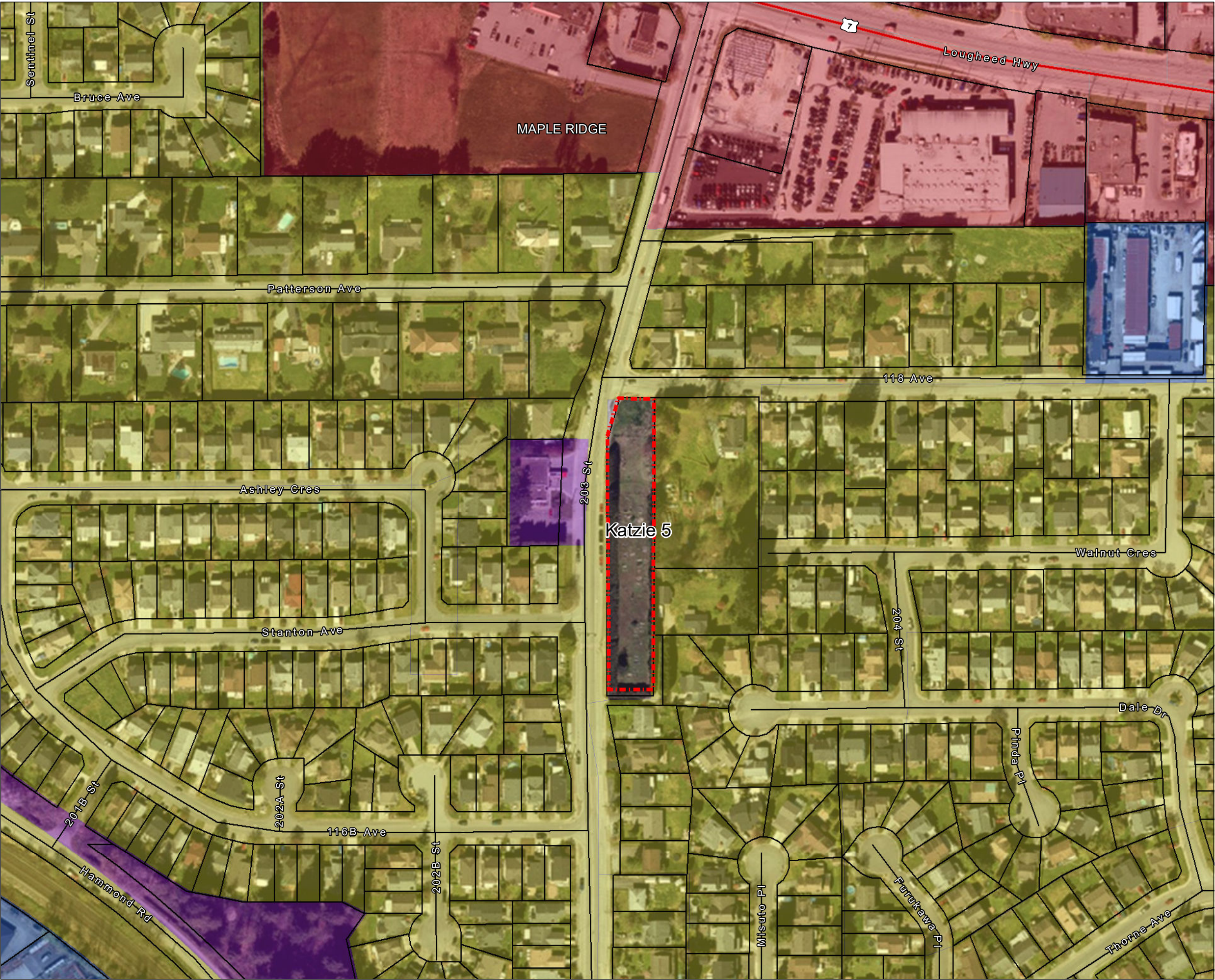


**CAMP LAKEWOOD (6.1 HA)** is a fee simple property located within the northeast portion of the City of Maple Ridge ([Figure 1-8](#)). Although it is mostly undeveloped, two buildings in disrepair remain on the property with associated septic and well infrastructure. There are no current uses but it is zoned as institutional (P-3 Children’s) as indicated in the [Generalized Land Use Plan](#) (City of Maple Ridge, 2014). The property is bounded by the Alouette River to the west and surrounded by undeveloped land but is near the Fraser Regional Correctional Centre and the Alouette Correctional Centre for Women.









FILE LOCATION: G:\GIS\2018\187439 Katzie EMP\MXD\July 5\188155 Katzie Surrounding Zoning\_K5\_LU\_&\_COP.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-6. Overview of Katzie 5

**LEGEND**

**ZONING**

- INSTITUTIONAL
- COMMERCIAL
- INDUSTRIAL
- RESIDENTIAL

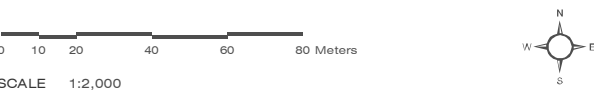
**BOUNDARIES**

- KATZIE 5
- CERTIFICATES OF POSSESSION
- LOT
- MUNICIPAL

**TRANSPORTATION**

- ROAD
- HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.



MAP DRAWING INFORMATION:  
ESRI Basemaps, DATARC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge,  
City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

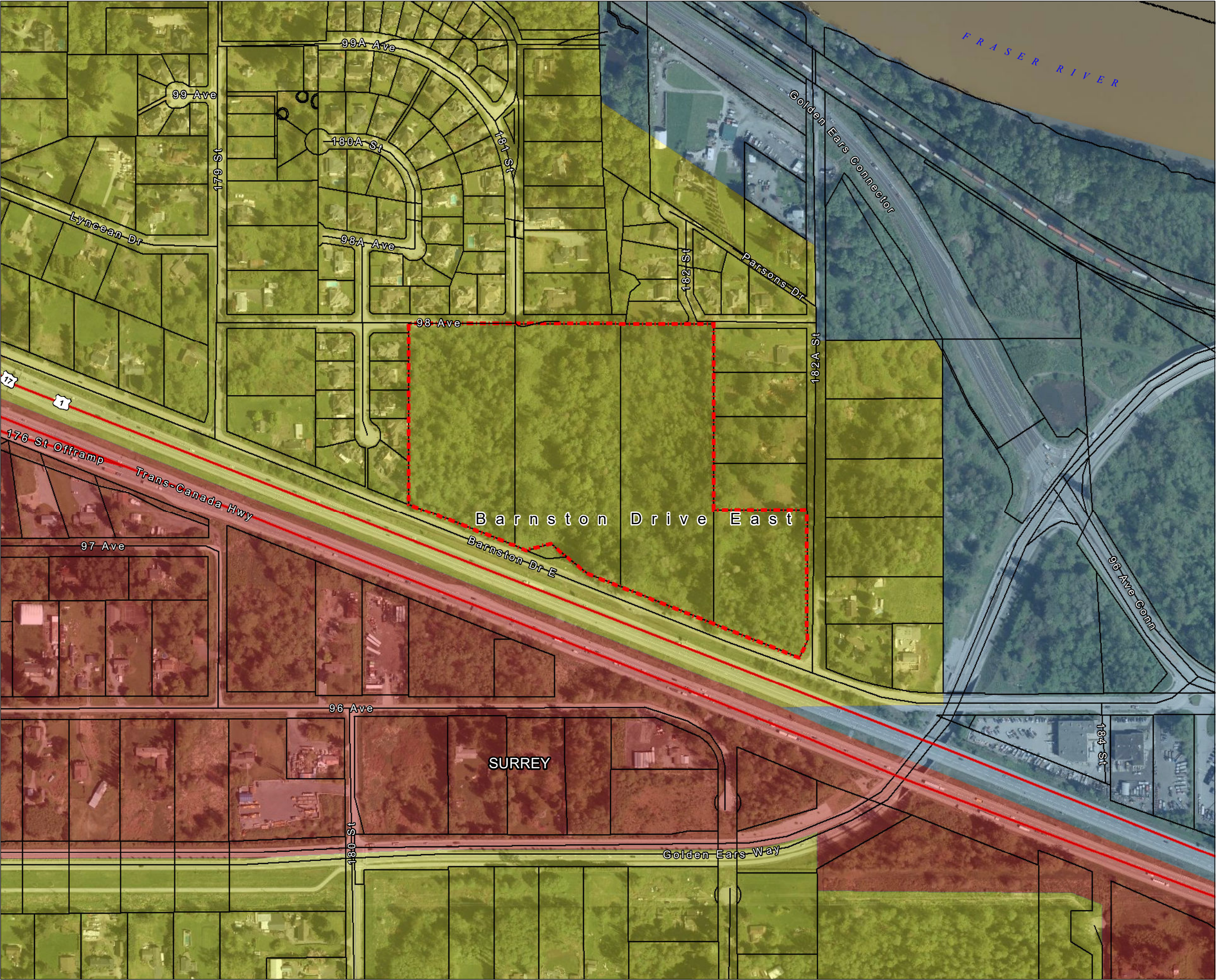


PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08









Katzie First Nation  
Environmental  
Management Plan

Figure 1-7. Overview of Barnston Drive East

LEGEND

ZONING

- COMMERCIAL
- INDUSTRIAL
- RESIDENTIAL

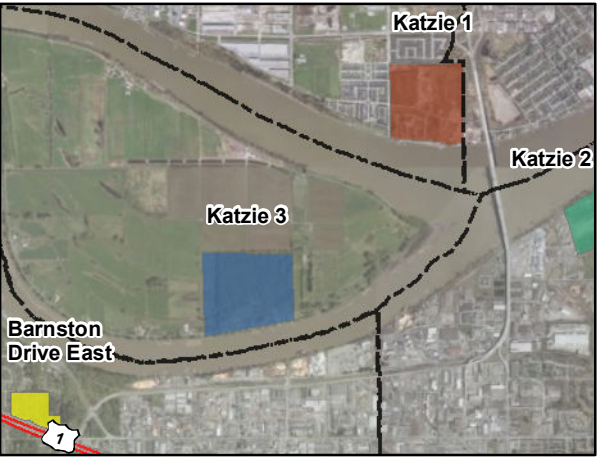
BOUNDARIES

- BARNSTON DRIVE EAST
- CERTIFICATES OF POSSESSION
- LOT
- MUNICIPAL

TRANSPORTATION

- ROAD
- HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.



0 25 50 100 150 Meters  
SCALE 1:4,000

MAP DRAWING INFORMATION:  
ESRI Basemaps, DATAC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge, City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

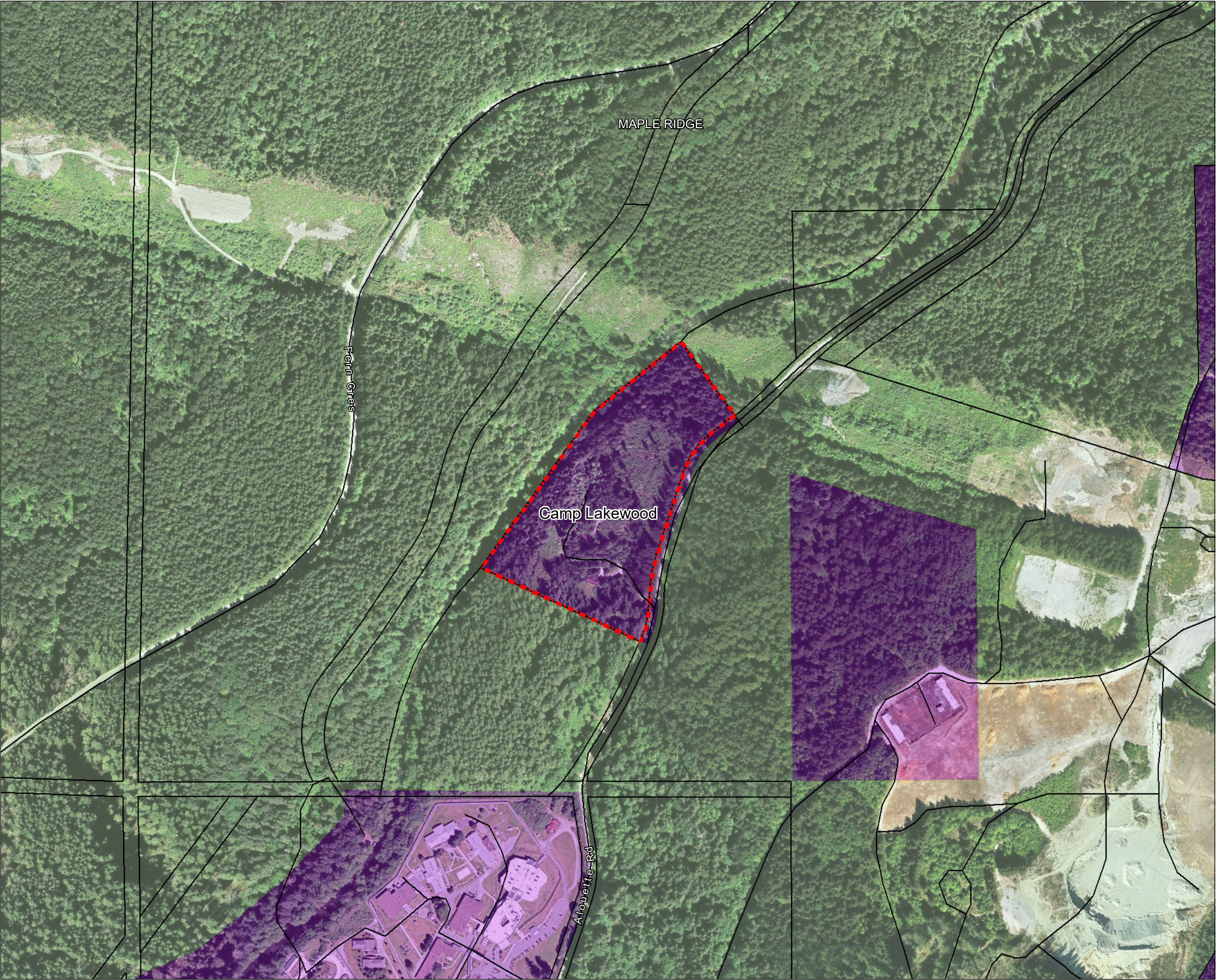


PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08









FILE LOCATION: G:\GIS\2018\187439 Katzie EMP\MXD\July 5\188155 Katzie Surrounding Zoning\_CampLakeWd\_LU\_&\_COP.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-8. Overview of Camp Lakewood

**LEGEND**

**ZONING**

- AGRICULTURAL
- INSTITUTIONAL

**BOUNDARIES**

- CAMP LAKEWOOD
- CERTIFICATES OF POSSESSION
- LOT
- MUNICIPAL

**TRANSPORTATION**

- ROAD
- HIGHWAY

Municipal Zoning designations for Maple Ridge and Pitt Meadows have been adapted for this map.



0 25 50 100 150 200 Meters  
SCALE 1:5,000

MAP DRAWING INFORMATION:  
ESRI Basemaps, DATARC, INAC, Dillon Consulting Limited, Katzie First Nation, City of Maple Ridge, City of Surrey, City of Coquitlam, City of Port Coquitlam, City of Langley, City of Pitt Meadows.

MAP CREATED BY: RBB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 18-7439  
STATUS: FINAL  
DATE: 2019-07-08







## 2.4 The Physical and Natural Environment

### 2.4.1 Topography

Katzie lands and land holdings are relatively flat with gentle slopes towards the Fraser and Alouette Rivers and Pitt Lake. Elevation changes for Katzie 1, Katzie 2, Katzie 3, Katzie 5, Barnston Drive East and Camp Lakewood are 10 – 20 m comparison ([Figure 1-9](#) to [Figure 1-11](#), and [Figure 1-13](#) to [Figure 1-15](#)), with the exception of areas subject to infilling and an embankment that surrounds Katzie 2 on the west and south sides. Elevation changes for Katzie 4 vary from sea level to 300 m above sea level ([Figure 1-12](#)). Although the majority of Katzie 4 is on the relatively flat floodplain of Pitt Lake, there is a moderate slope up to the northwest toward Coquitlam Mountain and Pinecone Burke (Columbia Environmental, 2015).

Katzie 1, Katzie 2, Katzie 3, and Katzie 5 are located in the Fraser River floodplain and Katzie 4 is located in the Pitt Lake floodplain ([Figure 1-9](#) to [Figure 1-12](#)). Barnston Drive East and Camp Lakewood are not located within a known floodplain.

### 2.4.2 Biogeoclimatic Features

Katzie lands and land holdings are located in the Lower Fraser Valley region of British Columbia, which is within the Coastal Western Hemlock zone (CWH), and specifically within the Eastern Very Dry Maritime (CWHxm) subzone. The CWH occurs at low to middle elevations mostly west of the coastal mountains, along the coast of British Columbia. The subzone typically experiences wet, mild winters and warm, dry summers. The regional climate for Katzie lands and land holdings are primarily affected by the close proximity to the Fraser River and Pacific Ocean.

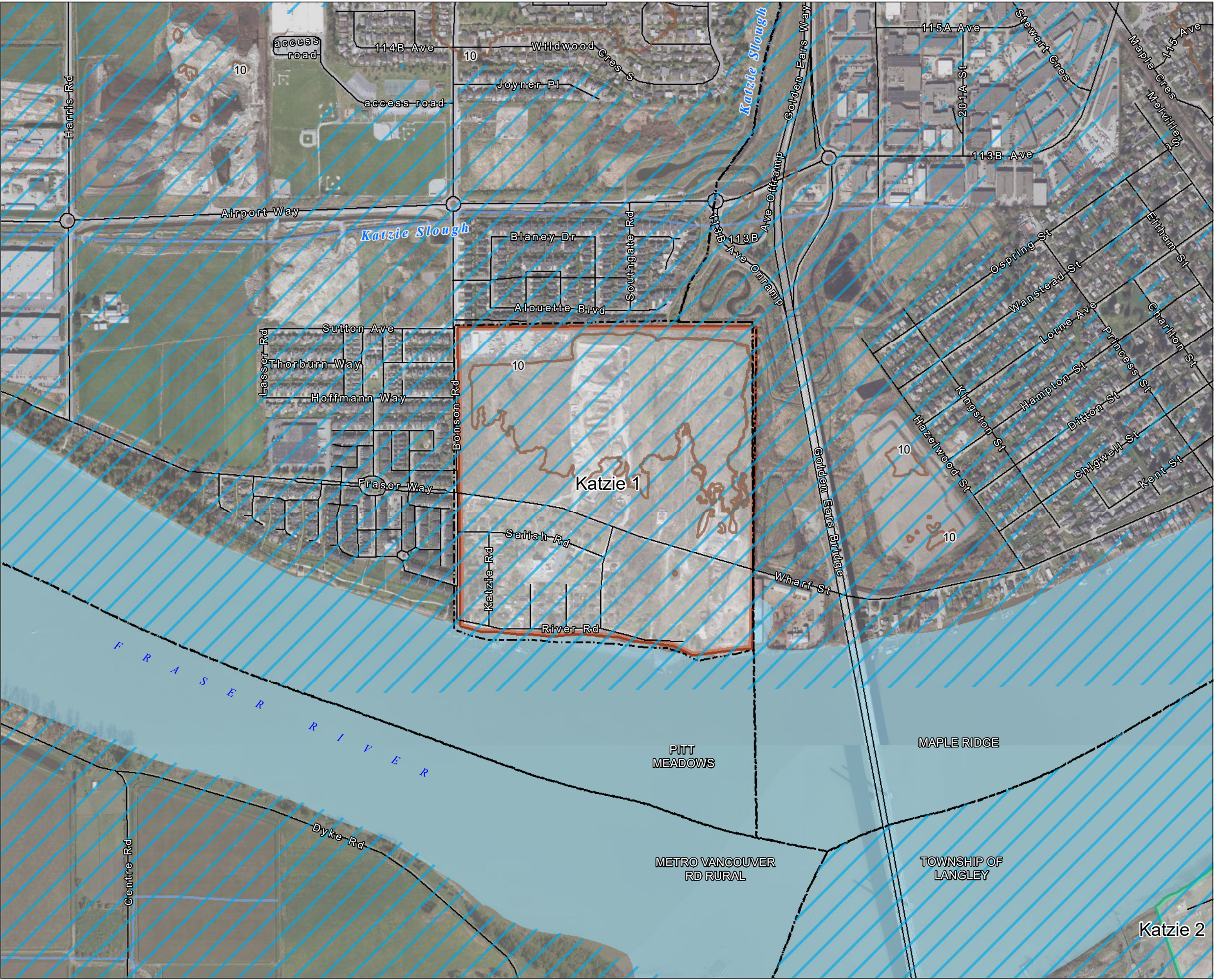
With higher-altitude forests, large valley-bottom wetlands and two major rivers, **Qícəy** is one of the most ecologically productive and biodiverse areas in the Fraser River valley. Prior to dyking by early European settlers beginning in 1890, the lowland floodplain areas of the Fraser River Valley had regular inundated freshwater wetlands that were transected by deep, wide sloughs. The Pitt Polder wetland was one of the largest freshwater wetlands in the region. It was a complex mosaic of marshes, swamps, and bogs transected by navigable sloughs. This area was comprised of the dynamic floodplains of the Alouette, Pitt and Fraser rivers, which flooded each spring during freshet.

The vast wetlands provided abundant water birds and wapato (*Sagittaria latifolia*), tule (*Schoenoplectus acutus*), and bog cranberry (*Vaccinium oxycoccos*). Katzie territory was famous among neighbouring groups for their cranberries, and in the fall many outsiders came to gather them. However, the Katzie were possibly the most renowned among other groups as the most famous source of Indian potatoes the “Wapato” (Katzie First Nation, 2007). The mountain forests surrounding Pitt Lake also provided cedar, deer, elk, black bear, and mountain goat, while harbour seals, white sturgeon, salmon and oolichan were harvested sustainably from Pitt Lake and from the Fraser, Pitt, and Alouette rivers (Katzie First Nation, 2017).









Katzie First Nation  
Environmental  
Management Plan

Figure 1-9. Topography, Floodplain, and Hydrology  
Katzie 1

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- KATZIE 1
- MUNICIPAL

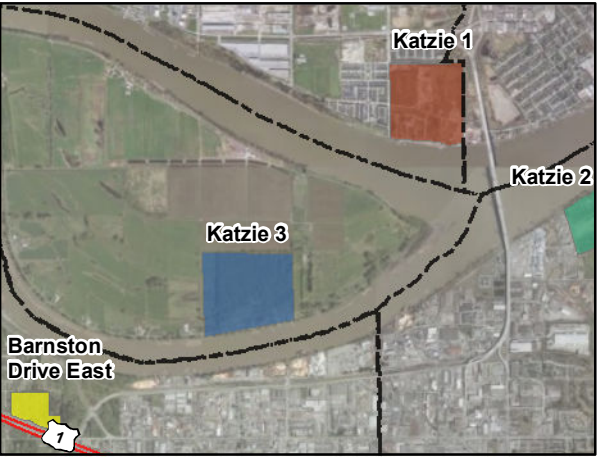
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



0 25 50 100 150 200 Meters  
SCALE 1:8,000



MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

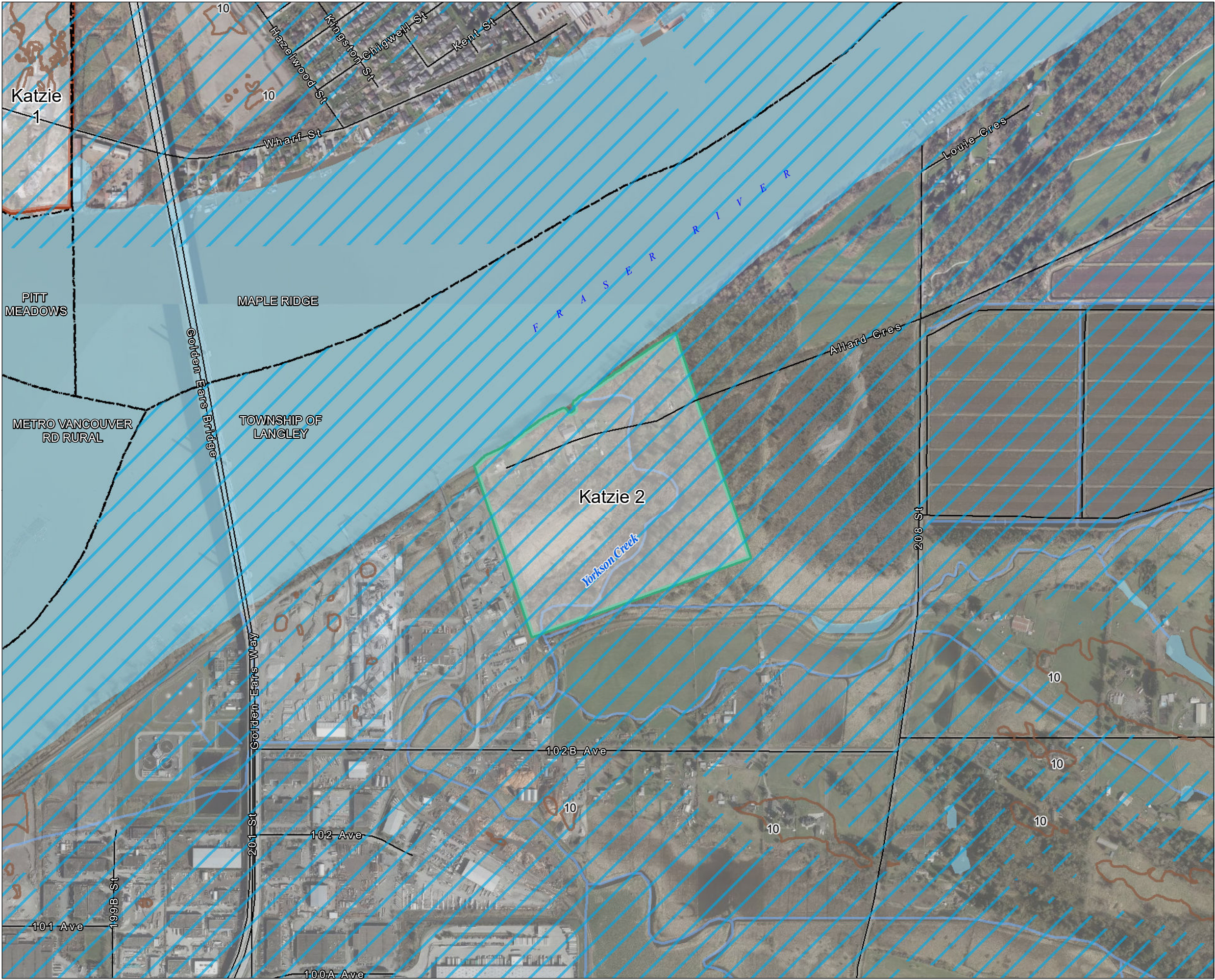


PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08









FILE LOCATION: G:\GIS\2018\188155 Katzie LUP\Katzie\_FN\MXD\July 5\188155 Katzie Floodplain\_K2.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-10. Topography, Floodplain, and Hydrology  
Katzie 2

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- KATZIE 2
- MUNICIPAL

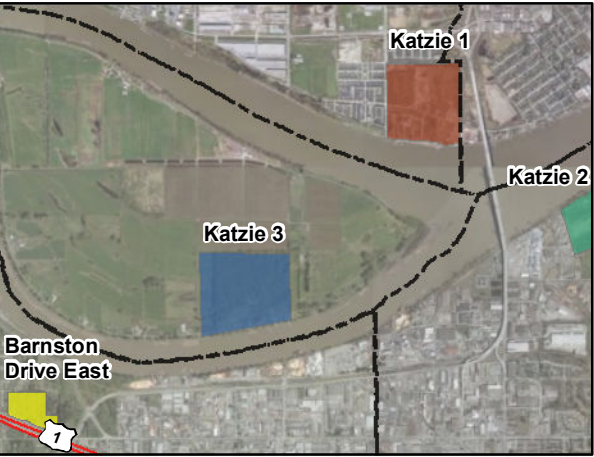
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



0 25 50 100 150 200 Meters  
SCALE 1:8,000



MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08









Figure 1-11. Topography, Floodplain, and Hydrology  
Katzie 3

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- KATZIE 3
- MUNICIPAL

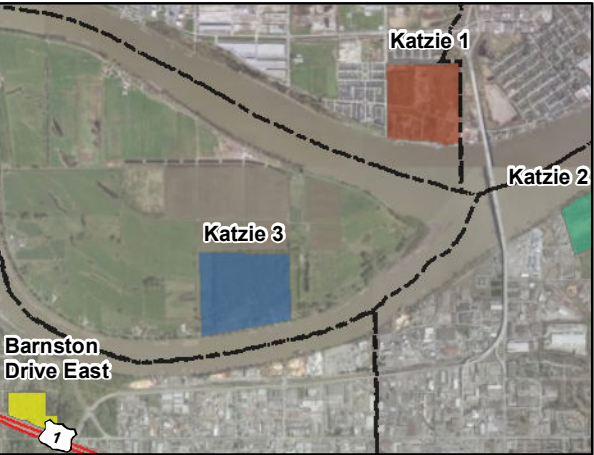
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



0 25 50 100 150 200 Meters  
SCALE 1:8,000

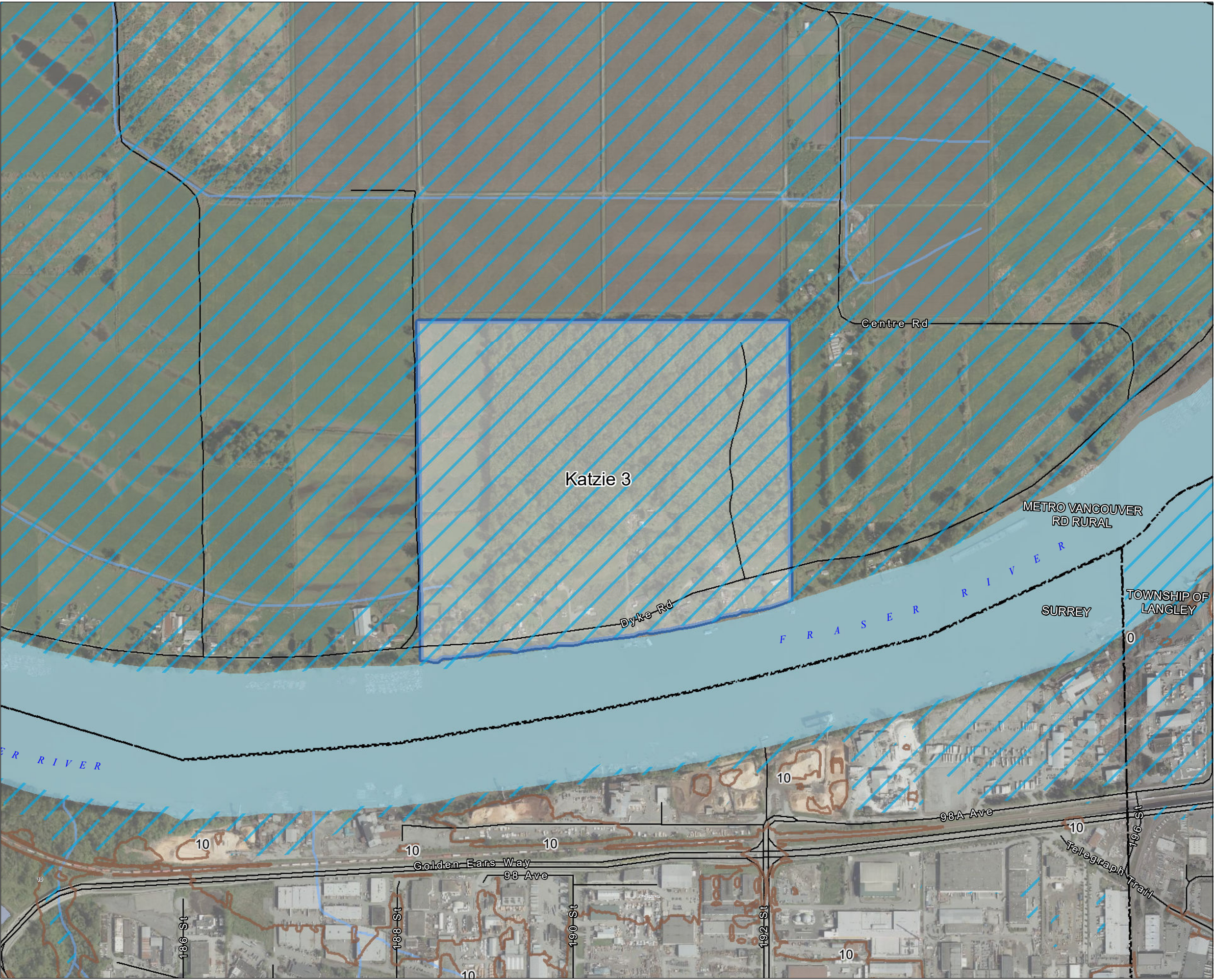


MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



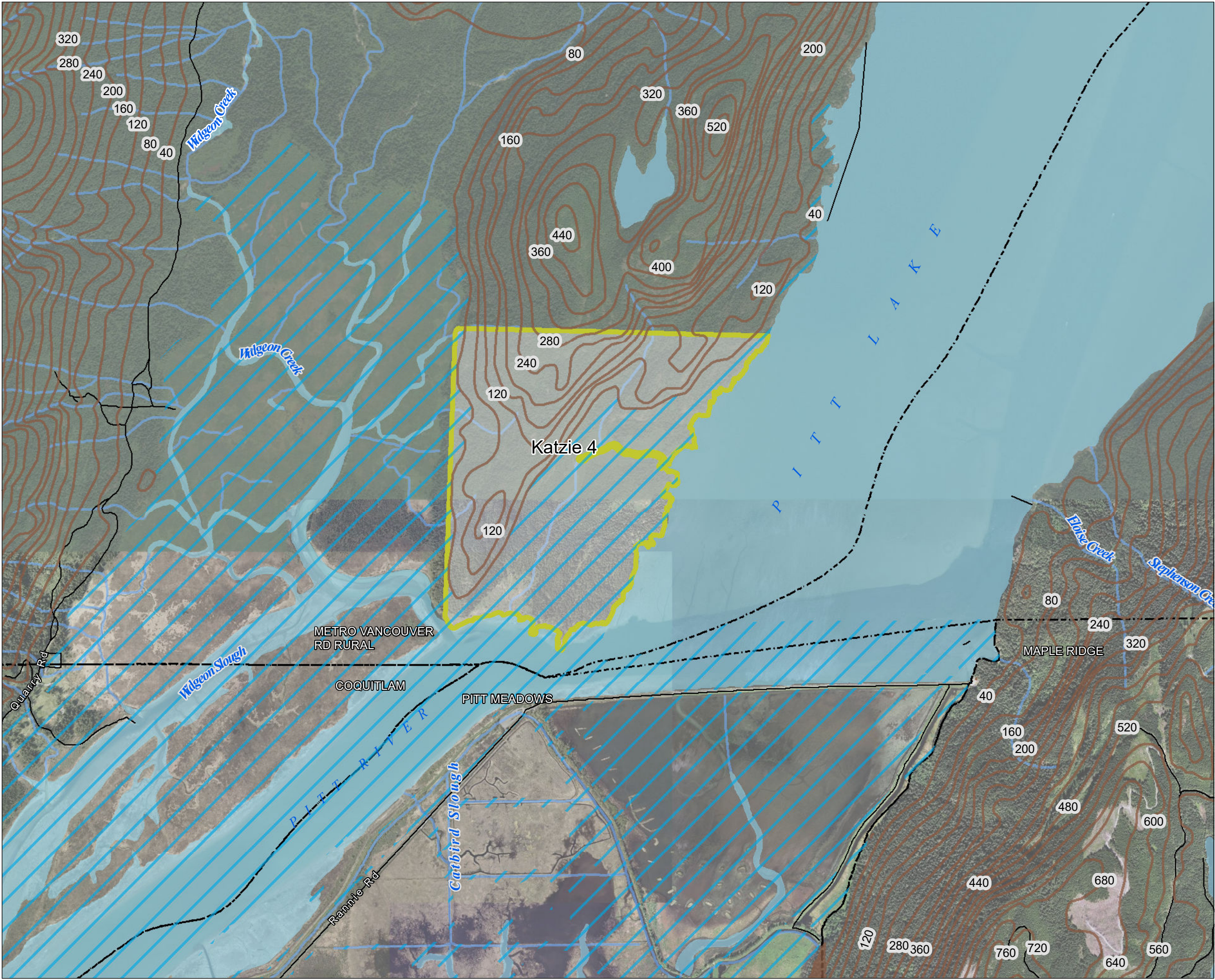
PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08











FILE LOCATION: G:\GIS\2018\188155 Katzie LUP\Katzie\_FN\MXD\July 5\188155 Katzie Floodplain\_K4.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-12. Topography, Floodplain, and Hydrology  
Katzie 4

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- KATZIE 4
- MUNICIPAL

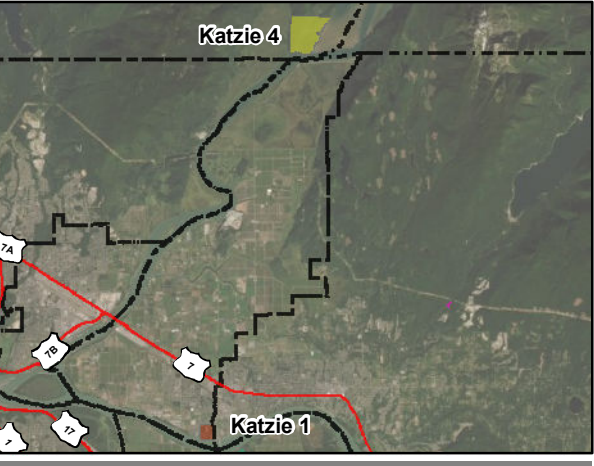
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



0 100 200 400 600 800 Meters  
SCALE 1:21,000



MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

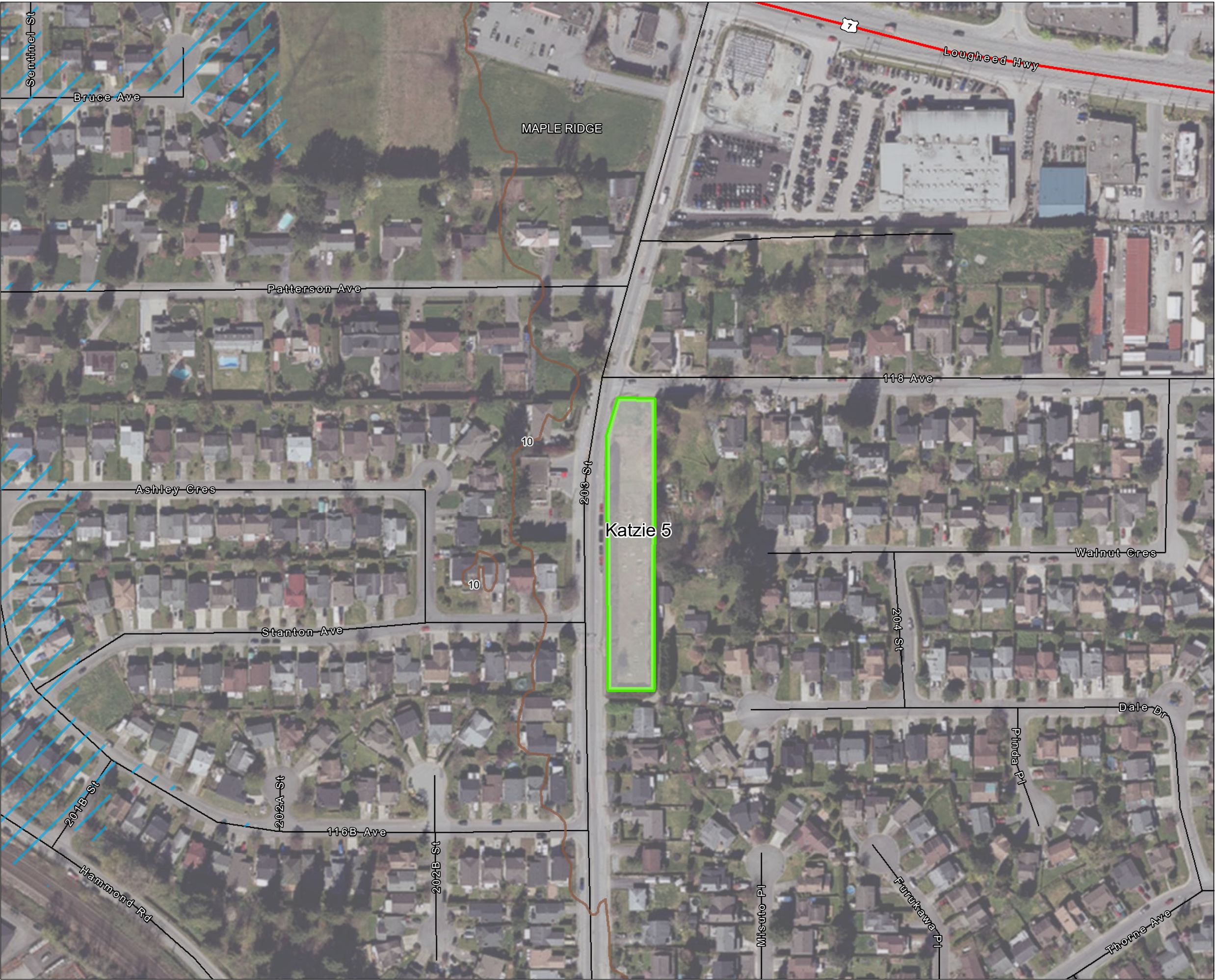


PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08









Katzie First Nation  
Environmental  
Management Plan

Figure 1-13. Topography, Floodplain, and Hydrology  
Katzie 5

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- KATZIE 5
- MUNICIPAL

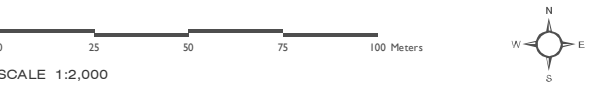
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



SCALE 1:2,000  
MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

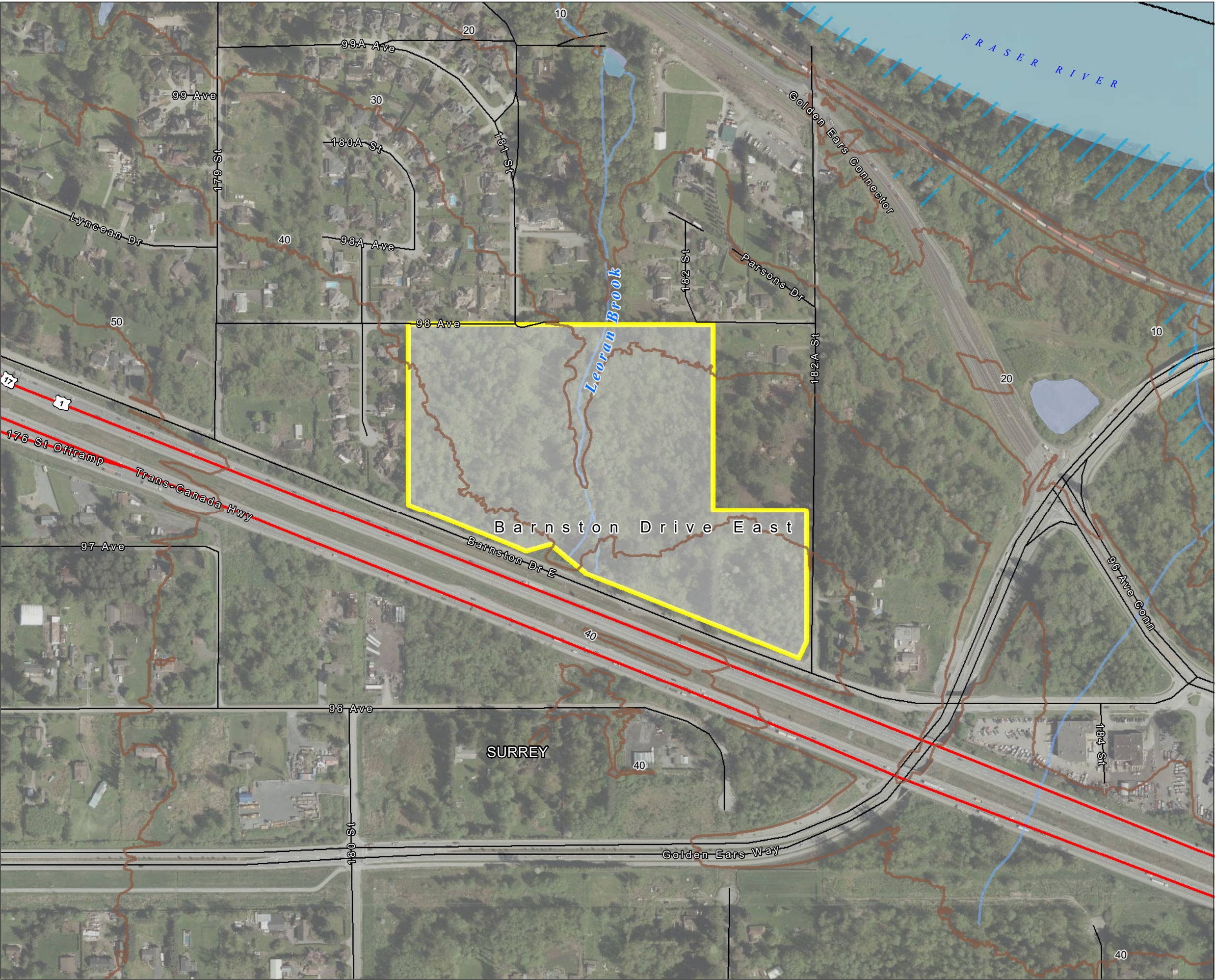


PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08









FILE LOCATION: G:\GIS\2018\188155 Katzie LUP\Katzie\_FN\MXD\July 5\188155 Katzie Floodplain\_BarnstonDrE.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-14. Topography, Floodplain, and Hydrology  
Barnston Drive East

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- BARNSTON DRIVE EAST
- MUNICIPAL

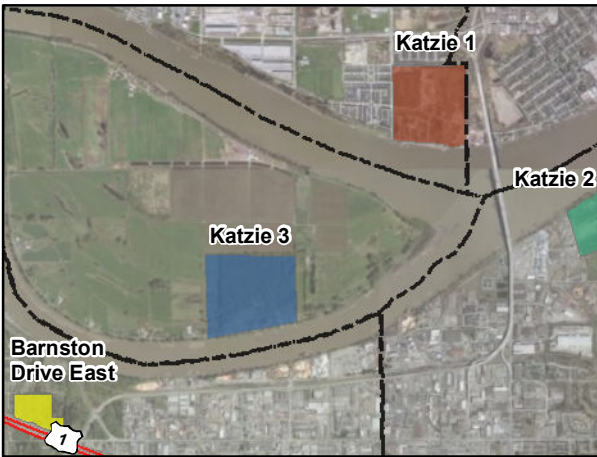
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



0 25 50 100 150 Meters  
SCALE 1:4,000



MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N

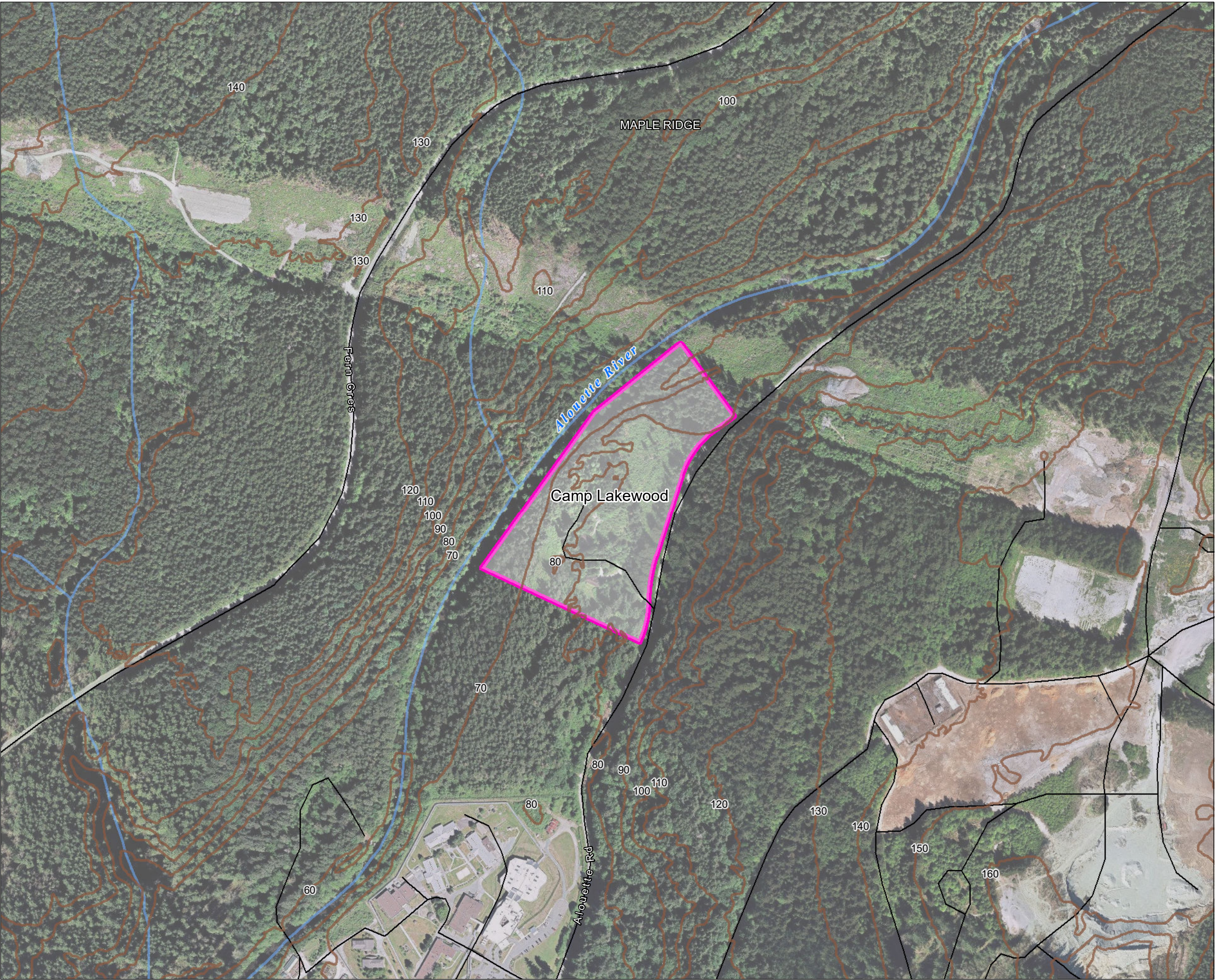


PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08









FILE LOCATION: G:\GIS\2018\188155 Katzie LUP\Katzie\_FN\MXD\July 5\188155 Katzie Floodplain\_CampLakewood.mxd



Katzie First Nation  
Environmental  
Management Plan

Figure 1-15. Topography, Floodplain, and Hydrology  
Camp Lakewood

LEGEND

HYDROLOGY

- FLOODPLAIN\*
- WATERBODY
- WATERCOURSE

BOUNDARIES

- CAMP LAKEWOOD
- MUNICIPAL

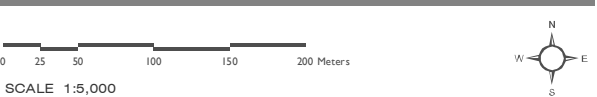
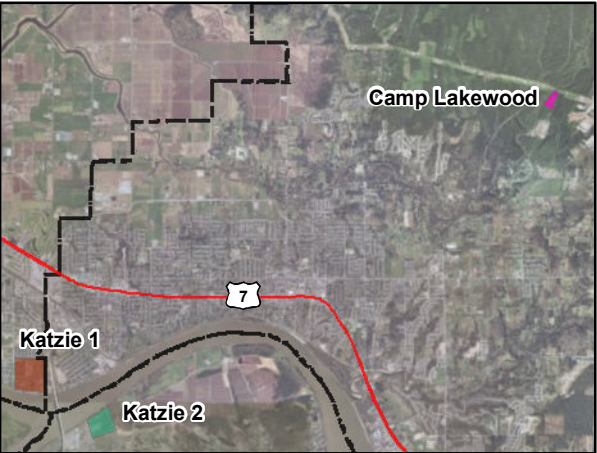
ELEVATION

- CONTOURS

TRANSPORTATION

- ROAD
- HIGHWAY

\*Adapted from Fraser Basin Council  
<https://www.fraserbasin.bc.ca/>



MAP DRAWING INFORMATION:  
ESRI basemaps, DATABC, INAC, Dillon Consulting Limited, FBC, City of Maple Ridge,  
City of Surrey, City of Port Coquitlam, Township of Langley, City of Pitt Meadows

MAP CREATED BY: RB, KV  
MAP CHECKED BY: SM, AN  
MAP PROJECTION: NAD 1983 UTM Zone 10N



PROJECT: 18-8155  
STATUS: FINAL  
DATE: 2019-07-08







### 2.4.3 Water Features

Katzie lands and land holdings are rich in a variety of water features, including rivers, creeks, wetlands, lakes, and riparian areas. Key water features on and/or adjacent to Katzie lands and land holdings include:

- Fraser River
- Yorkson Creek
- Katzie Slough
- Alouette River
- Leoran Brook
- Pitt River & Pitt Lake
- Widgeon Creek (Slough)

Details of the water features on and adjacent to Katzie lands and land holdings are provided in **SECTION 3.0** of **PART 2: COMPONENT PLAN SERIES**.

### 2.4.4 Vegetation

Forests in the Eastern Very Dry Maritime subzone are dominated by coniferous tree species, including western hemlock, western red cedar, and Douglas fir with an understory of shrubs, ferns, and mosses. While a wide range conifer and understory species are present today on Katzie lands and land holdings, land development and alterations have changed much of the natural vegetation. Details of the vegetative land cover on Katzie lands and land holdings are provided in **SECTION 5.0** of **PART 2: COMPONENT PLAN SERIES**

### 2.4.5 Wildlife & Fish

The Lower Fraser Valley region provides nesting areas and a migratory corridor for a diversity of bird species that use wetland and riparian habitats. The various water features on and adjacent to Katzie lands and land holdings provide potential habitat for a variety of songbirds, waterfowl, and amphibians.

Katzie lands and land holdings provide habitat and landscapes that are suitable to a variety of wildlife species. Wildlife on developed Katzie lands are limited to species that are adapted to urban environments

Water features have always played a significant role in Katzie First Nation culture. Prior to dyking, the lowland areas of **Q'ícəy** consisted of regularly inundated fresh-water wetlands transected by a series of deep, wide sloughs that could be easily navigated by canoe. The ancient slough system that once connected Pitt Lake and the Nicomekl and Serpentine Rivers to the Katzie villages on the north and south shores of the Fraser River played a vital role in Katzie lifeways. A wide variety of floral and faunal resources were available to the Katzie in the unique wetland area of the sloughs. The sloughs provided short cuts into the resource rich inland areas and may have facilitated trade with more northern groups (Katzie Land Use Plan, 2012).



Pitt Lake



Wapato



such as coyotes, raccoons, common passerine birds and raptors, and rodents. Forested areas provide suitable habitat for a broader range of wildlife, including larger species such as wolves, black bear, cougar, deer, and occasionally moose and elk. A variety of mammals, amphibians, and reptiles can be found on Katzie lands and land holdings year-round. Details of wildlife that may be present on and adjacent to Katzie lands and land holdings are provided in **SECTION 5.0** of **PART 2: COMPONENT PLAN SERIES**.

Katzie lands and land holdings also have valuable fish habitat and resources within a variety of surface water features. The Fraser River, Pitt River, and Pitt Lake hold the largest number of fish species including suckers, trout, sturgeon, stickleback, eulachon, and salmon species (FIDQ, 2018). Details of fish species that may be present on and adjacent to Katzie lands and land holdings are provided in **SECTION 4.0** of **PART 2: COMPONENT PLAN SERIES**.



Common forest type

## 2.5 Legislative Environment

The passing of Katzie Land Code in 2017 allows for the development and implementation of environmental and land management laws relating to Katzie lands. However, federal laws applicable on First Nations lands and consistent with the *Framework Agreement* continue to apply. As indicated in the *Framework Agreement*, environmental laws and processes implemented on Katzie lands must be harmonized with federal ones to promote effectiveness and consistency and to avoid duplication and/or uncertainty. In addition, while provincial laws do not apply to Katzie lands<sup>3</sup>, environmental protection standards created by Katzie and penalties for non-compliance must also be at least equal to those established by the province. An overview of federal and provincial laws and

### The Regulatory Gap

Federal environmental protection laws continue to apply to Katzie lands, and Katzie members and residents can be fined for non-compliance. However, the provinces have greater jurisdiction over land and natural resources, and the majority of legislation governing environmental management and contaminated sites is provincial and does not apply to First Nation reserve lands – this is commonly referred to as the “regulatory gap”.

Under Land Code, a First Nation becomes responsible for closing this regulatory gap on its lands through policy and legislative development and implementation. In many cases, First Nations seek to harmonize their environmental policies and laws with those of the province, regional districts, and/or local municipalities to promote effective and consistent environmental processes and to avoid duplication.

Although provincial and municipal legislation and regulations do not apply to Katzie lands, they may serve as best management practices or guidelines that can be used to develop environmental management policies and/or laws for Katzie lands.

<sup>3</sup> Katzie’s land holdings (fee simple lands) are under both municipal and provincial jurisdiction and subject to provincial laws, municipal bylaws, and any relevant municipal plans.



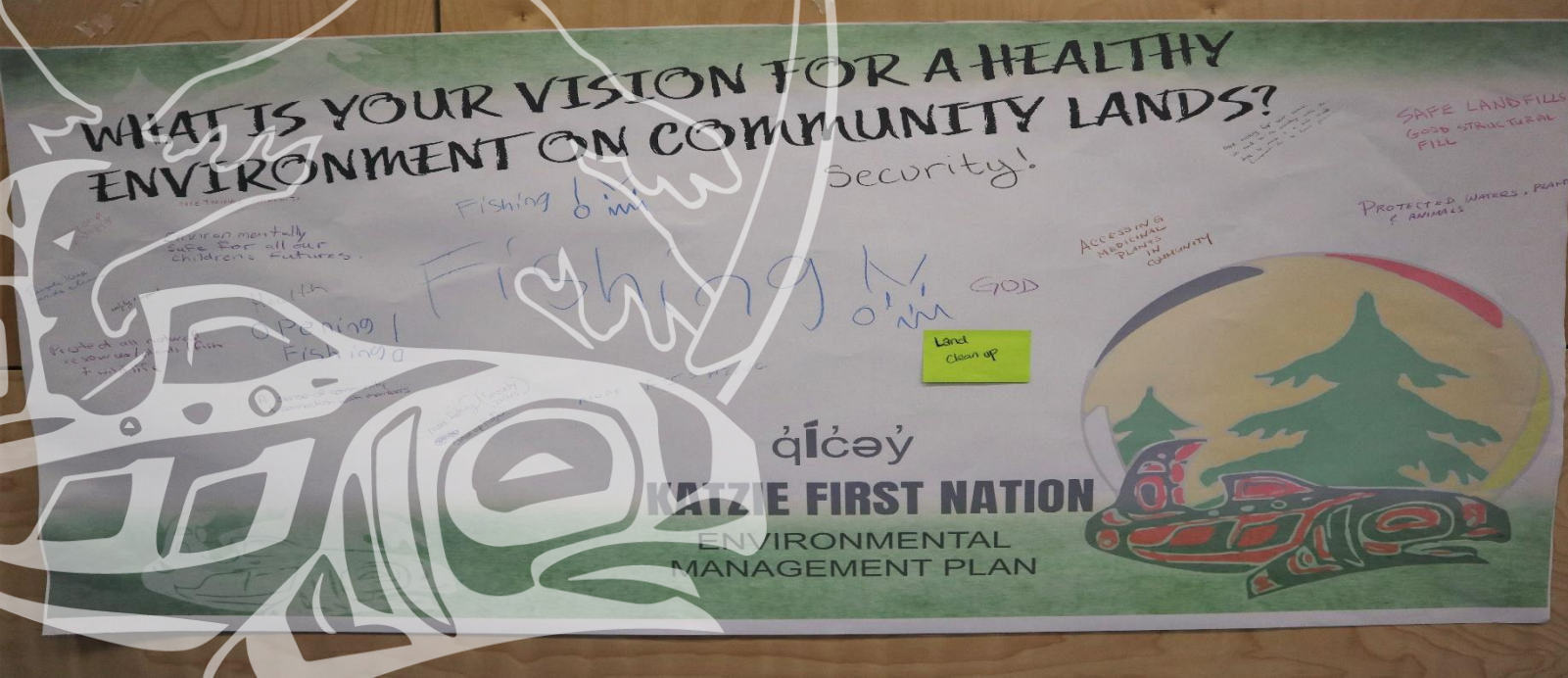
associated regulations and standards relevant to environmental management and protection is provided in **APPENDIX 1-A**.

Through our Land Code, Katzie has already developed several important laws, including:

- A Subdivision, Development & Servicing Law;
- A Spousal Property Law; and
- A Soil & Fill Law.

It is anticipated that Katzie may develop additional laws, as needed, to support our environmental responsibilities and associated risk management.





## 3.0 METHODOLOGY

The EMP was developed through a collaborative and community-driven approach in that the environmental management priorities that form the basis of this EMP were identified by Katzie community members and informed by existing issues on Katzie lands and land holdings. This approach ensures that the goals and objectives of the EMP are in line with the needs, vision, and priorities of the Katzie community.

Key activities completed throughout the EMP development process include:

- Background literature and data collection and review;
- Site visits of Katzie lands;
- Community engagement; and
- Regular meetings and strategic planning sessions with Katzie leadership and staff, the Lands Advisory Committee (LAC), and our technical consultant (Dillon Consulting Limited).

### 3.1 Literature Review

A literature review was completed to develop an understanding of the existing baseline conditions, support community perspectives, and to assist with identifying key environmental management priorities on Katzie lands and land holdings. Documents reviewed included:

- Phase I and Phase II Environmental Site Assessments completed on Katzie lands (2015-2019);
- Katzie's Comprehensive Community Plan (2017);
- Katzie's Strategic Plan (2014-2019);
- Katzie's Eco-Cultural Restoration Plan (2017);
- Katzie's previously completed Land Use Plan (2012);
- Technical studies completed on Katzie lands and land holdings (e.g., geotechnical, drainage, hydrology, environmental assessments and studies, etc.); and



- Online databases, including [iMapBC](#) (2019), [BC Species and Ecosystems Explorer](#) (Ministry of Environment, 2019), [Metro Vancouver GIS Maps](#) (2016), [Meadows Mapview](#) (City of Pitt Meadows, n.d.), [City of Surrey Mapping Online System](#) (City of Surrey, 2019), [Ridge View 2.0 Online Mapping System](#) (City of Maple Ridge, 2019).

### 3.2 Site Visits

Site visits of the Katzie 1, Katzie 2, Katzie 3 and Katzie 4 were undertaken in the summer of 2018. The aim of the site visits was to provide a high level overview of Katzie lands and to observe areas and activities identified during the literature review. Natural features observed on Katzie lands were documented, as well as activities that are relevant to environmental management.



### 3.3 Community Engagement

Community input is a key component of the EMP development process. Activities and discussions related to the local environment and environmental management were completed in an effort to fully engage Katzie members. The objectives of the community engagement process were to:

- Gain the best possible understanding of the existing environmental features and conditions on Katzie lands and land holdings;
- Gain an understanding of the concerns of Katzie members regarding environmental issues on Katzie lands and land holdings;
- Identify the top environmental management priorities of the Katzie community; and
- Provide targeted information related to environmental issues and associated management based on identified information needs.



Community engagement initiatives were coordinated with Katzie leadership, staff, and the Lands Advisory Committee (LAC). These initiatives included:

- Community newsletters to inform members of upcoming events and progress throughout the EMP development process;
- A community survey also available online to maximize participation (with 29 responses received);
- Interviews with select community members (Elders, staff, and long-term residents); and
- Community open houses and meetings on Katzie 1, Katzie 2 and Katzie 3.





### 3.4 Targeted Meetings

Throughout the development of the EMP, meetings were held with Katzie leadership, staff, and the LAC to provide regular updates on the EMP development process and to incorporate the perspectives and interests of Katzie members into the project design, planning, and implementation. The key objectives of these meetings were to:

- Solicit input and seek guidance on the development of the EMP;
- Discuss and confirm existing environmental issues on Katzie lands and land holdings, and environmental management priorities to guide the development of the EMP;
- Develop specific goals, objectives, action items and policies for each environmental management priority; and
- Assign roles and responsibilities for the EMP in terms of implementation, maintenance and reporting.



These meetings enabled the EMP to be collaboratively developed with significant community input throughout the process – they provided an open forum for discussion with Katzie members (through the LAC) to ensure the EMP captures the community’s needs and aspirations for environmental management on Katzie lands and land holdings.

### 3.5 Environmental Management Priorities

The following 10 environmental management priorities for Katzie lands and land holdings were identified based on the efforts described in the previous sections:

- Managing land development to prevent issues
- Protecting surface waters and groundwater
- Protecting fisheries resources
- Protecting wildlife, plants and species at risk
- Proper management of solid waste
- Proper management of hazardous waste
- Managing and preventing contaminated soil and fill
- Managing noise
- Managing local air quality
- Protecting cultural resources

The environmental management priorities form the basis of the accompanying **PART 2: COMPONENT PLAN SERIES** and served as a guide for its development.





## 4.0 IMPLEMENTATION & ADMINISTRATION

To ensure the EMP becomes a respected and effective governance tool, all related roles, responsibilities, approaches to review and amendments must be clearly defined and communicated. The EMP is intended to serve as a living document that must evolve in response to changing environmental, operational, and legislative conditions. An overview of the implementation and administration of the EMP is provided in the following sections.

### 4.1 Roles & Responsibilities

Key personnel that will use this document and provide interpretation of the EMP include the Chief and Council, the Lands Department, and the Approving Committee (Staff). They will have the responsibility of ensuring this EMP becomes a respected and effective governance tool, however it is important to note that everyone is responsible for compliance with the EMP and associated policies and operating procedures.

Table 1-1. Roles and responsibilities for EMP implementation and maintenance

Role	Responsibility
Chief & Council	<ul style="list-style-type: none"><li>- A final approving authority.</li><li>- Provide “GO” or “NO-GO” actions for proposed activities/projects (i.e. water diversion), by considering all of the available information and the technical comments presented to them.</li><li>- Provide approval for environmental training, human resources, and support for funding and implementation of strategic environmental initiatives described in the EMP.</li><li>- Liaise with local, regional, provincial, and federal authorities, as needed.</li><li>- Participate in any EMP reviews and updates, as required.</li></ul>
Lands Director (or as directed)	<ul style="list-style-type: none"><li>- Presents Chief and Council with all of the available information and the technical comments for their decision for “GO” or “NO-GO” actions for proposed activities/projects.</li><li>- Provides direction on EMP implementation.</li><li>- Prepares the budget to implement strategic environmental initiatives on an annual basis, including staffing and training recommendations.</li></ul>



Role	Responsibility
	<ul style="list-style-type: none"> <li>- Assign responsibilities to the Lands Planner that relate to technical reviews for an activity/project, environmental inspections and environmental monitoring.</li> <li>- Oversee any EMP reviews and updates, including assessing the level of approvals required for amendments (refer to <a href="#">Section 4.4.1</a> below).</li> </ul>
Lands Manager (or as directed)	<ul style="list-style-type: none"> <li>- Communicates the EMP and associated responsibilities to members, businesses, stakeholders or anyone that wishes to perform an activity/project on Katzie lands.</li> <li>- Provides technical background work related to an application or environmental management request (i.e., provides location of a proposed project relative to nearby environmental constraints).</li> <li>- Main point source to communicate the EMP's goals and actions to Staff, the Community, and other outside organizations.</li> <li>- Provides assistance in the event of an environmental incident to ensure minimum standards are met, including monitoring and reporting.</li> <li>- Champions EMP reviews by establishing and managing an EMP Review Team (refer to <a href="#">Section 4.4.2</a> below).</li> </ul>
Lands Clerk	<ul style="list-style-type: none"> <li>- Primary registration of lands instruments and related documents.</li> <li>- Maintain document control procedures for documents (see <a href="#">Section 4.3</a>).</li> </ul>
Lands Department (General)	<ul style="list-style-type: none"> <li>- Maintain the EMP and associated documents, as well as document control procedures (refer to <a href="#">Section 4.3</a> below).</li> <li>- Participate in EMP reviews and the EMP Review Team, as required.</li> <li>- Present technical comments related to a proposed activity/project to the Chief and Council for review.</li> <li>- Liaise with local, regional, provincial, and federal authorities, as needed.</li> <li>- Responsible for maintaining the EMP and related documents (e.g., permits, site plans).</li> </ul>
Lands Advisory Committee	<ul style="list-style-type: none"> <li>- Provide Chief and Council with community perspectives on proposed activities or projects to inform decision-making processes.</li> <li>- Participate in any EMP reviews and updates.</li> </ul>
Katzie Technical Advisors/Consultants	<ul style="list-style-type: none"> <li>- Provide technical input during any activity or project proposals and during reviews.</li> </ul>
Other Staff, Consultants, Businesses, Developers and Contractors	<ul style="list-style-type: none"> <li>- Adhere to the requirements set out in this EMP and applicable laws, regulations, and standards.</li> <li>- Communicate environmental responsibilities and requirements of this EMP to their staff and sub-contractors, and record that communication.</li> <li>- Ensure all members of their staff and sub-contractors are trained to prevent or mitigate environmental impacts.</li> <li>- Ensure all labour, equipment, and materials are available to execute the project activities and respond to environmental incidents.</li> <li>- Correct deficiencies and any non-compliance issues raised by Chief and Council, the Lands Department, and/or regulators.</li> <li>- Retain the services of a Qualified Environmental Professional to assess and mitigate risk associated with impacts to the environment.</li> <li>- Provide documentation related to project activities upon request by the Lands Department and/or Chief and Council, and as per the EOPs and applicable legislation and regulations.</li> </ul>



## 4.2 Schedule

An implementation schedule has been developed to support Katzie in implementing the strategies contained in **PART 2: COMPONENT PLAN SERIES** – the implementation schedule is found in **APPENDIX 2-A**.

## 4.3 Document Control

Document control is a means of keeping track of documents, procedures, and processes to ensure that the correct and most up-to-date versions are accessible to everyone. Document control is important given that environmental legislation, best management practices, procedures, and roles and responsibilities can change over time and the EMP must be updated and amended accordingly. The following document control measures will be implemented for this EMP:

- Include a date and version number on all documents;
- Review all documents on a pre-determined schedule (see [Section 4.4](#));
- Revise documents as required;
- Obtain appropriate approvals and sign-offs on all revised documents prior to issuing or re-issuing;
- Remove and appropriately destroy/recycle all out-dated documents;
- Maintain an electronic master copy at the Katzie Lands Department; and
- Store all EMP records in hard copy and electronic format for a minimum of 5 years.

## 4.4 Amendments & Reviews

The Lands Department is responsible for ensuring that the EMP and related documents are reviewed, updated, and maintained, as needed. To meet this commitment, the department should complete periodic amendments to the EMP – as required based on changes in legislation, standards, and/or best practices – and lead a full review at least once every 5 years (or sooner, if and as required).

### 4.4.1 Amendments

Amendment to the EMP may be required as changes are made to legislation or standard practices, or based on changing community context. This may be done at any time, but will require the following steps for approval:

- 1) Proposed change and supporting reasons should be discussed with the Lands Director followed up with a request in writing.
- 2) The Lands Director will review the suggested amendment(s), make a decision on whether the changes are minor or significant, and then seek approval as follows:
  - a. Significant changes (e.g., changes in environmental management priorities, development of new actions/strategies, changes to policies, etc.) – Will require Chief and Council review and approval.
  - b. Minor changes (e.g., legislative updates) – Generally only require approval by the Lands Director; however, LAC review and approval may be required in some cases depending on the nature of the changes, at the discretion of the Director.



- 3) Pages are revised accordingly by the Lands Department and document control table(s) are modified to show the amendments.
- 4) Amendments are communicated to Katzie leadership, staff, community members, and/or others, as appropriate.

#### **4.4.2 Full Review**

At least once every 5 years (earlier if necessary), the Lands Manager will lead a full review of the EMP and its related documents. An EMP Review Team – consisting of members of staff, the LAC, and/or leadership – will be established to champion the review.

Key aspects of the review will include, but will not necessarily be limited to, the following:

- 1) Review and update the community context (e.g., ongoing or emerging issues, changes in features present, etc.) throughout Parts 1 and 2 of the EMP, as required.
- 2) Review and update the environmental management priorities and associated component plans in Part 2 based on emerging issues or community needs, as required.
- 3) Review applicable legislation and indicate any changes that are needed, as they relate to the EMP.
- 4) Complete a performance summary for actions for the management strategies/actions contained in the EMP to determine implementation progress and identify any outstanding strategies/actions. Determine if outstanding strategies/actions are still relevant and needed.
- 5) An update on the effectiveness and suitability of the EMPs and the related environmental policies and operating procedures in relation to changing information and/or conditions.
- 6) A summary of environmental incidences, including non-compliance, to determine if and how these incidences can be mitigated through EMP amendments (e.g., additional strategies/action items).
- 7) A review of EMP-related budgets (e.g., training, enforcement) and adequacy and associated challenges that should be addressed.

The Lands Manager will provide Chief and Council with a summary of findings and recommended updates/revisions needed for the document for review and approval.





## 5.0 CONDITIONS FOR SUCCESS

This chapter outlines several important considerations in terms of the conditions for success for the implementation of and compliance with the EMP and effective environmental management, including associated liability risk management (refer to [Section 1.0](#)).

### 5.1 Effective Data Management & Tracking

Effective data management and tracking is important for environmental management for several reasons: it enables existing environmental features and issues to be properly documented and accessed by all Katzie departments and staff, which is important given that efforts to address and/or avoid issues often require collaboration among staff and departments; and it enables the progress of any efforts to address ongoing issues to be properly tracked to inform future actions. While Katzie has been striving to collect, store, and share records and documents, document management and accessibility among Katzie departments has been a challenge. Currently, Katzie staff and departments do not have a central location to access and store all relevant Katzie documents.

**A centralized and accessible digital database would help to better enable organization of and access to records and relevant documentation.** The database should be easily accessible to the Katzie Lands Department and other Katzie staff, as appropriate, and should provide a means to track documents, maps, and environmental procedures. Information and data that could be housed in the database include, but are not limited to:

- Best Management Practices, operating procedures, and/or legislation and standards related to environmental and land management (i.e., reference library);
- Reports associated with historical, cultural, heritage, and/or archaeological sites;
- Environmental reports, including:
  - Previous and ongoing environmental site assessments;
  - Wildlife, vegetation, and/or fisheries studies;



- Forestry studies;
- Previous and ongoing environmental reviews and assessments;
- Geotechnical and drainage studies and reports;
- Studies or reports completed by Indigenous and Northern Affairs Canada (now Indigenous Services Canada);
- Environmental spatial data and mapping (e.g., well and septic locations, GPS locations of environmental features, spatial data from studies and reports completed for Katzie lands);
- The EMP and associated documents; and
- Any Katzie-specific policies, laws, protocol, and procedures and associated documentation.

The Katzie database should be reviewed and regularly updated by Katzie staff once every year, or as needed. Reports, studies and maps that are no longer relevant should be archived or removed, when possible and where appropriate.

## 5.2 Policy & Law Development

Policy and law development is required for effective environmental management and protection, and associated liability risk management for Katzie lands. Given the regulatory gap that exists on reserve lands (refer to [Section 2.5](#)), the development and implementation of environmental policies and laws can be used to operationalize components of the EMP and address environmental management concerns raised throughout the EMP development process. Because of the legally binding nature and enforceability of laws, they are generally used over policy when the potential risks are greater and enforceability is required to manage risks.

### Best practices for effective document and data management include:

- **Central hub** – The use of a central hub is important because when each department stores its own files in their own ways, it can get confusing and things can get lost.
- **Naming conventions** – The use of consistent naming conventions is important to avoid duplication and/or confusion and to support easy searching and access. Documentation and naming guidelines should be established so that staff members are not creating and naming their own files independently. Putting the effort into developing a naming and organization system upfront will prevent future headaches!
- **Log changes to documents** – Any modifications or changes to master documents or data should be logged to avoid confusion and prevent outdated documents or data from being used incorrectly.
- **Access and permission** – Given that some information may be confidential or sensitive in nature, access considerations are important in terms of determining who can or should have access to specific documents and data, and who should not. Create and maintain a list that documents current access privileges and changes in access.
- **Assign responsibilities** – Ensure anyone who has access understands what their responsibilities are in terms of document naming and management. Provide guidelines meant to support effective management before providing access and ensure they are being adhered to.



## Environmental Management & Protection Regime

### Environmental Management Plans

Identify goals in terms of environmental management, and strategies to achieve them (including policy and law development)

### Environmental Policies

Guiding principles used to give direction to program managers and staff within an organization.

### Environmental Laws

Established, legally binding and enforceable procedures or standards related to environmental management.

Throughout the EMP development process, Katzie leadership, staff and members identified potential policies and laws to support environmental management on Katzie lands based on existing issues. Recommendations for potential policy and law development are provided in **PART 2: COMPONENT PLAN SERIES**, with established policies included in **PART 3: ENVIRONMENTAL POLICIES & OPERATING PROCEDURES**.

Given the costs and timelines associated with the development of laws, some First Nation communities have developed overarching pieces of legislation (e.g., Land Protection Law, Community Quality Law) that encompass procedures and standards related to several environmental management priorities (e.g., solid waste, air quality, water quality, etc.). An overview of some of the laws that support environmental management enacted by other First Nations is provided in **APPENDIX 1-B**.

Key considerations when developing and implementing policies and/or laws include, but are not limited to:

- Policies and laws should be made publicly available to everyone expected to follow them;
- Community education surrounding any policies and laws, including the rationale behind them, should be provided to encourage compliance;
- Similar to federal and provincial laws, application of a “polluter pays” principle to any laws related to environmental management is important to reduce liability of Katzie for the actions of individuals, and to strengthen existing Katzie policies related to environmental protection; and
- Consistent compliance measures (education, warnings, checking, compliance orders) and enforcement measures (e.g., ticketing, fines, penalties, enforcement orders, conviction, and/or prosecution) are generally needed to make laws and associated regulations effective.

Depending on available resources and capacity, Katzie may choose to establish a Community Enforcement Officer or similar position with a responsibility to enforce Katzie laws, or coordinate and share resources with other First Nations in the region to establish a shared enforcement position or service.



## 5.3 Education & Awareness

Engaging Katzie members and all residents of Katzie lands is critical to the success of this EMP. In order to achieve the goals identified in **PART 2: COMPONENT PLAN SERIES**, the community needs to be engaged and play an active role in environmental management. Education, training and outreach programs can contribute to positive change in attitudes and behaviours. These may include, but are not limited to:

- Collaborating with various external agencies (governmental and non-governmental) to develop environmental awareness and protection programs;
- Providing members and non-member residents with information on environmental resources within or adjacent to Katzie lands and associated threats through:
  - Posting information on community Facebook pages and in community newsletters (e.g., Environment 101 section in community newsletters);
  - Community workshops;
  - Informative signage in the community;
  - Circulating informational pamphlets;
- Raising awareness to empower all residents to identify and report environmental incidences (e.g., “Community Environmental Watch”); and
- Training for Katzie members to work as environmental/construction monitors, field assistants, etc. (see [Section 5.4](#)).

On-going education and opportunities to engage in stewardship activities help to instill a sense of pride in community members and an understanding of accountability when it comes to environmental management. This, in turn, helps to manage existing issues and prevent future ones. Engaged individuals can act as additional eyes and ears of the community and are more likely to identify and report infractions. Throughout **PART 2: COMPONENT PLAN SERIES**, specific strategies for education and outreach related to each environmental management priority have been identified.

## 5.4 Capacity Building & Training

Capacity building and training for Katzie staff may be required for effective environmental management and the implementation of the EMP and associated policies, laws, and procedures. In addition, employment opportunities for environmental management, monitoring, and inspection may become available as Katzie begins to implement the EMP. To maximize these potential opportunities, Katzie should take the following approach to build environmental capacity:

- Allocate specific funds for training;
- Identify suitable candidates to take part in environmental training programs;
- Maintain a database of trained personnel; and
- Create short-term and long-term positions in environmental management, as needed.

Institutions and organizations that offer relevant training include, but are not limited to:

- The [Building Environmental and Aboriginal Human Resources](#) project aims to help Indigenous communities with environmental certification and employment through a series of skills-based



environmental training programs. Training programs range from 3-16 weeks in duration. The following training programs are offered as part of this project:

- Workforce Training Programs
  - Environmental Core Skills
  - Environmental Monitoring Coordinator
  - Environmental Site Assessment Assistant
  - Contaminated Sites Remediation Coordinator
  - Local Environmental Coordinator
  - Land Use Planning Coordinator
  - Solid Waste Coordinator
  - Certificate of Applied Environmental Techniques
  - Certificate of Environmental Planning and Administration
  - Customizable Certificate
- University of Northern British Columbia
  - [Ecological Field Data Collection](#)
  - [Wildlife Monitoring Certificate](#)
  - [Environmental Monitoring Certificate](#)
  - [Aboriginal Community Resource Planning Certificate](#)
- Vancouver Island University
  - [Natural Resources Extension Program](#)
  - [Environmental Technician Certificate](#)
- Kwantlen Polytechnic University
  - [Environmental Protection Diploma](#)

## 5.5 External Supports

Katzie will likely require the support of external expertise (e.g., skilled contractors, biologists, engineers, technicians, project managers, etc.) to manage existing and potential environmental issues given the potential range of expertise that may be required. Katzie should develop and maintain a roster of Qualified Environmental Professionals that can be called upon to provide technical expertise as needed. Katzie should also strive to identify job shadowing and capacity building opportunities for community members where external expertise is required (e.g., job shadowing for youth for environmental field work including wildlife surveys, water quality monitoring, etc.).







## 6.0 REFERENCES

- Blakes, Cassels & Graydon LLP. (2020). Blakes Annual Overview, Environmental Law and Regulation in British Columbia 2020. Retrieved from [https://www.blakes.com/getmedia/aa6a4310-847d-4890-87b1-6fd43ec261be/Environmental-Law-and-Regulation-in-British-Columbia-2020-Blakes-Annual-Overview\\_Guides\\_022020\\_EN.pdf.aspx](https://www.blakes.com/getmedia/aa6a4310-847d-4890-87b1-6fd43ec261be/Environmental-Law-and-Regulation-in-British-Columbia-2020-Blakes-Annual-Overview_Guides_022020_EN.pdf.aspx).
- City of Maple Ridge (2014). Official Community Plan. Retrieved from City of Maple Ridge Website: <http://www.mapleridge.ca/316/Official-Community-Plan>
- City of Maple Ridge (2018). Zoning Bylaw No. 3510. Retrieved from City of Maple Ridge Website: <http://www.mapleridge.ca/DocumentCenter/View/587/Zoning-Bylaw>
- City of Maple Ridge (2019). Property Map. Retrieved from Ridge View 2.0 Online Mapping System: <https://gis.mapleridge.ca/ridgeview/>
- City of Pitt Meadows (n.d). Meadows Mapview. Retrieved from City of Pitt Meadows Website: <http://www3.pittmeadows.bc.ca/map/Default.aspx>
- City of Surrey (2017). Abbey Ridge Local Area Plan. Appendix I of the City of Surrey Official Community Plan. Retrieved from <https://www.surrey.ca/city-services/17185.aspx>
- City of Surrey (2019). City Map. Retrieved from City of Surrey Online Mapping System: <https://cosmos.surrey.ca/external/>
- Columbia Environmental Consulting Ltd. (Columbia Environmental) (2015). Final Report Phase I Environmental Site Assessment Katzie First Nation, British Columbia.
- Fisheries Inventory Data Queries (FIDQ) (2018). Retrieved from Province of BC Website: <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/fish/fish-and-fish-habitat-data-information/search-fish-fish-habitat-data-information/fisheries-inventory-data-queries>
- iMapBC (2019). Retrieved from Province of BC Website: <https://www2.gov.bc.ca/gov/content/data/geographic-data-services/web-based-mapping/imapbc>
- Katzie First Nation (2007). Final Report: Upper Pitt River independent power production cultural impact assessment. Katzie Territory, British Columbia.
- Katzie First Nation (2017). Eco-Cultural Restoration in Katzie Traditional Territory. Katzie Territory, British Columbia.
- Metro Vancouver (2016). Sensitive Ecosystem Inventory Map. Retrieved from Metro Vancouver GIS: <http://www.metrovancouver.org/business/gis/Pages/default.aspx>
- Metro Vancouver (2017, July 28). Metro Vancouver 2040 Shaping Our Future. Retrieved from Metro Vancouver Website: <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/RGSAdoptedbyGVRDBoard.pdf>
- Ministry of Environment (2019). BC Species and Ecosystems Explorer. Retrieved from: <http://a100.gov.bc.ca/pub/eswp/>
- Statistics Canada (2018). Katzie 1 and 2, IRI [Census subdivision], British Columbia (table). Aboriginal Population Profile. 2016 Census. Statistics Canada Catalogue no. 98-510-X20 16001. Ottawa. Released July 18, 2018. <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/abpopprof/index.cfm?Lang=E> (accessed January 9, 2019).
- Urban Systems (2015). IR1 – Drainage Assessment. Report prepared for Katzie First Nation.









# Appendix 1-A

Federal & Provincial Laws







# Relevant Federal Legislation & Regulations

FEDERAL LEGISLATION	SUMMARY AND ASSOCIATED REGULATIONS
<a href="#"><i>Canadian Environmental Protection Act (CEPA, 1999)</i></a>	<ul style="list-style-type: none"><li>▪ The principal federal piece of legislation governing environmental activities, aimed at preventing pollution and protecting the environment and human health</li><li>▪ Requires federal maintenance and publishing of a <a href="#">National Pollutant Release Inventory</a></li><li>▪ Provides a wide range of <a href="#">regulations</a>, <a href="#">guidelines</a> and <a href="#">codes of practice</a> related to environmental protection, pollution control and prevention, and waste management</li><li>▪ <a href="#">Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations</a> establish technical standards for the design and installation of storage tank systems and include requirements for operation, maintenance, removal, reporting, and record-keeping</li><li>▪ Owners or managers of specified toxic or hazardous materials are required to prepare and implement environmental emergency plans under the <a href="#">Environmental Emergency Regulations</a></li><li>▪ Maximum penalties of \$1-million and/or three years’ imprisonment for individuals and \$6-million for large corporations</li></ul>
<a href="#"><i>Cultural Property Export and Import Act (1985)</i></a>	<ul style="list-style-type: none"><li>▪ Aimed at protecting Canada’s national heritage through the establishment of controls on the export of objects of historical, scientific, and cultural significance</li><li>▪ Items under export control are listed on the <a href="#">Canadian Cultural Property Export Control List</a> and permits are required for any items listed</li><li>▪ The maximum penalty for non-compliance is \$25,000 and/or five years’ imprisonment</li></ul>
<a href="#"><i>First Nation Land Management Act (1999)</i></a>	<ul style="list-style-type: none"><li>▪ Provides First Nations with the authority to make laws in relation to reserve lands, resources and the environment through the development and implementation of a Land Code, which replaces the sections of the <i>Indian Act</i> related to land management on reserves</li></ul>
<a href="#"><i>Fisheries Act (1985)</i></a>	<ul style="list-style-type: none"><li>▪ Aimed at protecting Canada’s fisheries, including all fish and fish habitat</li><li>▪ The Act has been frequently used by Environment Canada to punish those responsible for water-polluting activities (<a href="#">Blakes, Cassels &amp; Graydon LLP, 2020</a>)</li><li>▪ Prohibits the release of “deleterious substances” into fish-bearing waters</li><li>▪ It is an offence to carry out an activity that results in harmful alteration, disruption or destruction of fish habitat</li><li>▪ Requires that Indigenous knowledge must inform habitat decisions and the effects of decisions on the rights of Indigenous people must be considered</li><li>▪ Protects Indigenous knowledge that is shared in confidence to the Minister</li><li>▪ Imposes reporting requirements: any release of deleterious substances into fish-bearing waters or where damage to fish habitat may occur must be reported</li><li>▪ Authorizations for serious harm to fish may be permitted under the <a href="#">Application for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations</a></li><li>▪ Maximum penalties for non-compliance are \$2-million and/or three years’ imprisonment for individuals, \$8-million for small corporations, and \$12-million for large corporations</li></ul>
<a href="#"><i>Impact Assessment Act (IAA, 2019)</i></a>	<ul style="list-style-type: none"><li>▪ Replaces the Canadian Environmental Assessment Act (CEAA) 2012 and includes broader provisions for public participation and Indigenous consultation</li><li>▪ Aimed at identifying and avoiding or minimizing potential significant environmental effects associated with projects prior to their approval</li><li>▪ Outlines the responsibilities and procedures for the federal environmental assessment (EA) of projects</li><li>▪ Impacts on physical and cultural heritage must also be considered</li><li>▪ Projects subject to IAA are listed in the <a href="#">Physical Activities Regulations</a></li><li>▪ A project description must be submitted for projects subject to IAA, as described in the <a href="#">Information and Management of Time Limits Regulations</a></li><li>▪ Time limits are provided within which EAs are to be concluded and decided upon – refer to the <a href="#">Practitioners Guide to Federal Impact Assessments</a></li><li>▪ Maximum penalties for non-compliance are up to \$300,00 for individuals, \$2-million for small corporations, and \$4-million for large corporations</li></ul>
<a href="#"><i>Indian Act (1985)</i></a>	<ul style="list-style-type: none"><li>▪ First passed in 1876; amended many times since</li><li>▪ Sets out the general structure of First Nation Governments and limits of power (<i>i.e.</i>, how reserves and bands can operate)</li><li>▪ The <a href="#">Indian Waste Disposal Regulations</a> – which prohibit the operation of a garbage dump, using land for the disposal or storage of waste or burning waste on a reserve without a permit issued under the Regulations – <u>do not</u> apply to communities operating under a Land Code</li></ul>
<a href="#"><i>Migratory Birds Convention Act (1994)</i></a>	<ul style="list-style-type: none"><li>▪ An international agreement between Canada and the U.S. for the protection of migratory birds</li><li>▪ <a href="#">Regulates</a> harvesting/ hunting of birds</li><li>▪ Also contains environmental protection provisions</li><li>▪ Prohibits the deposit of oil, oil waste or other substances harmful to migratory birds in any waters or areas frequented by migratory birds</li><li>▪ Disturbance of migratory birds nests is also prohibited</li><li>▪ The maximum penalty for non-compliance is \$1-million and/or three years’ imprisonment</li></ul>
<a href="#"><i>Pest Control Products Act (2002)</i></a>	<ul style="list-style-type: none"><li>▪ The <a href="#">Pest Control Products Act Regulations</a> require pest control products to be registered with detail about the product and its use (<i>e.g.</i>, chemical makeup, effectiveness, impacts on environment)</li><li>▪ Health Canada’s <a href="#">Pest Management Regulatory Agency</a> is responsible for administering this legislation, registering pest control products and determining how they can be used, re-evaluating registered products and setting maximum residue limits</li></ul>



FEDERAL LEGISLATION	SUMMARY AND ASSOCIATED REGULATIONS
<u><i>Safe Drinking Water for First Nations Act (2013)</i></u>	<ul style="list-style-type: none"><li>▪ Allows the federal government to work with First Nations to develop regulations for access to safe drinking water, effective treatment of wastewater, and the protection of drinking water sources of First Nations lands</li><li>▪ Associated regulations have yet to be implemented</li></ul>
<u><i>Species at Risk Act (SARA, 2002)</i></u>	<ul style="list-style-type: none"><li>▪ Aimed at preventing wildlife species from disappearing</li><li>▪ Lists species at risk and categorizes them as threatened, endangered, extirpated, or of special concern</li><li>▪ Prohibits activities related to listed species, including killing or harming listed species and activities that result in the destruction of critical habitat</li><li>▪ Outlines measures to provide for the recovery of listed species</li><li>▪ Provides measures to manage species of special concern to prevent them from becoming endangered or threatened</li><li>▪ Requires that species at risk are considered in the EA process and any proposed mitigation strategies must be consistent with recovery strategies and action plans identified under SARA</li><li>▪ The maximum penalty for non-compliance is \$2-million and/or five years’ imprisonment</li></ul>



# Relevant Provincial Legislation & Regulations

PROVINCIAL LEGISLATION	SUMMARY AND ASSOCIATED REGULATIONS
<a href="#"><i>Drinking Water Protection Act (2001)</i></a>	<ul style="list-style-type: none"><li>▪ Aimed at ensuring the provision of safe drinking water by drinking water operators and suppliers</li><li>▪ Applies to most water supply systems, including small water systems, and provides for the establishment of drinking water protection plans</li><li>▪ Prohibits anyone from introducing hazardous substances to a domestic drinking water system or a drinking water source</li><li>▪ The <a href="#"><i>Drinking Water Protection Regulation</i></a> prescribes water quality standards for potable water and requires water supply operators to be certified by the Environmental Operators Certification Program</li><li>▪ The Regulation also imposes requirements for operating permits, water treatment, monitoring, testing and reporting, and public notification in the case of water quality issues</li><li>▪ The maximum penalty for non-compliance is \$200,000 and/or one years’ imprisonment</li></ul>
<a href="#"><i>Environmental Assessment Act (2018)</i></a>	<ul style="list-style-type: none"><li>▪ Establishes a comprehensive process for the identification of potential environmental impacts related to major projects in BC</li><li>▪ Act was revitalized in 2018 to ensure the legal rights of First Nations are respected and the public’s expectation of a strong transparent process are met</li><li>▪ Requires an EA be conducted for reviewable projects listed in the <a href="#"><i>Reviewable Projects Regulation</i></a></li><li>▪ New regulations are currently being developed, including the <i>Dispute Resolution Regulation</i>, <i>Capacity Funding Regulation</i>, <i>Administrative Monetary Penalties Regulation</i> and <i>Regional/Strategic Environmental Assessment Regulation</i> (<a href="#"><i>Blakes, Cassels &amp; Graydon LLP, 2020</i></a>)</li></ul>
<a href="#"><i>Environmental Management Act (2003)</i></a>	<ul style="list-style-type: none"><li>▪ The principal provincial piece of legislation governing environmental activities</li><li>▪ Prohibits the introduction of waste (including hazardous waste) into the environment in any way that causes pollution (<i>i.e.</i>, alters or impairs the health of the environment), except in accordance with a regulation, permit or code of practice</li><li>▪ The <a href="#"><i>Open Burning Smoke Control Regulation</i></a> sets rules about open (outdoor) burning and prohibits open burning of specific materials identified in the Regulation</li><li>▪ The <a href="#"><i>Waste Discharge Regulation</i></a> lists industries in which the introduction of waste into the environment is prohibited and prescribes activities which may operate under a code of practice or must have a permit</li><li>▪ The <a href="#"><i>Hazardous Waste Regulation</i></a> addresses the proper handling and disposal of hazardous wastes and any person generating hazardous waste must register the waste and apply for a provincial identification number</li><li>▪ The <a href="#"><i>Spill Reporting Regulation</i></a> lists substances that must be reported in the case of a spill or escape</li><li>▪ The <a href="#"><i>Contaminated Sites Regulation</i></a> establishes a detailed regime for the identification, determination, and remediation of contaminated sites, as well as the assessment and allocation of liability for remediation</li><li>▪ The <a href="#"><i>Recycling Regulation</i></a> sets out requirements for the province’s recycling program and for industry requirements for collection and disposal programs</li><li>▪ The <a href="#"><i>Municipal Wastewater Regulation</i></a> establishes water quality standards for discharges to ground, water, and for reclaimed waters and imposes monitoring requirements</li><li>▪ Establishes a number of offences: failure to handle and dispose of waste in accordance with the Regulations; failure to comply with the terms of a permit; and failure to report a spill or escape of waste into the environment</li><li>▪ The maximum penalty for non-compliance is \$1-million and/or six months’ imprisonment</li><li>▪ Additional administrative penalties of up to \$75,000 may be applied under the <a href="#"><i>Administrative Penalties Regulation</i></a></li></ul>
<a href="#"><i>Riparian Areas Act (1997)</i></a>	<ul style="list-style-type: none"><li>▪ Renamed from the <i>Fisheries Protection Act</i> (1997)</li><li>▪ Aimed at protecting and restoring fish habitat in provincial waters</li><li>▪ Provides authority for water managers to consider impacts to fish and fish habitat before approving new licenses, amendments to licenses or issuing approvals for work in or near streams</li><li>▪ Allows for the designation of sensitive streams and the development of recovery plans under the <a href="#"><i>Sensitive Streams Designation and Licensing Regulation</i></a></li><li>▪ The <a href="#"><i>Riparian Areas Protection Regulation</i></a> requires the protection of riparian areas during development through site-specific assessments by a Qualified Environmental Professional (QEP) on the effects of a proposed development on fish habitat</li></ul>
<a href="#"><i>Heritage Conservation Act (HCA, 1996)</i></a>	<ul style="list-style-type: none"><li>▪ Aimed at identifying and conserving sites of heritage or archaeological value</li><li>▪ Requires provincial maintenance of a <a href="#"><i>Heritage Site Registry</i></a> and registered sites are protected from alteration or damage without a permit</li><li>▪ Contains specific conditions for the handling of Aboriginal artefacts and sites</li><li>▪ Under the HCA, government may issue orders to stop work on any property that may have or does have heritage value</li><li>▪ Maximum penalties for non-compliance are \$50,000 and/or two years’ imprisonment for individuals and \$1-million for corporations</li></ul>



PROVINCIAL LEGISLATION	SUMMARY AND ASSOCIATED REGULATIONS
<a href="#"><u>Integrated Pest Management Act (2003)</u></a>	<ul style="list-style-type: none"><li>▪ Regulates pesticide applications that may be used to control invasive plant infestations</li><li>▪ Gives two general requirements that apply to most pesticides uses: pesticides must be applied in accordance with their federal government approved label (also a requirement of the <a href="#"><u>Pest Products Control Act</u></a>) and pesticides must not be used in a way likely to cause an unreasonable adverse effect to human health or the environment</li><li>▪ Under the Act, no person is authorized to use a pesticide in a manner that causes an “unreasonable adverse effect” on human health or the environment</li></ul>
<a href="#"><u>Public Health Act (2008)</u></a>	<ul style="list-style-type: none"><li>▪ Focus on public health issues including communicable disease and environmental health hazards</li><li>▪ The <a href="#"><u>Health Hazards Regulation</u></a> imposes requirements for prescribed setbacks of wells from probable sources of contamination, private dwellings, cemeteries and dumping grounds</li><li>▪ Under the <a href="#"><u>Sewerage System Regulation</u></a>: permits are required for the construction of holding tanks (<i>i.e.</i>, septic tanks); prescribed setbacks from wells are required for holding tanks and sewerage systems; and only qualified practitioners as prescribed in the Regulation are permitted to construct and maintain sewerage systems</li><li>▪ The <i>Sewerage System Regulation</i> also imposes requirements for maintenance of holding tanks and sewerage systems</li></ul>
<a href="#"><u>Transportation of Dangerous Goods Act (1996)</u></a>	<ul style="list-style-type: none"><li>▪ Aimed at regulating the transportation of dangerous goods in the province</li><li>▪ The <a href="#"><u>Transportation of Dangerous Goods Regulation</u></a> adopts the Regulation under the federal TDGA</li><li>▪ Dangerous goods are prohibited from being transported unless all prescribed safety requirements are complied with</li><li>▪ Imposes reporting requirements where a spill, discharge or escape of dangerous goods occurs</li><li>▪ The maximum penalty for general non-compliance is \$50,000 and/or two years’ imprisonment and penalties are doubled for additional offences</li><li>▪ The maximum penalty for non-compliance with reporting requirements is \$10,000 and/or one years’ imprisonment</li></ul>
<a href="#"><u>Water Sustainability Act (2014)</u></a>	<ul style="list-style-type: none"><li>▪ The BC <i>Water Sustainability Act</i> (WSA) is the main provincial regulation governing water resources in BC. It is applicable if “changes in and about a stream” are anticipated. Under the Act, this means:<ul style="list-style-type: none"><li>- Any modification to the nature of the stream including the land, vegetation, natural environment or flow of water within the stream; or</li><li>- Any activity or construction within the stream channel that has or may have an impact on a stream.</li></ul></li><li>▪ The WSA includes considerations aimed at protecting stream health and aquatic environments; considering water in land use decisions; regulating and protecting groundwater use; improving security, water use efficiency, and conservation; and measuring and reporting water use</li><li>▪ The <a href="#"><u>Groundwater Protection Regulation</u></a> establishes standards to protect groundwater supplies and requires all wells to be properly constructed, maintained, deactivated and closed</li><li>▪ The WSA includes policies giving government authority to impose and collect fines, and to order site remediation or prosecution as an alternative to fines</li></ul>
<a href="#"><u>Water Protection Act (1996)</u></a>	<ul style="list-style-type: none"><li>▪ Aimed at fostering sustainable use of the province’s water resources</li><li>▪ Prohibits the removal of water from the province and the construction or operation of projects requiring the transfer of water from one major watershed to another</li><li>▪ The maximum penalty for non-compliance is \$200,000 and/or one years’ imprisonment</li></ul>
<a href="#"><u>Weed Control Act (1996)</u></a>	<ul style="list-style-type: none"><li>▪ Aimed at protecting the province’s economy, natural resources, and society from the negative impacts of foreign weeds, and is administered by the Ministry of Forest, Lands and Natural Resource Operations</li><li>▪ Requires all land occupiers to control the spread of provincial and/or regional noxious weeds on their land and premises, and specifies provisions for transportation, movement, and cleaning of machinery</li></ul>
<a href="#"><u>Wildlife Act (1996)</u></a>	<ul style="list-style-type: none"><li>▪ Regulates the management of wildlife in the province</li><li>▪ Protects wildlife from direct harm or harassment</li><li>▪ The <a href="#"><u>Controlled Alien Species Regulation</u></a> allows for the control of non-native species</li><li>▪ Protects birds and their eggs from possession or destruction</li><li>▪ Contains specific protections for raptors (<i>e.g.</i>, eagles) and their nests</li><li>▪ The maximum penalty for non-compliance is \$250,000 and/or two years’ imprisonment</li></ul>





# Appendix 1-B

Reference First Nation Laws







LEGISLATION	COMMUNITY	PURPOSE	SUMMARY
<i>Development Law (2015)</i>	Seabird Island First Nation	To promote environmentally sustainable, healthy, safe, convenient, and well planned use for Seabird Lands.	<ul style="list-style-type: none"> <li>Prohibits approvals without applications for developments</li> <li>Reviews subdivision, development and servicing</li> </ul>
<i>Environmental Protection Law (2017)</i>	Skowkale First Nation	<ol style="list-style-type: none"> <li>To address concerns of introduced and continued presence of waste, including historic and ongoing contamination.</li> <li>To establish framework to regulate introduction of waste, implement measures to safeguard against environmental emergencies, and manage and remediate contaminated sites.</li> </ol>	<ul style="list-style-type: none"> <li>Prohibits introduction, cause, or allow of waste introduction to Environment that will cause pollution</li> <li>Includes outline for permits, licenses and the suspension, cancellation or exceptions of such</li> <li>Outlines for Environmental Emergency procedures and operations</li> <li>Enforcement provided through inspector and penalties</li> <li>Outlines contaminated site remediation requirements for both owned and orphaned</li> </ul>
<i>Community Quality Law (2016)</i>	Skowkale First Nation	To promote a healthy and safe community environment.	<ul style="list-style-type: none"> <li>Prohibits illegal dumping, littering, storage of waste and unsightly derelict materials, excessive noise, disorderly conduct, and fireworks on Skowkale lands</li> <li>Includes provisions for fireworks permits, enforcement officers and penalties</li> </ul>
<i>Environmental Management Law (2017)</i>	Sq'ewa:lxw First Nation	To ensure that the Sq'ewa:lxw people's vision of a safe, prosperous, and sustainable community is achieved while caring for our land and water.	<p>Allows for:</p> <ul style="list-style-type: none"> <li>The prohibition of improper disposal of wastes, industrial wastes, and litter</li> <li>The development and implementation of Sq'ewa:lxw Environmental Operating Procedures</li> <li>Control of the movement, import, export of soils</li> <li>The prohibition of the discharge of contaminants</li> <li>Control of handling, storage, and transportation of fuel and environmental contaminants.</li> <li>The remediation of contaminated sites</li> <li>The issuing of Environmental Permits for the handling, treatment, transportation, storage, and introduction of contaminants into the environment</li> <li>The issuing of Environmental Orders and Remediation Orders</li> <li>Enforcement of the Law</li> </ul>
<i>Environmental Assessment Law (2014)</i>	Matsqui First Nation	<ol style="list-style-type: none"> <li>Protect Lands from significant adverse environmental effects.</li> <li>Identify potential environmental effects before decisions are made to proceed.</li> <li>Promote cooperation and coordinated action between Matsqui and other governments with respect to environmental assessments.</li> <li>Ensure timely environmental assessment.</li> </ol>	<p>Establishes requirements for:</p> <ul style="list-style-type: none"> <li>Environmental assessments and approvals</li> <li>Project applicability and exemptions</li> <li>The environmental assessment process and associated procedures</li> <li>Administration and enforcement including penalties</li> </ul>
<i>Land Use &amp; Zoning Law (2017)</i>	Sq'ewa:lxw First Nation	To promote environmentally responsible, healthy, safe, convenient, and well planned use of Sq'ewá:lxw lands.	<ul style="list-style-type: none"> <li>Establishes a process for developing a land use plan</li> <li>Regulates land uses in line with the land use plan through the establishment of an authorization process</li> <li>Establishes land use zones and associated objectives, permitted uses, and prohibited uses</li> <li>Identifies a list of generally prohibited activities</li> </ul>
<i>Vacant &amp; Dangerous Buildings Law (2018)</i>	Skowkale First Nation	<ol style="list-style-type: none"> <li>To address concerns of risks to health and safety of member posed by vacant buildings and by dangerous or illegal activities undertaken within structures.</li> <li>To establish framework to safeguard against health and safety hazards posed by vacant buildings and dangerous and illegal uses of buildings.</li> </ol>	<ul style="list-style-type: none"> <li>Defines the requirements for vacant buildings and the exceptions</li> <li>Outlines permit options for vacant buildings</li> <li>Includes outline for entering property and buildings for inspections, and emergencies</li> <li>Compliance addressed through fines and further action if required</li> </ul>
<i>Business Permit Law (2016)</i>	Skowkale First Nation	To record and regulate businesses on Skowkale lands.	<ul style="list-style-type: none"> <li>Prohibits the operation of a business without a valid permit</li> <li>Includes information required for a business permit and an overview of the permitting process</li> <li>Includes provisions for penalties and enforcement</li> </ul>



LEGISLATION	COMMUNITY	PURPOSE	SUMMARY
<i>Outdoor Fires Laws (2018)</i>	Sq’ewa:lxw First Nation	To promote safety and to protect Sq'ewa:lxw lands, members, occupants, buildings, and resources from potentially hazardous results of improper outdoor fire and burning practices.	<ul style="list-style-type: none"><li>Prohibits the lighting, fueling, or use of fire on Sq'ewa:lxw lands except under certain circumstances (e.g., camp fire) or with a permit (e.g., for Ceremonial or Traditional fires)</li><li>No person shall have any fire on Sq'ewa:lxw lands when prohibited to do so under a burning ban or in high winds</li></ul>
<i>Noise Control Law (2018)</i>	Sq’ewa:lxw First Nation	To prevent unreasonable noise that is likely to disturb the community.	<ul style="list-style-type: none"><li>Allows for the prohibition of any noise in or on a public or private place which disturbs or tends to disturb the quiet, peace, rest, enjoyment, comfort, or convenience of any person or persons</li><li>Specifically prohibits:<ul style="list-style-type: none"><li>The use of property to make such noise</li><li>The playing of instruments or electronic apparatus between 11 pm and 8 am;</li><li>Harboring any animal/pet that makes such noise for any period in excess of one hour</li><li>Constructing or demolishing any structure so as to make such noise between 8 pm and 8 am, or on Sundays or statutory holidays</li><li>Operating nay outdoor public address system without a permit</li><li>Operation of recreational vehicles that make such noise</li></ul></li></ul>
<i>Animal Control &amp; Protection Law (2018)</i>	Sq’ewa:lxw First Nation	To protect the welfare of animals residing on Sq'ewa:lxw Lands and to provide measures of safety and control for the residents of Sq'ewa:lxw lands.	<p>Allows for:</p> <ul style="list-style-type: none"><li>Prohibition of free-roaming dogs</li><li>Restraint, enclosure, and muzzling of vicious dogs</li><li>Prohibition of choke collars</li><li>Isolation of diseased animals</li><li>Limiting of ownership of the number of dogs (2) and cats (2) on a property of under 0.5 hectares (1.2 acres)</li><li>Prohibition of poor treatment of animals through neglect and cruelty</li><li>Proper feeding, watering, housing, and veterinary care of animals</li><li>Licensing of dogs at a future date should Sq'ewa:lxw proceed with such a program</li></ul>
<i>Dog Licensing &amp; Animal Management (2014)</i>	Tzeachten First Nation	To control and regulation dog and animal management to promote safe and respectful ownership.	<ul style="list-style-type: none"><li>Defines “Aggressive Dog” and “Dangerous Dog”; Dog and animal businesses; “Exotic Pet”; “Livestock”; “Nuisance Dog”; “Poultry”</li><li>Limits number of pets for one ‘Owner’, exceptions are listed</li><li>Prohibits livestock and poultry; bees, apiaries (except under permit); certain dog activities</li><li>Dog license are required and requirements and responsibility under license are listed</li><li>Enforcement and penalties are enforced by the authority of the Animal Control Officer and are outlined for seizure of dogs, impoundment, destruction, and animal care and control</li></ul>
<i>Enforcement &amp; Ticketing Law (2012)</i>	Tzeachten First Nation	The purpose is to promote fair, effective and efficient enforcement of laws.	<ul style="list-style-type: none"><li>Outlines appointment and authority for Enforcement Officers</li><li>Requirements for issuing a ticket and penalties</li><li>Outlines how fines and tickets are paid, or the process for a hearing of a dispute</li><li>Define failure to responds to ticket and subsequent procedures upon meeting this definition</li></ul>