SAVARY ISLAND
COMMUNITY PLAN

BACKGROUND REPORT

Savary Island
Official Community Plan

FINAL | March 25, 2025

Submitted to:

qathet
REGIONAL DISTRICT

Acknowledgements

Created by Bluerock Planning Inc.

Project team:

- Jonathan Schmidt, Project Manager
- Kelly Learned, Senior Planner
- Kacia Tolsma, Planner & Climate Change Analyst
- Steve Schaming, GIS & Mapping

Administration & Planning team:

- Laura Roddan, General Manager of Planning Services
- Cherise Roberts, Planner

Final Version: March 25, 2025

Land Acknowledgement

qɛyɛ qʷən (Qaye qwun) is the place name for Savary Island in ʔayʔaǰu θ əm (Ay-A-Ju-Thum), the language spoken by the Tlaʾ amin, Homalco, Klahoose, and Kòmoks people. The word qɛyɛ qʷən means freshwater spring. The island has this name because of the three freshwater sources on the island. The springs on the island also carry the name qɛyɛ qʷən.

The name qɛyɛ qʷən was given to the island after the transformer came and transformed ʔayhos (Ay hos), a double-headed serpent, into the physical island we see today. When ʔayhos was feasting near maƛ nač (Mutl nach / Mitlenatch), χa χ yɛ ti qaymɪxʷ (the transformer) came and transformed the serpent into an island to stop him from getting to his cave at χ a χ a giɬ (XaXa geetl / Hurtado Point). The solid rock at the end of the island is where the transformer stopped ʔayhos. At χ ɛ χ aǰeyɪs (XeX yales / Beacon Point), the transformer speared ʔayhos, which left a water hole that never goes dry, even in the summer.

Since time immemorial, Tla'amin people have occupied qɛyɛ qʷ ən. Tla'amin people living on qɛyɛ qʷən participated in ceremonies and spiritual gatherings, clam digging, root digging, and berry picking.

Near the reef, there was also a herring spawning area in the past. To this day, ancestral remains and burial sites are still being found on qɛyɛ qʷən, often on private property. The island continues to be an important place in ʔəms giǰɛ (Tla'amin territory) for these uses. Today, Tla'amin Nation is a modern self-governing Nation with a desire to restore Tla'amin Nation's rightful place and decision-making role throughout Tla'amin territory.

Place names are important and reflect the relationships between ʔayʔaǰu θ əm speakers and their territories. Colonial place names on the island have erased the knowledge held by ʔayʔaǰu θ əm place names, with some English place names on the island being racist and derogatory. Work is being done to officially change derogatory place names. While Elders were able to share teachings and identify place names on qɛyɛ qʷən, many place names were lost because of the impacts of colonization and residential schools.

- *Tla'amin Nation Lands and Resources Department and Culture, Language & Heritage Department*

In our efforts to protect and conserve Savary Island's unique ecosystems, we are committed to fostering respectful relationships with the Indigenous communities who have long safeguarded this land.

This report endeavors to use the ʔayʔaǰuθəm (Ay-A-Ju-Thum) place names where possible, in recognition of the First People of this land, and to avoid use of disrespectful labels commonly used in the past.

Table of Contents

1 PURPOSE 1
2 COMMUNITY CONTEXT 2
3 PLANNING CONTEXT & JURISDICTIONS.....9
4 BASE MAPS.....11
5 DEVELOPABLE LAND ANALYSIS 15
6 HOUSING REPORTS.....29
7 CLIMATE CHANGE ASSESSMENT 32
8 REVIEW OF PLANS, REPORTS & STUDIES.....39
9 SUMMARY OF FINDINGS 60
10 APPENDIX: RESOURCES 61

List of Maps

Map 1 | Regional Context 3
Map 2 | Transportation & Services 7
Map 3 | Conservation Lands 12
Map 4 | Land Ownership 14
Map 5 | Savary Island Subdivided Lots (west)..... 16
Map 6 | Savary Island Subdivided Lots (central) 17
Map 7 | Savary Island Subdivided Lots (east)..... 18
Map 8 | Land Development 21
Map 9 | Undeveloped Land 24

List of Figures

Figure 1 | Savary Island Jurisdictions Overview.....9
Figure 2 | Developed Lots on Savary Island.....20
Figure 3 | Savary Island Developed Parcels 1996-2024 22

List of Tables

Table 1 | Government Jurisdictions on Savary Island.....10
Table 2 | Savary Island Parcel Class and Ownership.....13
Table 3 | SSID Occupancies and Populations 2023.....26
Table 4 | SSID Occupancy and Population Estimates 27
Table 5 | Development Projections by SSID 2024-2035 28
Table 6 | Development Projections by SSID 2036-2049 28
Table 7 | qRD Housing Needs Report Summary 30
Table 8 | Potential Climate Change Implications.....33
Table 9 | Climate Change Projections Savary Island.....37
Table 10 | List of Reviewed Plans, Reports, and Studies 39

1 PURPOSE

The purpose of this report is to compile and present the background work and analysis completed by the Bluerock Planning consultant team in preparation for updating the Official Community Plan (OCP) for Savary Island. This document aims to provide an overview of the reports relevant to the planning process and to uncover trends that have occurred on Savary over time. While detailed numbers may not be the most current, trends are key to informing the OCP.

Important note regarding review of reports and technical studies for the Background Report: Savary Island Community Plan policies will be determined through engagement with community members, the Advisory Committee, qathet Regional District staff and directors, and the OCP consultant team and no single technical study will be implemented verbatim into policy or regulation.

1.1 Overview of Report Contents

Community Context

- This section summarizes Savary Island's unique planning context within provincial, federal, and regional government jurisdictions.

Base Maps:

- Base maps show key geographical features and layouts. Full PDFs of these maps are available for download upon request, ensuring comprehensive access to detailed mapping data.

Developable Land Analysis:

- The project team has conducted baseline analysis of land on Savary. There are some limitations on the available information, particularly as it pertains to developed and undeveloped land.

Housing Reports:

- The qRD has conducted two housing reports. Because the data is region-wide, extrapolating Savary Island specific data is limited. However, some of the recommendations are relevant to the OCP update.

Climate Change Analysis:

- A climate change assessment was conducted to evaluate the implications of climate change on land use within the Savary Island context.

qRD Plans and Documents Review:

- This section summarizes the review of relevant plans and documents commissioned or completed by the qathet Regional District (qRD). These findings are included to provide context and reference for the OCP update.

2 COMMUNITY CONTEXT

2.1 Location & Geography

Savary Island is located within the qathet Regional District (qRD) off the southern coast of British Columbia, lying within the Georgia Strait between Vancouver Island and the mainland (see **Map 1 | Regional Context**). The island is positioned approximately 6 kilometers southwest of Lund and 30 kilometers northwest of Powell River, the nearest urban center providing access to essential goods and services.

Savary Island is known for its unique geography, featuring extensive sandy beaches, coastal dunes, and diverse ecosystems. Its narrow, crescent-shaped landmass extends approximately eight kilometers in length and varies in width, reaching approximately one kilometer at its widest point. The island's terrain includes a mix of coastal bluffs, forested areas, wetlands, and grasslands, creating a rich and varied landscape. The island's low elevation and porous, sandy soils contribute to its distinct environmental characteristics, particularly affecting water retention, vegetation, and groundwater availability. Unlike many neighboring islands that feature rocky shorelines, Savary's predominantly sandy composition presents unique challenges and opportunities for land use and conservation efforts.

The island's remote location and limited infrastructure influence its accessibility and development patterns. Most transportation to and from Savary is facilitated through Lund, which serves as the primary departure point for water taxis and private boats. Powell River, located further inland, provides a connection to larger regional services, including health care, retail, and transportation links to Vancouver Island.

Savary Island's geography plays a crucial role in shaping its development and community dynamics, influencing key issues such as land use planning, environmental conservation, seasonal population fluctuations, and housing demand.

CONTEXT MAP

qathet Regional District

Inset Map Legend

- Tla'amin Nation
- qRD Boundary
- City of Powell River
- Municipalities
- Electoral Areas Boundary

Main Legend

- Planning Area Boundary
- Town/City
- Savary Island Dock
- Water Taxi
- Trail
- Road

Color-Blind Friendly

Created January, 2025 by Bluerock Planning inc.
Source Data: Qathet Regional District, iMAP BC

2.2 qathet Regional District Area "A"

Savary Island is within the qathet Regional District (qRD) Electoral Area A. As shown on **Map 1 | Regional Context**, Electoral District A covers a wide expanse of land in the northwestern portion of the qRD and includes the Malaspina Peninsula, the communities of Lund, Savary and Hernando Islands, and excludes Tla'amin Nation lands.

2.3 Area A & Savary Island Populations

The total population for qRD Area A according to the 2021 census is 1,250, an increase from 1,105 in 2016. Although exact population numbers are not available for Savary Island, estimates are approximately 100 to 200 permanent residents growing to 2,000+ seasonal residents in the summer.

2.4 First Nations History

Savary Island is called Qaye qwun (qɛyɛ qʷən) by the Tla'amin (ɬaʔamin) people and is located on the traditional territory of the Tla'amin, Klahoose, and Homalco First Nation. The land was an important place for harvesting deer, clams, cedar bark, berries and medicines. The island was also used as a burial site for thousands of years. There is indication that the island was also a cultural place for ceremonial and spiritual gatherings. Modern developments have encountered archaeological artifacts. It is prudent to be aware of provincial laws pertaining to archaeological preservation during excavation and construction on Savary Island. These First Nations have a common history in the area that dates back over 8,500 years with countless archaeological sites that document their history, culture, and presence in the area.

Tla'amin Final Agreement

After 25 years of negotiations with the Provincial and Federal governments the Tla'amin Final Agreement was signed in 2014[3]. The agreement came into effect April 5, 2016 and Tla'amin became a self-governing Nation. The Citizens of Tla'amin have the right to harvest wildlife and migratory birds for food, social and ceremonial purposes within any Wildlife and Migratory Birds Harvest Area. The Nation also owns and has authority to manage all timber and forest resources on Tla'amin Lands. The Tla'amin Nation owns several parcels of land on Savary Island.

The Tla'amin Nation has signed overlap agreements with both the Klahoose and Homalco First Nations and these protocol agreements will be maintained into the future.

2.5 Economics.

The economics of Savary Island are simple with few people working on the Island and a majority of economic activity surrounding the Island being related to summertime holiday homes and tourism. There are activities surrounding real estate transactions, small commercial ventures and fisheries.

2.6 Infrastructure

2.6.1 Water

The island's water supply relies on sand-based aquifers that are vulnerable to contamination. While groundwater quality generally meets drinking standards, some wells show elevated nitrate and chloride levels.

2.6.2 Sewage

There are no public or communal sewage systems on the Island. Individual properties have their own sewage disposal systems (e.g. septic system and tank).

Elevated nitrate levels in some wells indicate septic discharge impacts, while seawater intrusion further complicates wastewater management.

2.6.3 Storm Water

There is no public storm water infrastructure on the Island. Rainfall results in natural overland flows.

2.6.4 Electricity

There is no electricity on Savary Island other than individual power generation from solar or household generators.

2.7 Mobility and Transportation

Mobility and transportation on the Island are different than many other places, including larger Islands. Transportation options on the Island include walking, cycling, and rural roads for driving. The island is good for cycling given the size of the Island and its current infrastructure.

2.7.1 Roads & Pathways

The Island has approximately 27 km of roads, which are maintained by the province's Ministry of Transportation and Transit (MOTT). These roads and some additional trails are also available for cycling and walking.

2.7.2 Water Taxi

The Island's residents and visitors rely heavily on water taxis to get to and from the Island. Various water taxis are available to Lund and Campbell River depending on the schedule. The Lund Water Taxi is available year-round.

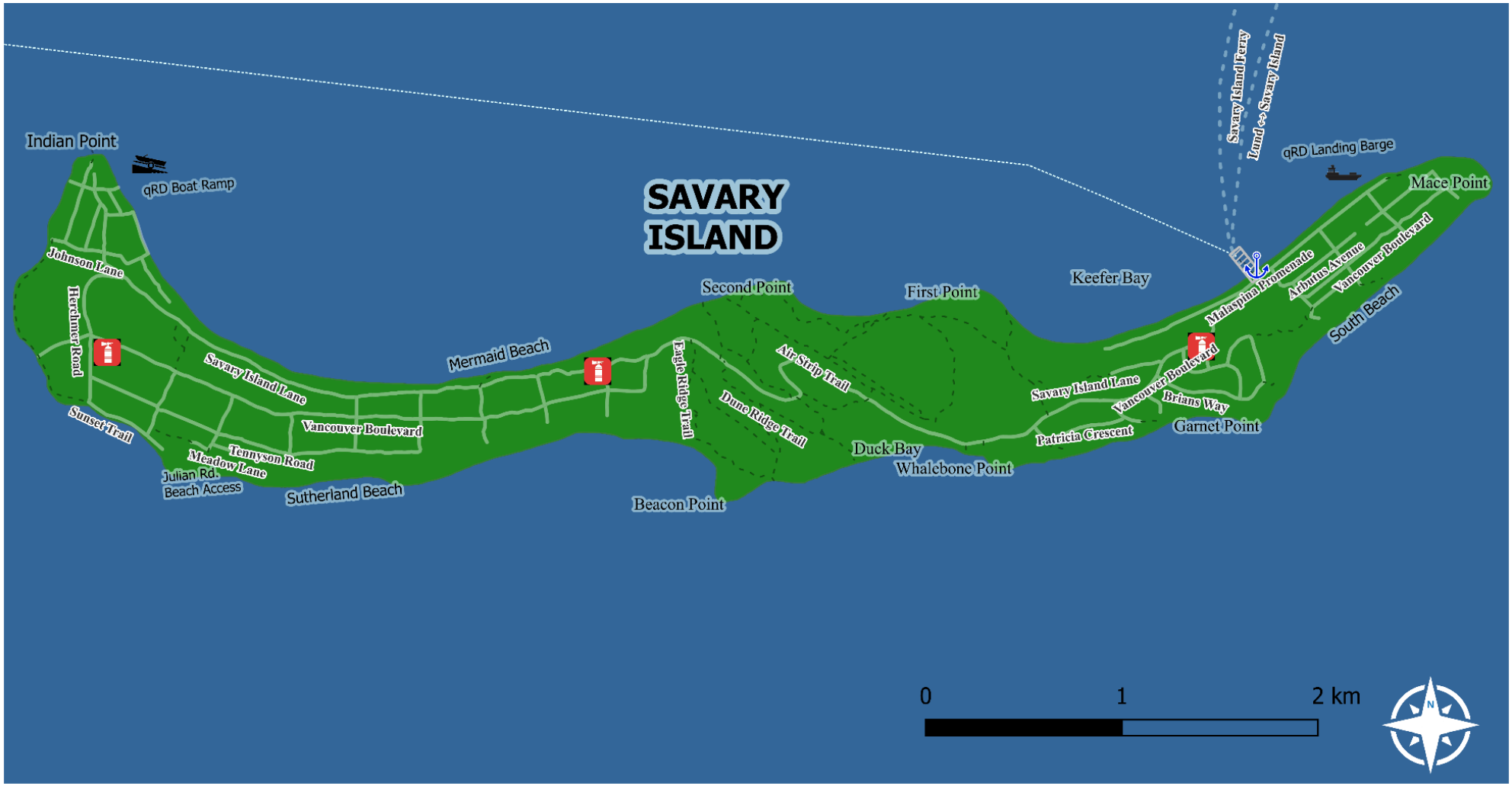
Savary Island Water Taxis

- Lund Water Taxi, Available Year-Round with Discounts for frequent Users
- Savary Island Ferry, Available for Charters Year Round
- Way West, Available for Charters Year Round

2.8 Fire Service

There are currently three firehalls on the Island (see **Map 2**) and a volunteer fire service for Savary Island. The Savary Island Volunteer Fire Department provides firefighting and medical first responder service across all Savary Island.

Map 2 | Transportation & Services



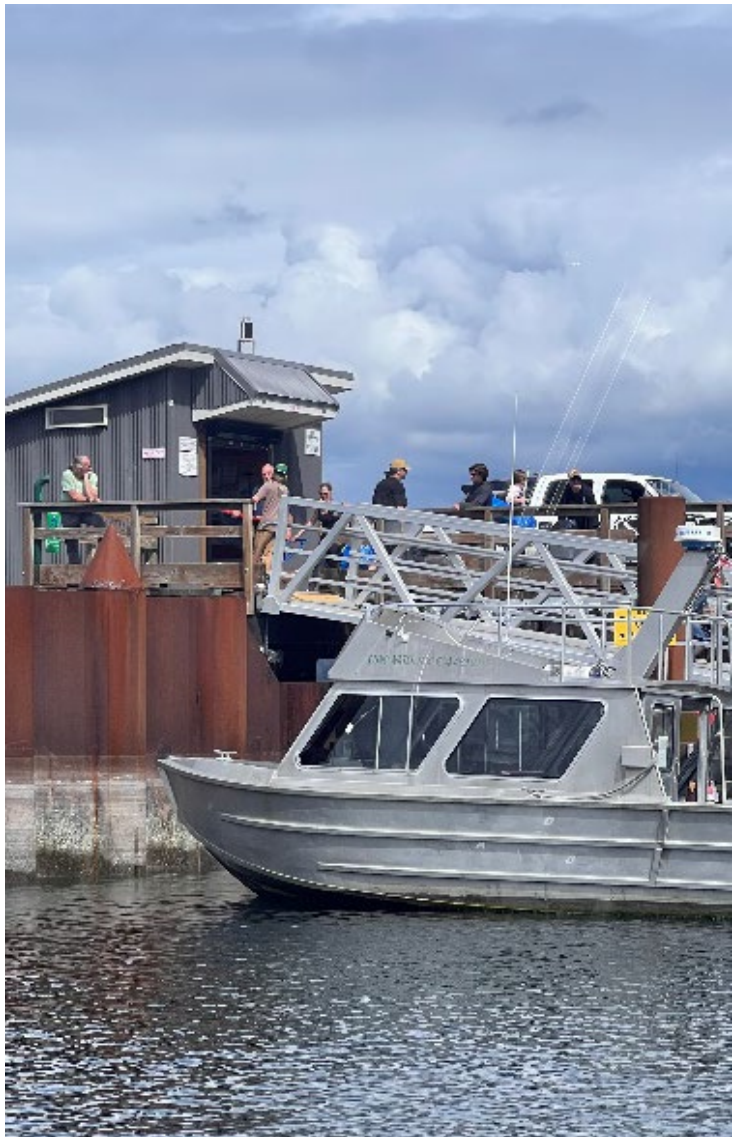
TRANSPORTATION & SERVICES

qathet Regional District

- Savary Island Dock
- Firehall
- qRD Landing Barge
- qRD Boat Ramp
- Campbell River Water Taxi
- Water Taxi
- Trail
- Ministry of Transportation & Infrastucture Road

Color-Blind Friendly

Created August, 2024 by Bluerock Planning inc.
Source Data: Qathet Regional District, iMAP BC



Savary Water taxi at Savary Island dock.

Cycling on one of Savary's dirt roads.

3 PLANNING CONTEXT & JURISDICTIONS

Savary Island has a unique planning context compared to many other municipalities and areas of British Columbia. The Island is located within Electoral Area A of the qathet Regional District (qRD). The Island is also impacted by federal and provincial jurisdictions, including the Federal Department of Fisheries and Oceans, Vancouver Coastal Health (VCH) and various provincial ministries. The qRD does not have a zoning bylaw or building bylaw for Savary Island. Jurisdictions on the Island, including provincial and federal are shown on **Figure 1 | Savary Island Jurisdictions** and **Table 1 | Government Jurisdictions on Savary Island.**

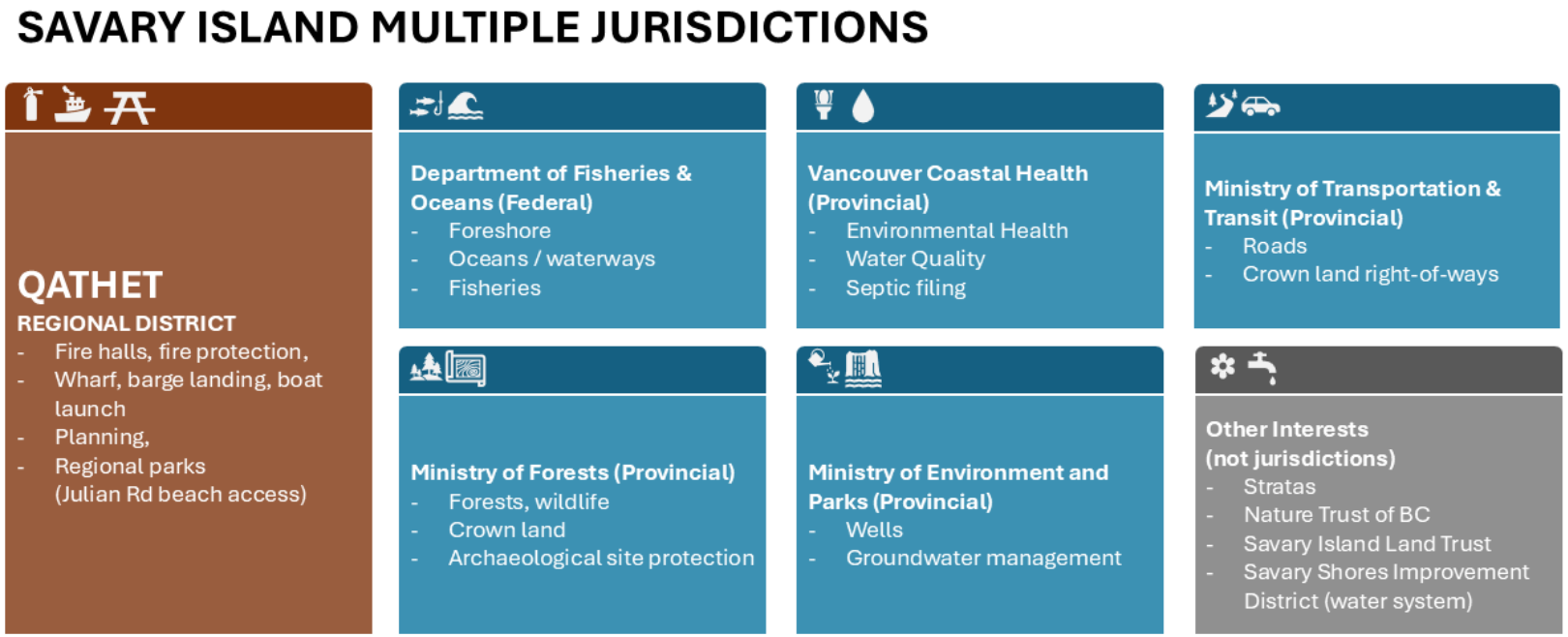


Figure 1 | Savary Island Jurisdictions Overview

Table 1 | Government Jurisdictions on Savary Island

Level of Government	Overview of Areas of Jurisdiction

Federal Jurisdiction	• Fisheries and Oceans Canada (DFO)
	  ▪ Ocean, foreshore, and fisheries
	• Environment and Natural Resources Canada
	  ▪ Species at Risk

Provincial Jurisdiction	• Ministry of Transportation and Transit (MOTT)
	  ▪ Roads and road right-of-ways
	• Ministry of the Environment and Parks
	  ▪ Wells, groundwater management and wildlife management
	• Ministry of Health (Vancouver Coastal Health)
	  ▪ Environmental health, water quality and septic filing
	• Ministry of Water, Land and Resource Stewardship
	  ▪ Land and natural resource management

qathet Regional District	• Planning Services, Official Community Plan • Regional Parks Services – Julian Road beach access trail • Fire Protection Services – fire halls, Savary Island volunteer fire department • Operational Services – wharf, barge ramp, boat launch

BC Building Code Requirements: The building owner is ultimately responsible for ensuring that construction work proceeds according to the requirements of the BC Building Code. This is the case for both new buildings under construction and existing buildings being altered, repaired or demolished. The qRD does not have a building bylaw to regulate or enforce the BC Building Code.

4 BASE MAPS

Basemaps play an important role in the development of an Official Community Plan (OCP). These maps provide visual representation of various foundational elements such as topography, roads, and infrastructure. Integrating basemaps into the planning process offers several significant benefits outlined below. Note, some of the elements described below may not apply to Savary Island's unique context and are provided to inform the reader of typical planning process considerations.

• **Enhanced Understanding of Geographic Context**	Basemaps offer a clear depiction of the Island's physical landscape, including elevation changes and natural features.
• **Infrastructure Planning and Management**	By displaying existing roads, utilities, and other infrastructure, basemaps enable an assessment of current resources and connectivity. This information is essential for planning upgrades, expansions, and maintenance, ensuring the current and planned infrastructure can support future growth and development if desired.
• **Informed Land Use Decisions**	Identify suitable areas for various land uses, including residential, commercial, industrial, and recreational zones by illustrating current land use patterns and potential constraints such as flood zones, wildfire risk or steep terrain.
• **Improved Public Engagement**	Visual tools like basemaps facilitate better communication with residents and stakeholders. They make complex data accessible and understandable, fostering greater community involvement in the planning process.
• **Environmental and Conservation Planning**	Topographic and natural feature maps are vital for environmental conservation efforts. They help identify critical habitats, water bodies, and other ecological assets that need protection, guiding sustainable development practices that preserve the Island's natural beauty.
• **Disaster Preparedness and Risk Management**	Basemaps assist in identifying vulnerable areas and planning for emergency response, helping to mitigate risks from natural disasters such as wildfires.

All the maps presented are fully available in PDF documents on request.

Map 3 | Land Ownership

LAND OWNERSHIP

qathet
REGIONAL DISTRICT

- Provincial Government
- First Nation
- Municipal Government
- PRIVATE
- Unclassified
- Warf
- Savary Island Dock
- Water Taxi
- Road

Color-Blind Friendly

Created August, 2024 by Bluerock Planning inc.
Source Data: Qathet Regional District, iMAP BC

4.1 Land Ownership Distribution

Ownership analysis involves identifying parcels owned by private individuals, corporations, and public entities. This provides insight into the availability of land for potential future development, potential challenges, and opportunities for collaboration. Publicly owned lands may offer potential for community-oriented projects. **Table 2** and accompanying **Map 3 | Land Ownership** show the majority of land on the Island is private land, with 1413 (57.4%) of parcels private. The Island also contains conservation lands as shown on **Map 4 | Conservation Lands** including lands owned by Savary Island Land Trust (SILT), and BC Nature Trust. Conservation Lands cover 24 parcels and 34.8% of land on the Island (see **Table 2**).

Table 2 | Savary Island Parcel Class and Ownership

Owner Type	# of Parcels	% of Parcels	Hect-ares	% of land
PRIVATE				
Private Parcels	1413	95.1%	229.21	57.4%
Private Conservation Lands (SILT, BC Nature Trust)	24	1.6%	138.83	34.8%
PROVINCE OF BC	14	0.9%	11.93	3.0%
LOCAL GOVERNMENT	4	0.3%	0.91	0.2%
FIRST NATION	2	0.1%	0.26	0.1%
OTHER	29	2.0%	18.09	4.5%
Total	**1486**	**100%**	**399.27**	**100%**

Map 4 | Conservation Lands

CONSERVATION LANDS

qathet Regional District

- Planning Area Boundary
- Savary Island Land Trust
- Nature Trust of BC
- Province of BC
- Private and Other
- Savary Island Dock
- Water Taxi
- Trail
- Road

Color-Blind Friendly

Created November, 2024 by Bluerock Planning inc. Source Data: Qathet Regional District, iMAP BC

5 DEVELOPABLE LAND ANALYSIS

5.1 Subdivision – Savary Island History

Savary Island is unique for a rural area due to the density of subdivided parcels. The current subdivision pattern of the Island goes back to 1910, when approximately two-thirds of the Island was subdivided into 1441 small lots. Since 1910, more lots have been subdivided, bringing the total number of lots on the Island to 1486 according to obtained data. Some lots have also been consolidated.

5.2 Past Studies on Development of Savary

Due to the atypically large number of subdivided lots per hectare on the Island for a rural area, past studies have also analyzed the state of development on the Island. These studies included the 1996 Tupper Groundwater Resources Report[1], and the 2006 Savary Island OCP[2].

1. ***1996 Tupper Groundwater Resources Assessment Report***

A survey of developed parcels on Savary Island was undertaken as part of the Tupper Groundwater Resources Assessment Report[1] in 1996 revealed that 471 lots had been developed, and a further 20 dwellings were under construction.

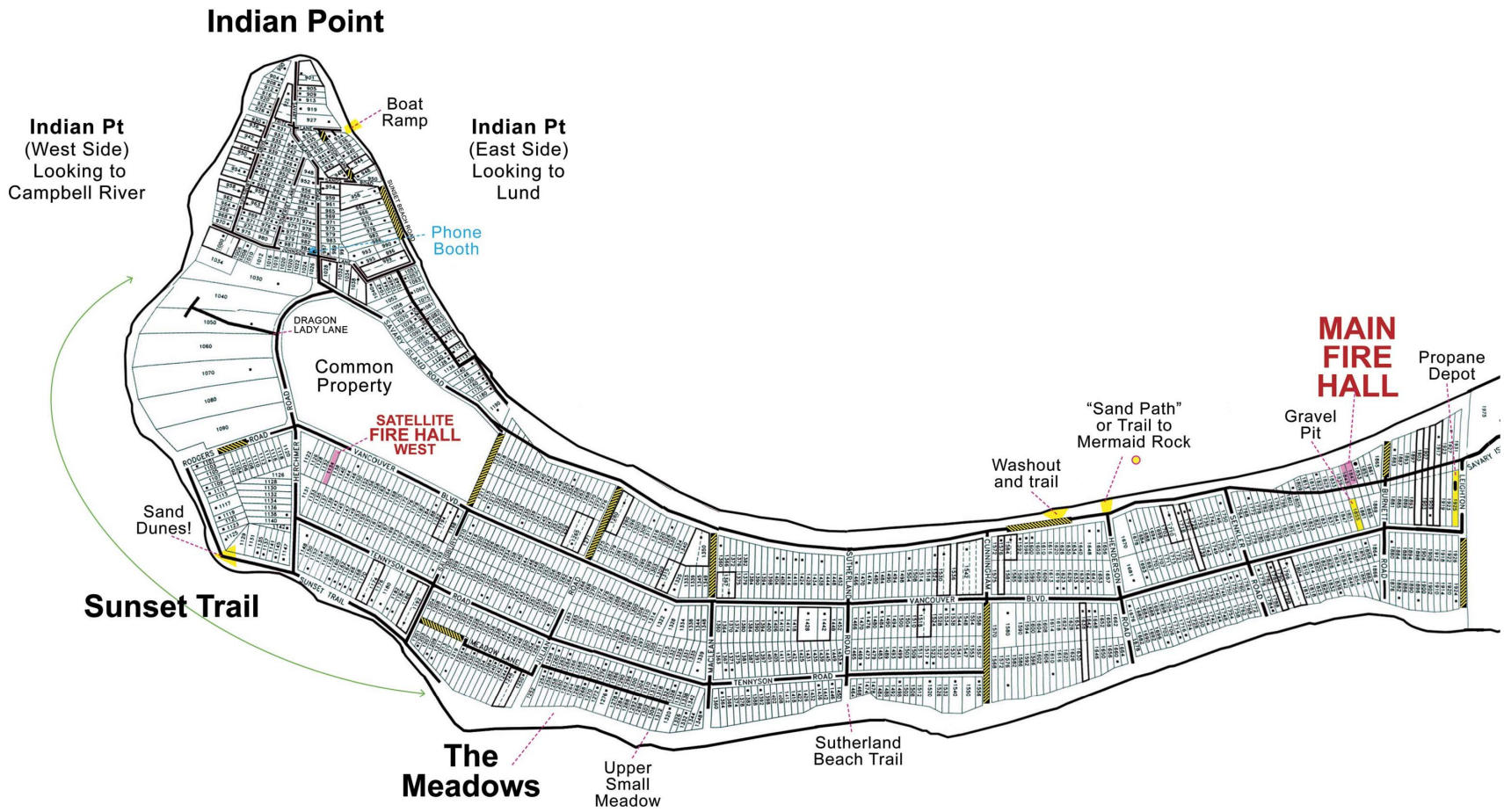
2. ***2006 OCP & Assessment Data***

The 2006 Savary Island OCP[2] effort included analysis of the assessment roll to determine the amount of development on the Island. The 2006 assessment roll indicated 647 developed properties on Savary. Based on the 1996 Tupper report of 471 developed lots, 176 new lots were developed between 1996 and 2006. This is an average of 19.5 per year. The analysis also indicated there were 764 vacant parcels on the Island that may have development potential; suggesting that fewer than half the lots on Savary were developed in 2006.

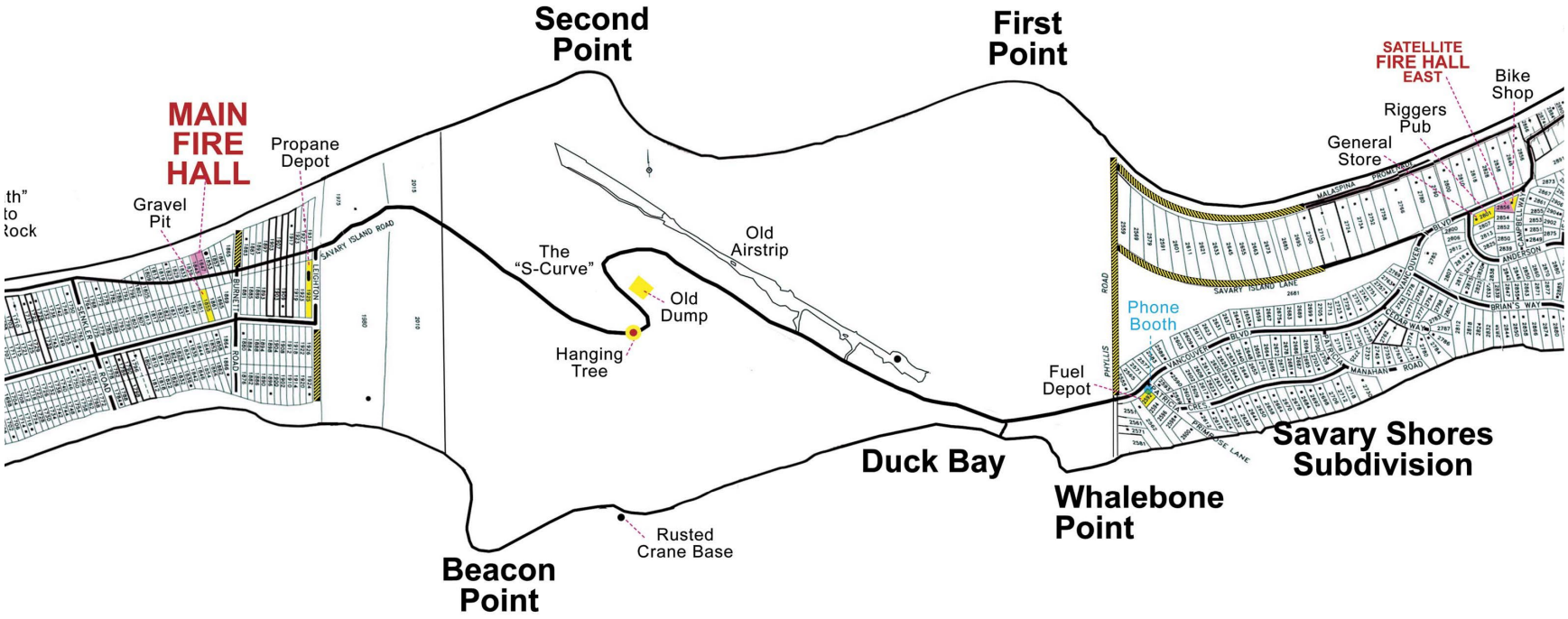
5.3 Subdivision – Current State

Savary Island has a relatively small size of 450 ha (1,111 acres) and has been subdivided into 1486 legal parcels (see **Map 5 | Subdivided Lots**). The average lot size is between 700 and 1400 sq. metres (7,500 to 15,000 sq. feet) in area. In most cases, parcels have an average width of 15.24 metres (50 ft.). Only 7 parcels are part of a bare land strata, the rest are fee simple. Due to the small size of many of the lots, some landowners own multiple adjoining lots. The number of lots for an island this size would be considered atypical.

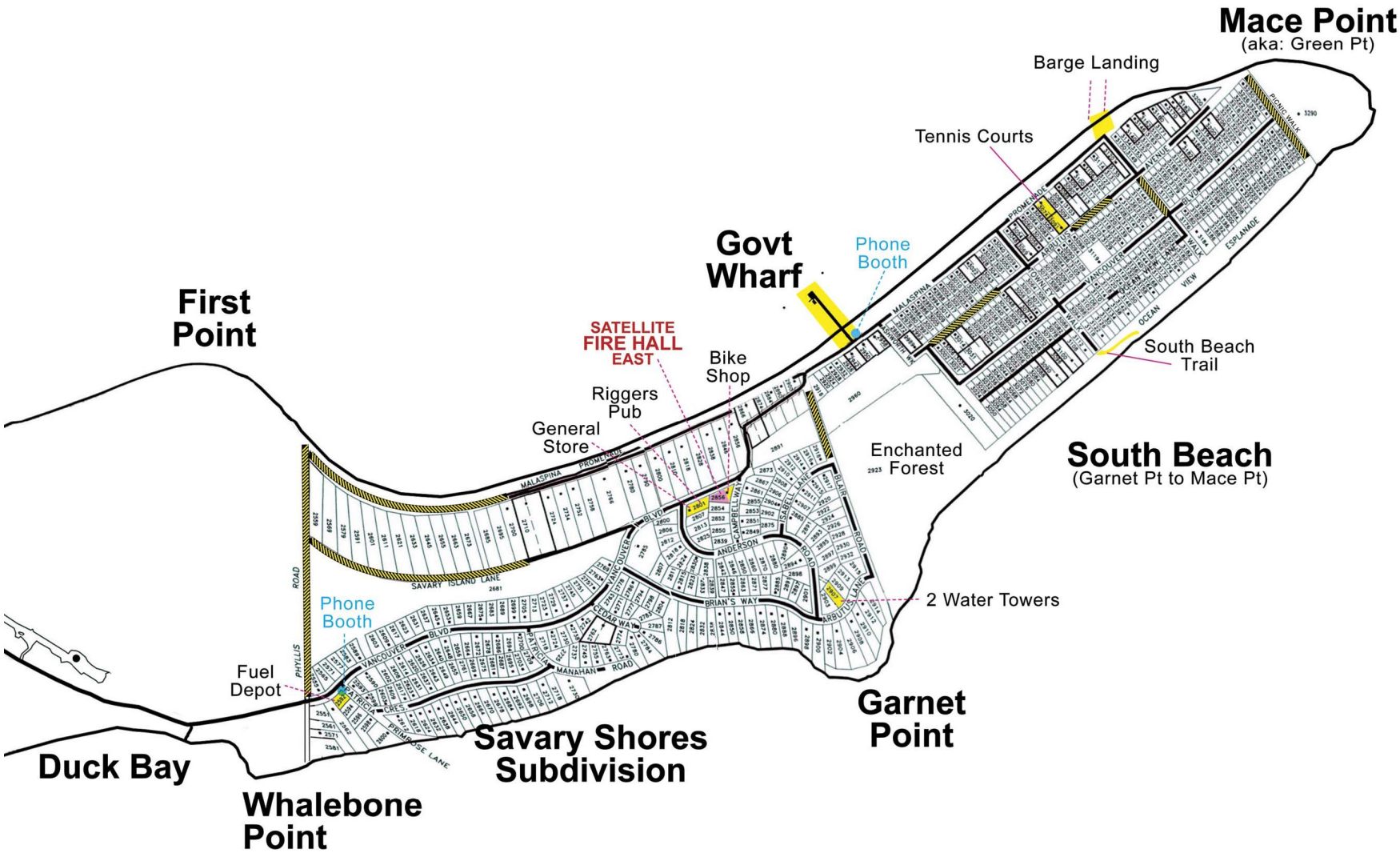
Map 5 | Savary Island Subdivided Lots (west)



Map 6 | Savary Island Subdivided Lots (central)



Map 7 | Savary Island Subdivided Lots (east)



5.4 Environmental Protected Areas

Environmental protection through land trusts is present on Savary Island. The Savary Island Land Trust (SILT) and the Nature Trust of BC (NTBC) both have properties on the Island as shown on **Map 4 | Conservation Lands**. The NTBC owns a large area of land in the centre of the Island and SILT owns smaller parcels across the Island. SILT owns a total of 18.5 acres on 22 parcels throughout the Island. NTBC owns a total of 133.1 hectares (328.9 acres). According to SILT, the Island features the greatest remaining example of dunes within the rare Coastal Douglas-Fir bio-geoclimatic zone and one of the best examples of coastal sand dunes in Canada.[1]

5.5 Development Potential

The presence of significant subdivision and the lack of zoning or building regulations means that building and development on the Island largely occurs without local approvals and direct tracking. Thus, the OCP process is a good opportunity to collect data on the current and potential future development of the Island. **Map 8 | Land Development** identifies the current subdivided lots, land trust properties, and estimates which properties have been developed based on tax assessment data from September 2024. The results shown on **Figure 2**, identify an estimated 672 undeveloped lots and 35 partially developed lots. To determine a "***Developed***" property, the Geographic Information System (GIS) model calculated any property with an improvement assessment value greater than $50,000. "***Partially Developed***" means any property with an improvement assessment value greater than $10,000 and less than $50,000. "***Undeveloped"*** means an improvement assessment value less than $10,000. This is based on official BC assessment tax data obtained in September 2024. Conservation lots, strata common property, and other lands believed to have no/little development potential were excluded.

[1] https://savaryislandlandtrust.org/

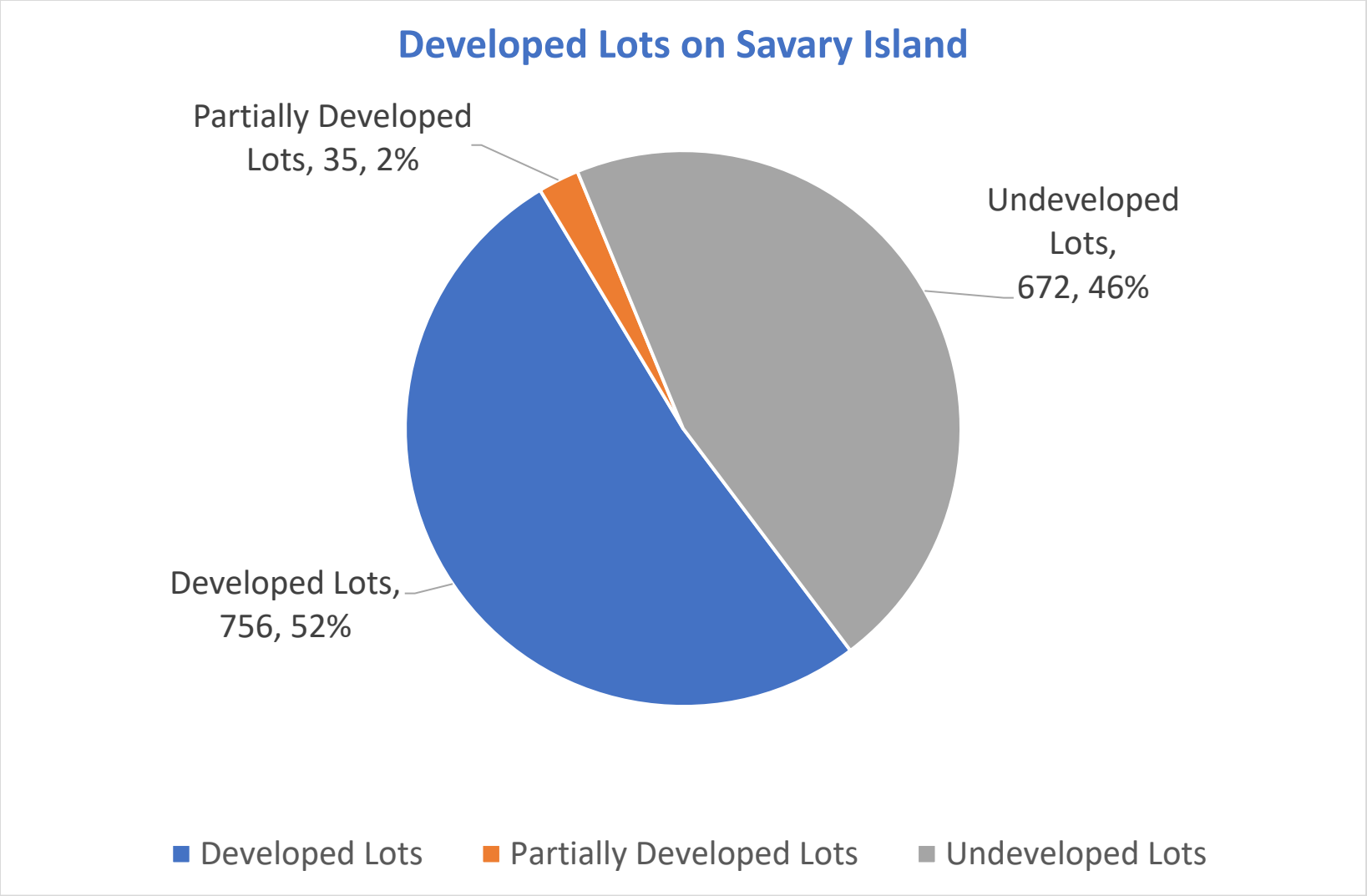


Figure 2 | Estimated Developed Lots on Savary Island

Map 8 | Land Development Estimates

LAND DEVELOPMENT

qathet Regional District

- Developed
- Partially Developed
- Undeveloped
- No/Limited Development Potential
- Savary Island Land Trust
- Nature Trust of BC
- Province of BC

- Savary Island Dock
- Water Taxi
- Trail
- Road

Color-Blind Friendly

Created November, 2024 by Bluerock Planning inc. Source Data: Qathet Regional District, iMAP BC

Data was derived from 2024 B.C. Assessment data. “Developed” means any property with an improvement assessment value greater than $50,000. “Partially Developed” means any property with an improvement assessment value greater than $10,000 and less than $50,000.

The results of the development potential mapping analysis on **Map 8** show several key findings:

- There is significant development potential remaining on the Island. Although, groundwater, septic field, steep slopes, geotechnical concerns and other real-world constraints may limit the actual potential of certain lots.
- There is more potential on the west end of the Island than the east end.
- Many of the undeveloped lots are not on the waterfront, suggesting a lower demand for this type of lot and fewer available uses.
- Viewed with the other historic data, it appears the development rate of growth is slowing. The 1996 data suggested a total of 471 developed properties, increasing by 176 to 647 by 2006, which was a rate of 19.5 per year during that time. From 2006 to 2024 there was an estimated 109 new developed properties, a rate of 6.05 per year as shown on **Figure 3**.
- There is known consolidation of lots on the Island, but no data available on consolidation.

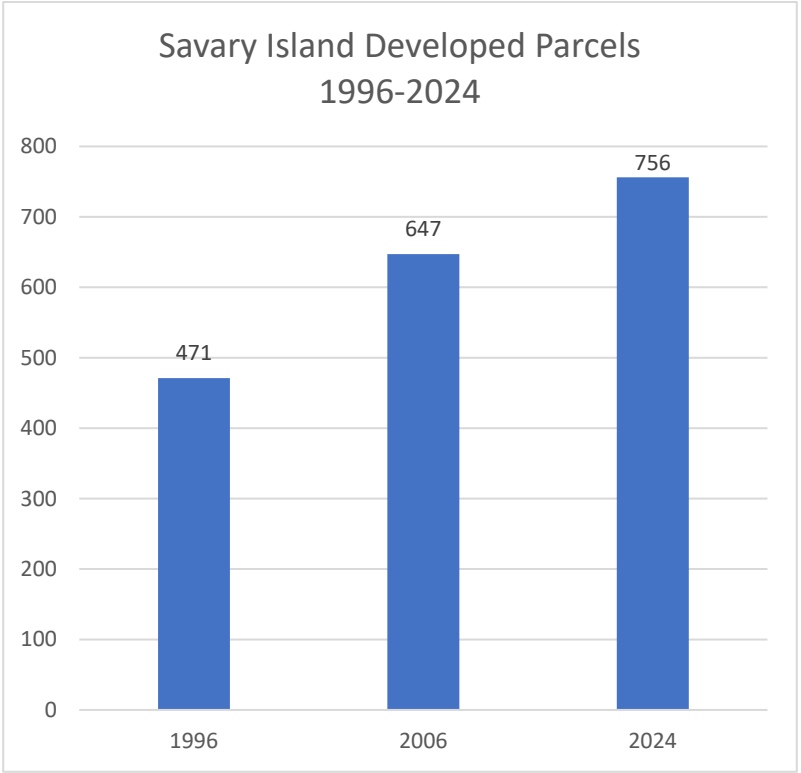


Figure 3 | Savary Island Developed Parcels 1996-2024

Limitations & Assumptions

There are limits to any type of GIS mapping analysis and the assumptions behind them. Assumptions and limitations of this analysis include:

- **Snapshot of Time** - Data was gathered from 2024 September BC Assessment Data provided to the qRD. Communities continually change which means this data may be different in a few months or a year from now. However, it does provide development and assessment trends over time which is more useful for OCP processes than exact numbers on a given day.
- **Physical** - Actual on-the-ground constraints may further limit development potential of lots and reduce the number of lots shown with development potential.
- **Ownership / Human** – The analysis does not consider if landowners desire to develop their land or not. For example, there is no consideration for where owners may own an adjacent property and do not wish to develop and want to leave an empty lot as a buffer and/or natural area. These decisions can change without notice and have an impact on the amount of development that occurs.
- **Other Jurisdictional Restrictions** – The analysis does not consider parcels that may be constrained due to provincial or federal legislation that would restrict them from development.
- **Land Titles Restrictions** – Other than the data available on land trusts, the analysis does not review all land titles for charges, liens, and interests such as easements or rights of way that may restrict development.

Map 9 | Undeveloped Land

UNDEVELOPED LAND

qathet Regional District

- Undeveloped
- No/Limited Development Potential
- Savary Island Dock
- Water Taxi
- Trail
- Road

Color-Blind Friendly

Created November, 2024 by Bluerock Planning inc. Source Data: Qathet Regional District, iMAP BC

5.6 Water Data and Population Projection Estimates

In addition to the development analysis based on September 2024 BC Assessment data, the project team received an analysis from the Savary Shores Improvement District (SSID), which tracks monthly water usage. The SSID is a metered water district and monthly recordings can help make an educated estimate of how many properties used water in a given month. The data is provided by the SSID, including some development projections. The estimates for current development on the Island correspond to the numbers gathered by the BC Assessment analysis shown earlier in this Report. **Table 3 | SSID Occupancies and Populations 2023**, shows the occupancy for only the 171 developed SSID properties during 2023. From the water usage data that SSID gathers it has estimated the occupancy and total number of persons per month. It shows that during the peak in August there were an estimated 680 persons within the SSID's 171 developed properties. **Table 4** is a calculation of the total population on Savary Island based on the 2023 SSID data shown in **Table 4** above. Based on the SSID 2023 data it can be estimated that the peak population in August on Savary is around 3,000 persons. The non-peak population in January is estimated at 309 for the Island.

Table 3 | SSID Occupancies and Populations 2023

2023	SSID OCCUPANCIES	171	Developed Properties	
	2023 Occupied Properties	Occupancy %	Estimated Average occupancy rate per parcel	Estimated number of persons in SSID by month (Population)
January	35	20.47%	2.00	70
February	42	24.56%	1.75	74
March	62	36.26%	1.75	109
April	77	45.03%	2.00	154
May	126	73.68%	2.50	315
June	131	76.61%	3.00	393
July	157	91.81%	4.00	628
August	151	88.30%	4.50	680
September	120	70.18%	2.50	300
October	83	48.54%	2.00	166
November	45	26.32%	1.75	79
December	61	35.67%	3.00	183

Table 4 | SSID Occupancy and Population Estimates

2023	SAVARY ISLAND OCCUPANCIES	756 Developed Properties		
	Estimate based on SSID occupancy data	Estimate based on SSID occupancy rate percentage	Estimate based on SSID occupancy per property	Extrapolated population of Savary Island by month
	2023 Occupied	Occupancy Percent	Avg Occupancy	Population
January	155	20.47%	2.00	309
February	186	24.56%	1.75	325
March	274	36.26%	1.75	480
April	340	45.03%	2.00	681
May	557	73.68%	2.50	1393
June	579	76.61%	3.00	1737
July	694	91.81%	4.00	2776
August	668	88.30%	4.50	3004
September	531	70.18%	2.50	1326
October	367	48.54%	2.00	734
November	199	26.32%	1.75	348
December	270	35.67%	3.00	809

5.6.1 Population and Development Projections

Table 5 and **Table 6** extrapolate future population projections based on the SSID data analysis from 2023. The data shows that by 2049 if the status quo continues there could be a peak summer population of 5,000 on Savary Island based on a 2% growth rate from 2023.

As stated in earlier development analysis, real-world constraints like, steep slopes, groundwater availability, individual choices, and other factors will likely prevent all available parcels from being developed. Nonetheless, the data suggests that Savary Island will likely experience future growth, which inevitably brings both benefits and challenges.

Table 5 | Development Projections by SSID 2024-2035

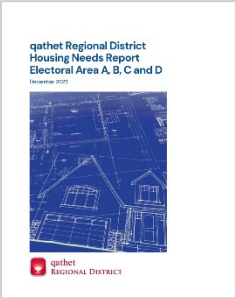
SAVARY ISLAND POPULATION PROJECTIONS				
Year	Non-Peak		Peak (August)	
	Growth Rate		Growth Rate	
	2.00%	1.00%	2.00%	1.00%
2024	756	756	3004	3004
2025	771	764	3064	3034
2026	787	771	3125	3064
2027	802	779	3188	3095
2028	818	787	3252	3126
2029	835	795	3317	3157
2030	851	803	3383	3189
2031	868	811	3451	3221
2032	886	819	3520	3253
2033	903	827	3590	3286
2034	922	835	3662	3318
2035	940	843	3735	3352

Table 6 | Development Projections by SSID 2036-2049

SAVARY ISLAND POPULATION PROJECTIONS				
Year	Non-Peak		Peak (August)	
	Growth Rate		Growth Rate	
	2.00%	1.00%	2.00%	1.00%
2036	959	852	3810	3385
2037	978	860	3886	3419
2038	998	869	3964	3453
2039	1017	878	4043	3488
2040	1038	886	4124	3523
2041	1059	895	4206	3558
2042	1080	904	4291	3593
2043	1101	913	4376	3629
2044	1123	922	4464	3666
2045	1146	932	4553	3702
2046	1169	941	4644	3739
2047	1192	950	4737	3777
2048	1216	960	4832	3814
2049	1240	970	4929	3853

6 HOUSING REPORTS

6.1 qathet Regional District Housing Needs Report December 2023



Recent changes to provincial legislation in British Columbia requires that municipalities complete Housing Needs Reports. Because Savary Island is one area within a larger regional district, data and recommendations are not specific to Savary however the outcomes from the report are outlined here to provide higher level background information.

The qRD completed a Housing Needs Report for Electoral Area A, B, C and D in 2023[4]. The qRD Housing Needs Report analyzes current and projected demographic and housing data to estimate the number of housing units needed by 2028 for Electoral Areas A, B, C, and D. According to federal Census data, the population of the study area in 2021 was 6,237, an increase of 7.79% from 2016. Savary Island is within Electoral Area A.

The Housing Needs Report's key findings include:

- Population in Areas A to D is aging and contains a higher percentage of seniors than in other parts of the province. The median age in the study area ranges from 57.2 to 62.4, significantly higher than the provincial median of 41.6.
- Housing in Areas A to D primarily consists of single-detached units, with a high percentage of ownership versus rental.
- Most of the housing stock is composed of units with three or more bedrooms.
- Between 2016 and 2021, the number of households in the study area paying more than 30% of their before-tax income on shelter increased from 13.3% to 16.4%. Of renter households, an average of 26% were in core housing need in 2021.
- Suitability remained roughly the same between 2016 and 2021. In Area A 4% of housing was listed as not suitable.
- The report projects a population of 6,612, a 6% increase from 2021, and a housing gap of 338 housing units by 2028 in Electoral Areas A, B, C, and D.

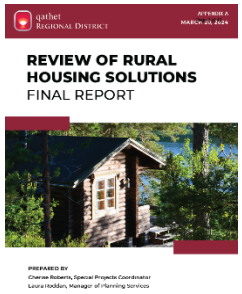
Table 7 | qRD Housing Needs Report Summary

Area	2028 Projected Population	2028 Housing Gap	1 Bedroom	2 Bedroom	3 Bedroom	4+ Bedroom
A	1,319	23	4	14	3	2
B	1,751	75	11	46	11	7
C	2,321	140	21	84	21	14
D	1,221	100	15	60	15	10
Total	**6,612**	**338**	**51**	**204**	**50**	**33**

The Housing Needs Report includes ten recommendations to help the qRD meet the projected housing need:

1. Support secondary suites in all residential areas.
2. Support accessory dwelling units in residential areas where Provincial septic and water servicing standards can be met.
3. Promote non-profit housing societies.
4. Collaborate with BC Transit to improve rural transit service.
5. Promote public information on available grants, Homeowner Grants, contact information for BC Housing and CMHC, among others.
6. Promote partnership with Happipad. Happipad is a Canadian federally incorporated non-profit facilitates home sharing that is safe, affordable, and accessible.
7. Review of manufactured home park policies. Consider expansion of existing manufactured/mobile home parks where provincial septic and water servicing standards can be met.
8. Develop a process to track rental housing – recommended that the Regional District set up a voluntary online registry to track rental housing units in the electoral areas.
9. Collaborate with City of Powell River to consider establishment of a regional housing reserve fund.
10. Complete updated housing needs assessment in 2028 – The time frame for this Housing Needs Report is five years. The Provincial government has mandated that housing heeds reports be completed every five years.

6.2 2024 Review of Rural Housing Solutions Final Report



In 2024 the qRD staff completed a report on Rural Housing Solutions[9]. The purpose of this report is to present strategies and solutions that the qathet Regional District can use to mitigate the current shortage of housing in rural areas. A key theme that emerged is the lack of water and sewer servicing, other basic services, and community amenities within rural areas. This makes these areas such as Savary Island, not appropriate for high-density or affordable housing developments. As a result, development is primarily directed towards development nodes, municipalities, and urban centres where services are readily available and accessible. Regional districts are still looking at increasing density. For example, gentle density such as secondary suites and expanding housing options where possible, pursuing regional partnerships, and providing educational resources. The Report highlights various tools available to the qRD to support rural housing. This includes, incentives, policy and regulation, partnerships, and awareness and advocacy.

Savary Island is not mentioned directly in the report however there are some relevant sections for the Savary Island Community Plan. Specifically, section 6.3 “Vancouver Coastal Health Subdivision Guideline”. This section of the report quotes the Subdivision Guidelines and cites best practices in terms of lot sizes and individual services of water and sewer. The following are excerpts from the report guidelines:

The Subdivision Guideline[13] recommends:

- A minimum lot size of 0.2 hectares (0.5 acres) for parcels serviced by an approved community water system. A minimum lot size of 1 hectare (2.5 acres) for parcels serviced by a private well (dependent on slope within the primary and reserve sewage disposal areas and minimum soil depth)
- 30m (100 ft) from individual well to absorption field site. 3m (10 ft) from the absorption field to any building or property line, 1m (3 ft) from the septic tank to any building or property line, 30m (100 ft) from high water mark of marine water or freshwater to absorption field site, and 15m (50 ft) from water suction lines to adsorption field site.

The 2017 Sewerage/Subdivision Best Practice Guidelines from the Ministry of Municipal Affairs and Housing[14] states:

  - “One hectare is a widely accepted minimum parcel size that is considered to result in minimal risk to public and environmental health provided that it has been demonstrated via the initial site assessment that the site is not hydrogeologically sensitive.”

7 CLIMATE CHANGE ASSESSMENT

7.1 Overview & Purpose

The Bluerock Planning consulting team created a climate change assessment for this background report. Led by project team member Kacia Tolsma, Director of Sustainability and Planning for 4EVER, a sustainability-based organization in Nanaimo, BC. The assessment is meant to understand potential impacts and scenarios and does not suggest or imply any policy directions. As stated in this report regarding other technical studies, **community plan policies will be determined with community members and no single technical study will be implemented verbatim into policy or regulation.**

The projected impacts of climate change, such as flooding, sea level rise, erosion, wildfire, and extreme weather have serious implications for the residents of Savary Island. Planning and land use provide many opportunities to adapt to climate change. Residents also have opportunities to reduce their emissions, mitigate impacts and adapt to climate change in their land use choices.

This climate change assessment outlines:

1. The implications of climate change on land use in the Savary Island context,
2. Climate projections over two time periods, 2030, 2050, and
3. Emissions targets and policies from the existing Official Community Plan, and
4. Relevant plans and data from the Island and qRD that should be reviewed and could be integrated into the Official Community Plan (OCP) update.

7.2 Implications of Climate Change on Land Use

The implications of climate change on land use are complex and far-reaching. Meaningful consideration of climate change in community planning demands a number of adaptive strategies to reduce risk and vulnerability and emissions. The following is a list of the potential implications of climate change on Savary Island and potential responses that will be discussed further with Savary parcel owners during phase 3 of the OCP process:

Table 8 | Potential Climate Change Implications

Topic	Description of Climate Change Implications	Potential Response(s)
Water Resource Management:	• Prolonged droughts and water shortages due to extended periods without rainfall have implications for drinking water availability and quality, aquifer recharge, and on ecosystem health.	• Efficient water use strategies, including rainwater harvesting, grey water systems, water-sensitive landscaping to maximize water capture and storage, and minimizing the disturbance of natural land while avoiding the creation of water intensive landscapes.
Increased Shoreline Erosion and Coastal Flooding Risk:	• Savary Island faces increasing threats from sea level rise, leading to increased shoreline erosion and coastal flooding incidents. The relatively shallow slopes of much of Savary mean that even minor flooding can cover large sections of land, with erosion potential particularly high along exposed shorelines.[15]	• Strategies may include the stabilization of shorelines, enhancing natural areas through blue/green infrastructure, identifying infrastructure in high-risk areas and evaluating potential relocation to minimize future damage. • Limit or restrict development in high-risk areas.

Increased Wildfire Risk:	• Increased temperatures, extreme wind events, and prolonged dry periods increase the risk of wildfires, particularly in structures and lots with little to no setback from forested edges, which is consistent with Savary Island's built form (*see Savary Island Community Wildfire Plan*[8]).	• Developments and structures should adopt fire-smart building practices and create defensible space around properties. • Wildfire risk practices could be integrated into policy and/or regulation where applicable.
Increased Slope Hazard Risk:	• A significant portion of Savary Island faces risks of slope hazards.	• Encourage or prevent new developments from building development in high-risk areas. • Involve a qualified professional to review proposed developments in high-risk areas to ensure safe building sites and safe development practices are selected.
Fractured Supply Chains:	• Savary Island, like other rural island communities, is highly dependent on external resources such as groceries, propane, and diesel.	• Efforts like strengthening local emergency infrastructure should be made to prepare for and bolster local supply chains during extreme weather events that reduce access to mainland resources. • Fostering local leadership in resilience planning and creating shared resources may also empower residents to better withstand the impacts of climate change while maintaining social cohesion.

Ecosystem Management:	• Climate change is altering ecosystems, leading to habitat loss and shifts in species distribution, with concerns for unique environments. For example, Savary Island's sand dunes, which contain plant species at risk.	• Collaboration for expanded protection of ecosystems and areas with flora and fauna species at risk is recommended.
Energy Management:	• As climate change drives more frequent extreme weather events, such as heat waves, storms, and even cold snaps, energy systems will face increased demand and more frequent power outages.	• Local renewable energy production, such as solar panels, could continue to be supported on Savary in hopes of creating resilient and diverse energy systems that can withstand extreme weather.

7.3 Climate Change Projections (2030, 2050)

Using the climate change tool developed by Environment and Climate Change Canada[16], the project team gathered climate change projections for Savary Island for 2030 and 2050, with a baseline period of 1991-2020 as shown on **Table 9**. While no future projection will be 100% accurate, it provides a rough picture of what could be expected for temperatures and precipitation for Savary Island in future years and decades as the climate changes.

For the 1971-2000 period, the annual average temperature was 9.9 ºC. Under a high emissions scenario, annual average temperatures are projected to be 11.6 ºC for the 2021-2050 period, 13.0 ºC for the 2051-2080 period and 14.6 ºC for the last 30 years of this century.

The average annual precipitation for the 1971-2000 period was 1258 mm. Under a high emissions scenario, this is projected to be 8% higher from 2051-2080 and 11% higher for the last 30 years of this century[22].

Table 9 | Climate Change Projections Savary Island

Indicators (Under SSP2 - 4.5 Median Scenario)	Baseline Period (1991 - 2020)	2030	2050
Hottest Day describes the warmest daytime temperature in the selected time period. High temperatures determine if plants and animals can thrive. High temperatures limit or enable outdoor activities, define how we design our buildings and vehicles, and effect transportation and energy use. When temperatures rise above 27 degrees Celsius, people – especially the elderly – are much more likely to suffer from heat exhaustion and heat stroke. Many outdoor activities become dangerous or impossible in very high temperatures.	30.5°C	31.5°C	33.1°C
Days with Tmax > 25°C describes the number of days where the daytime high temperature is warmer than 25°C. This index indicates the number of very hot days in the selected time period. Tmax = maximum daily temperature.	26 days	39 days	55 days
Total Precipitation describes the total amount of precipitation, rain and snow combined, that falls within the selected time period. Precipitation significantly impacts water availability, agricultural practices, electricity generation and wildfire suppression.	238 mm	220 mm	321 mm

7.4 Emissions Targets and Policies

The current Savary Island OCP (2006) has set a target of a 33% reduction from 2021 levels compared to the 2010 baseline emission levels. The provincial targets for reducing GHG emissions are reducing levels 40% below 2007 levels by 2030, 60% by 2040, and 80% by 2050. When updating Official Community Plans it's a good time to review a potential update to emissions targets.

Climate change objectives specific to Savary Island identified in the Corporate GHG Reduction Strategy Project Background report include:

- Reducing greenhouse gas emissions by reducing fossil fuel consumption and shifting to alternative forms of energy.
- Promoting the use of renewable energy and the development of renewable energy sources.
- Considering the impacts of climate change in all land use decisions.

The policies in place to support these objectives include:

- The Regional District will seek guidance and financial assistance from other levels of government for implementing climate adaptation and mitigation policies.
- Islanders will work with the Regional District to measure and record emissions usage to develop a baseline for emissions reduction.
- The Regional District will work with Islanders to educate residents about reducing fossil fuel consumption and promote the use of alternative energy and fuel switching.
- The Regional District will encourage the retention and enhancement of natural trees and vegetation to offset emissions and support the island open spaces policies.
- The Regional District will work with Islanders to encourage alternative land transportation.
- The Regional District will work with Islanders to prepare for sea level rise by encouraging Development Guidelines for specific shoreline areas.

These policies will be further discussed with Savary Islanders during phase 3 of the OCP engagement process.

8 REVIEW OF PLANS, REPORTS & STUDIES

To better understand the current and recent issues on Savary Island, the project team reviewed relevant qRD plans and reports for the Savary Island Community Plan update. This section of the report summarizes the review of documents by topic area. For a full understanding of each plan or report please read the original source material.

Disclaimer: The content of these reports is the responsibility of the authors and any references to potential land use regulations and/or OCP policy has not been endorsed by the community planning project team. Any policies drafted for the OCP will be done through the community planning process, including engagement with Island residents.

Table 10 | List of Reviewed Plans, Reports, and Studies

INDEX	DOCUMENT NAME	AUTHOR	YEAR
LAND USE			
1.	Let's Talk Land Use: Public Engagement & Final Report[23]	Arlington Group, EcoPlan International	2022
2.	Savary Island Official Community Plan Bylaw No. 403, 2006[2]	qathet Regional District	2006
RECREATION AND PARKS			
3.	Parks & Trails Strategy[10]	Lees & Associates	2023
NATURAL HAZARDS			
4.	Savary Island Community Wildfire Protection Plan[8]	Bruce A. Blackwell	2009
5.	Savary Island Slope Hazard Study[5]	Tetra Tech Canada	2023
6.	qathet Regional District Coastal Flood Adaptation Strategy Final Technical Report[15]	Ebbwater Consulting Inc.	2022[19]

7.	qathet Regional District Coastal Flood Mapping Phase 2 – Islands[19]	Tetra Tech Canada	2022
8.	Tsunami Mapping	Golder Associates	2007
9.	Savary Island Dune and Shoreline Study[6]	Thurber Engineering Ltd. and Strix Environmental Consulting	2003
10.	A Preliminary Assessment of the Groundwater Resources of Savary Island[1]	David W. Tupper, P. Geo.	1996
CLIMATE CHANGE ACTION / GHGs			
11.	Corporate GHG Reduction Strategy Background Report[17]	GHG Accounting Services	2019

Savary Island Groundwater Assessment, (2025) forthcoming.	The qathet Regional District is working to improve the understanding of groundwater resources on Savary Island. The last island-wide water study was completed in 1996, nearly thirty years ago. The qRD commissioned this study to understand how issues related to water will influence planning, development, and quality of life on the island now and in the future. The report is forthcoming in 2025.

8.1 Let's Talk Land Use: Public Engagement & Final Report, 2022

In 2022 the qRD undertook an extensive engagement program to discuss land use issues with property owners in Electoral Areas A, B, and C. The program included specific engagement sessions held in each electoral area, including online Zoom session with Savary Island property owners. Feedback received through these sessions is summarized below.

Key Findings that could be considered for the Savary Island OCP:

- **Six main land use concerns by 20% or more of the respondents:**
  1) Protection of drinking water supply
  2) Demands on potable water supply
  3) Environmental impacts on watercourses
  4) Land use conflicts
  5) Coastal areas at risk
  6) Changes in drainage patterns/stormwater runoff

- The predominant response in all three electoral areas was the 'Existing level of regulation is limited but no change is needed' compared to the alternatives of either more or less regulation. This response was clearly expressed in three electoral areas, **with the notable exception of Savary Island.**

- **Savary Island residents expressed a much higher level of concern about land use and environmental issues.** A clear majority indicated concern for the protection of drinking water supply and coastal areas at risk. Over 40% also expressed concern about land use issues and demands on potable water supply. **Only 10% of Savary Island responses indicated they had no land use concerns.** Close to two thirds indicated 'Existing regulation is inadequate to manage land use and avoid conflict'.

- The report recommends that qathet Regional District engage with Savary Island residents and property owners to address their widespread concerns about managing development and land use conflicts.

- A large majority of Savary Island property owners are seasonal residents and live in many locations throughout B.C., outside the province and Canada. This meant engagement was mainly done online and there were 121 registrants.

8.2 Savary Island Official Community Plan Bylaw No. 403, 2006

The qRD completed the Savary Island Official Community Plan in 2006 that is still in place today. The OCP guides development, planning and land use activity on the Island. The OCP is comprehensive and looked at many of the challenges the island still faces, including concerns about over-development, groundwater protection, protecting the rustic rural lifestyle, environmental and hazard protection, road maintenance, tourism, seasonality of the island, and transportation.

Key Findings, Objectives and Policies:

- **Population and Concerns:** Savary Island has about 70 permanent residents and 800 seasonal landowners. Both groups value the island's rustic and laid-back lifestyle and are concerned that more development could harm its unique social and environmental qualities.
- **Development Characteristics:** Development on the island mainly consists of small, rustic cabins on narrow lots with roads that need maintenance. The island isn't served by BC Hydro, which is preferred to avoid year-round development. Most properties rely on individual wells and septic systems, which may pose future water quality issues.
- **Land Use History:** Two-thirds of the island was subdivided into 1441 small lots in 1910. Since 1910, a total of 1700 lots have been created, of which 1500 of them are less than 0.2 hectares in size.
- **Current Development:** Only 647 lots have been developed so far. Some islanders believe that the existing level of subdivision and the absence of public open spaces put Savary Island at a critical development threshold.
- **Document objective:** to relieve the pressures of over-subdivision and over-development while maintaining the community's rustic spirit.
- **Principal Aim:** To maintain Savary Island's unique character and rustic island lifestyle while protecting the island's groundwater resources, its sensitive ecosystems and its unique biophysical characteristics.
- **Major Goals of the OCP are as follows:**
    - To protect natural areas and the Island's ecological integrity by:
        - (a) striving for a high degree of individual and community environmental consciousness and stewardship;
        - (b) maintaining representative areas of

the Island's unique natural environment for open space, greenbelt or environmental reserve; and

- (c) establishing development assessment provisions or in the case of District Lot 1375, development permit provisions for the use of those lands that are subject to hazardous conditions and/or that may be environmentally sensitive or at risk as determined by the BC Conservation Data Centre.

- To safeguard the Island's ground water supply.
- To strive for a balance between land use regulations and the desire of local residents for a rural island lifestyle.
- To provide for a level of residential development which maintains the Island's rural character and is mindful of the Island's carrying capacity.
- To encourage lot consolidation in order to reduce the total number of small lots on the Island.
- To limit commercial development to small-scale, non-polluting endeavours compatible with the Island's rural character and natural environment.
- To provide a level of community services at a scale appropriate for a rustic rural island community.
- To encourage a system of transportation which meets but does not exceed the Island's needs and maintains and complements the Island's rural character.

- **The OCP's objectives and policies will guide land use development on the Island over the next 5 to 20 years.**

- **Environmentally sensitive areas and hazard lands**: The recommendations from the *Savary Island Dune and Shoreline Study* helped to influence the policies in the OCP. Based on previous studies, constructing coastal protective devices is not seen as a viable solution for reducing erosion on Savary Island. Site-specific coastal protection is expected to lead to increased erosion and beach loss in other parts of the island's coastline.

- **Marine Resources:** The planning area for the marine waters around Savary Island includes the surface of water extending 1,000 metres from the shore. If this

boundary overlaps with another jurisdiction or land mass, such as Hernando Island, the boundary is set at the midpoint between the two land bodies. The Powell River Regional District, in turn, has the ability to set OCP objectives and policies and zone the surface of the water. Emphasize the threat to clam production since it is the most productive clam area in the region.

- **Heritage Resources:** Three key areas of interest from the 2004 protocol agreement between Sliammon and the Regional District:
    - **Culture and heritage protection**
    - **Environmental protection**
    - **Land use planning and management**

- **2 recommendations for Savary Island from the 2007 strategic planning process between the Regional District and Sliammon:** The first was to incorporate a brief summary of Sliammon's (Tla'amin) historic and current use of Savary Island into this OCP. The second was to initiate, if feasible, the protection of Sliammon's cultural and archaeological sites through land swaps or exchanges between the Regional District, Sliammon (Tla'amin) First Nation and the Province of British Columbia.

- **Residential Use**
    - There are only two parcels on the Island greater than 10.1 ha (25 ac). District Lot 1375 is the only district lot on the island that hasn't been subdivided. Under the current 4.0 hectares (10 acres) minimum parcel size regulation, only two large parcels can be subdivided further. If these two parcels are developed to the maximum density allowed, around 35 additional parcels could be created.

- **Commercial:** The plan allows for flexibility in considering commercial use applications across the island. However, commercial operations should avoid ecologically sensitive areas, hazard lands, and the Savary Shores Improvement District, where bylaws restrict the use of water supply for commercial purposes. Only small-scale forms of tourist accommodation and associated commercial activities that cater to the Island's needs is desired (e.g., bed and breakfasts).

- **Transportation Planning:**
    - The island has a poorly maintained but passable road system that extends the full length of the island. The community wishes to maintain the rustic rural character of the road

system.
    - There has been a recent increase in the number of vehicles on the island during summer, straining the road system. Public transportation and vehicle permitting need exploration to minimize the number of vehicles.
    - Note: qRD Bylaw 347 created a service area for marine transportation facilities around Savary. The Savary Island Dock Advisory Committee (SIDAC) was formed to assist the management and future development of the wharf.

- **Watershed and Aquifer Stewardship:** Studies conducted to date indicate that a single deep aquifer supplies the majority of the Island's groundwater. A **hydrogeological assessment** is needed to determine the level of protection needed to sustain the quality and quantity of the Island's water supply. Savary Shores Improvement District has the only community water system on Savary Island. A **water stewardship program** involves implementing an educational component along with active involvement by landowners aimed at responsible management of the watershed and the groundwater resources.
- **Sewage Treatment and Disposal:** Since the aquifers are the main source of drinking water on Savary, ensuring that pathogenic material from the sewage effluent does not contaminate the aquifer is essential. Authorized registered practitioners are now responsible for sizing and installing septic systems on Savary Island. Local Health Officer permits are no longer needed, but filings must be made with the Vancouver Coastal Health Authority by the practitioner.
- **Solid Waste and Hazardous Material Management:** Savary is geotechnically and hydro-geologically unsuitable for a landfill. As a result, all solid waste and hazardous materials originating on Savary Island need to be transported off Island by private operators for disposal.
- **Fire Protection:** Hazard mapping has been completed for the Island and has indicated that east and west portions of the Island have an extreme interface hazard rating. On Savary, local road conditions, water shortages in some areas and limited equipment present great challenges in fighting fires. The **Savary Island Volunteer Fire Department (SIVFD)** continues to actively recruit and train volunteer firefighters and medical first responders.

- **Development Assessment Areas:** Landowners are

encouraged to follow the General Development Guidelines established for the three Development Assessment Areas listed below and identified on Map Schedule D:

- **Development Assessment Area 1 (DA-1): Shoreline Areas**
- **Development Assessment Area 2 (DA-2): Shoreline and Inland Dune –** many ecologically important areas that fall under DA-2 on Savary Island such as the south shore and at Indian Point. The land between Whalebone and Beacon Points are also significant because they are an example of a complete.
- **Development Assessment Area 1: Shoreline Areas** - These include areas of old forests, mature forests, wetlands and herbaceous ecosystems. Some lands within Development Assessment Area 3 overlap areas contained within Development Assessment Areas 1 and 2. Examples of ecologically sensitive areas include Mace point and the site of the northern limit of Garry Oak (Quercus garryana). The Big Meadow at the south end of Jullian Road is the site of a variety of herbaceous plants, sedges and grasses.

- **Development Permit Areas:**
  - Development Permit Area 1 (DP-1): Shoreline Areas
  - Development Permit Area 2 (DP-2): Shoreline and Inland Dune Areas
  - Development Permit Area 3 (DP-3): Ecologically Sensitive Areas
- **Heritage Conservation Area 1: Archaeological Sites -** The Heritage Conservation Act protects sites on Savary Island, requiring a permit from the Archaeology Branch for any alterations. Of the 12 known sites, five are on D.L. 1375. Due to extensive use by First Nation peoples, it's likely that more unmapped or unregistered sites will be discovered within D.L. 1375 and other areas of the island.
- **The six highest priority actions to implement the OCP include:**
  1. Zoning Bylaw (Policy 3.1.a)
  2. Siting Permit System (Policy 3.1.f)
  3. Road Upgrading and Maintenance (Policies 6.1.4 & 6.2.c & 6.2.g & 6.2.h & 6.2.i)
  4. Encourage Lot Consolidation (Policy 3.1.a)
  5. Encourage Regulation of Barge Traffic and Discourage Transportation of Vehicles (Policies 2.2.d & 6.3.c 6.3.d)
  6. Identify Medi-Vac Landing Sites (6.4a)

8.3 qathet Regional District Parks & Trails Strategy, 2023

In 2023 the qRD completed a Parks & Trails Strategy. The Strategy has a few references to Savary Island and some mapping.

The only existing parks service on Savary Island according to the qRD parks service map is the **Julian Road** beach access trail which was identified to have a low level of service and a qRD permit from MOTT (Ministry of Transportation and Transit). There are no identified regional parks on Savary Island.

Key Findings that could be considered for the Savary Island OCP:

Recommendation 1.3 Increase public access to the waterfront by acquiring and developing additional beach access trails.

- **Goal 3:** Strengthen community partnerships and volunteer resources.
- **Recommendation 3.1** Continue to work with First Nations communities, other levels of government, community groups, non-profit agencies, private landowners, land trusts, and Crown land tenure holders to maintain and expand land use agreements and acquire additional parkland for recreation and conservation.
- **Recommendation 3.2** Continue to develop the Parks, Properties and Trails Volunteer program to increase volunteering opportunities and support community organizations in assisting and contributing to regional parks, properties, and trails projects including ecological restoration, trail maintenance.
- **Recommendation 3.3** Collaborate with Tla'amin, shíshálh, Klahoose, Nanoose, Homalco, K'ómoks and other Coast Salish First Nations to incorporate cultural information at regional parks and explore

opportunities to protect culturally significant sites and incorporate traditional knowledge.

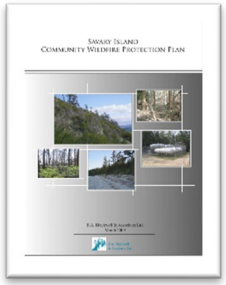
- **Goal 4:** Enhance the user experience at parks and beach access trails.
- **Recommendation 4.3** Provide clear accessibility information on the qRD's website, park webpages, and at trailheads.
- **Recommendation 4.4** Ensure all regional parks and beach access trails are identified with signage.
- **Recommendation 4.5** Identify opportunities to incorporate more support amenities such as washrooms, signage, and parking at select regional parks and beach access trails.
- **Goal 5:** Support active transportation and a connected community.
- **Community Engagement Results:**
    - Respondents from Savary island indicated a preference for improving existing parks and trails versus acquiring more.
    - 33% of respondents from Savary Island were very dissatisfied with the number of parks and trails.
    - 40% of online survey respondents indicated that parks and trails were either too far to travel to, or not accessible by biking/walking. Increased maintenance and accessibility improvements at beach access sites was one of the top priorities for participants at the Savary Island open house.
    - To improve accessibility, respondents indicated they would like to see
        - More washrooms at parks and at trailheads (24%); More accessible parking (11%); Improved parks and trails for people with mobility issues (18%); More beach access trails/accessible beach access trails (8%), and More signage at parks and at trail accesses (7%).
    - Participants at the Savary Island open house specifically requested that the **Mermaid Trail beach access site at Henderson Road** be maintained by the qRD as a designated beach access trail.
    - Online survey respondents from Savary Island were mostly dissatisfied with the variety of amenities in parks (40% very dissatisfied, 20% somewhat dissatisfied)
    - Online survey respondents indicated that opportunities to connect with nature (87%), and the protection of natural areas and sensitive ecosystems (75%) were the most valued aspects of the parks and trails system.

- Summary: Attendees at the Savary Island open house expressed the importance of public beach access and support from the qRD in stabilizing shorelines and providing safe beach access in steep locations. Attendees at the Savary Island open house placed emphasis on adding a public washroom on Savary Island and adding a beach access trail at Mermaid Beach.

Key Findings that could be considered for the Savary Island OCP:

- Describe alignment with the Parks & Trails Strategy's five goals and recommendations in the OCP.
- Be sure to identify Julian Road as a beach access trail in any parks map in the OCP and be mindful of its land status (qRD permit from MoTT).
- Incorporate key findings from the Savary Island open house into the OCP.

8.4 Savary Island Community Wildfire Protection Plan, 2009



Authors:
BA Blackwell & Associates

In 2009 the qRD hired BA Blackwell & Associates to complete the Savary Island Community Wildfire Protection Plan. The plan evaluates considerations for wildland urban interface management on Savary Island. A summary of the plan and relevance to the Community Plan process is provided below.

Key Findings that could be considered for the Savary Island OCP:

- The Savary Island Volunteer Fire Department (SIVFD) provides structural and initial wildland fire response. The Island is not serviced by BC Hydro. There is one small community water system serving the Savary Shores subdivision, but most water is drawn from aquifers or collected from rainwater. The dock is the primary access point to the Island and would be integral to any evacuation efforts in the event of a wildfire.
- Currently, there is no fire vulnerability standard for roofing material used on the Island. Many new homes are constructed with unrated roofing materials, and older homes often have unrated roofs that are vulnerable to spot fires. Additionally, the adjacent vegetation often contacts roofs, roof surfaces are frequently covered with litter fall and leaves from nearby trees, and open decks are common, further increasing fire vulnerability. Unrated roofing materials contribute to fire risk -- over the long term, building codes or bylaws to encourage a change in roofing materials when roof replacement of residences may be a solution. Woodpiles near homes are a significant issue, and structure setbacks are often absent. Generators are a considerable danger to suppression crews.
- There would likely be significant difficulty evacuating the Island, a wildfire could cut off egress from parts of the Island and evacuation plans need to be developed for this scenario, many visitors are unfamiliar with the Island and plans should ideally be posted by all property owners, especially of rental properties.
- Aquifers that provide drinking water for some residents could be negatively impacted by wildfire due to increased surface runoff from hydrophobicity changes, and numerous scarps could have terrain stability concerns. Water quality may be affected by retardants or salt water employed in fire fighting.

8.5 Savary Island Slope Hazard Study, 2023


TETRA TECH

1.0 INTRODUCTION

2.0 STEEP SLOPES ASSESSMENT

2.1 Background Review and Defining Potentially Hazardous Slopes

Savary Island Slope Hazard Study, 2023[5] **Authors:** Tetra Tech

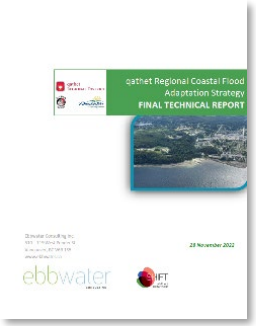
In 2023 the qRD commissioned Tetra Tech to complete a study of the slope hazards on Savary Island[5]. The following is a summary of that report.

Key Findings that could be considered for the Savary Island OCP:

- The Report includes a map highlighting areas with high, moderate, and low erosion potential and two maps highlighting potential slope hazard areas.
- The eastern and western ends of the island with marine deposits are stated as susceptible to erosion.
- The Report notes that it did not account for the following: Tsunami effect on coastal slope soil stability, Seismic (earthquake) hazards or related phenomena, Wildfire hazards, Snow avalanche hazards, Human Modification of the Shoreline.
- The Report states that potential slope hazard areas shown are not necessarily areas where current slope hazards exist but where there is an elevated risk of hazards occurring.
- General recommendations with respect to existing and future developments within these slope hazard areas include:
    - Any proposed new modification, new development, or modification to existing developments within the identified potential steep slope hazard areas should be reviewed by, and have site level assessment undertaken by, a qualified professional. Any further assessment should be completed in accordance with the latest professional practice guideline on landslide assessment in British Columbia released by Engineers and Geoscientists British Columbia (EGBC).
    - The assessment should comment on the suitability of the site, estimated erosion rates and safety of the site and include a Landslide Assessment Assurance Statement.
    - The study authors recommend that the probability used to evaluate the risk of instability follow the guidelines outlined in EGBC's latest guidelines on landslide assessment in British Columbia. Where no specific probability is listed, it is recommended it be 1/2500 years for consistency within the region and with seismic stability requirements.

- Potential slope hazard areas calculated by this study were compared with minimum and maximum erosion rates presented in the Savary Island Dune and Shoreline Study (Thurber, 2003). This comparison generally found that the potential slope hazard areas were either consistent with or slightly larger than the areas that would be theoretically impacted by erosion based on the Thurber 2003 erosion rates.
- Residents should be made aware of the areas where slopes may pose a hazard so they are informed prior to redevelopment, or development.

8.6 qathet Regional District Coastal Flood Adaptation Strategy Final Technical Report 2022



Author: Ebb Water Consulting

- The qRD received support from the British Columbia Community Emergency Preparedness Fund (CEPF) to retain Ebbwater Consulting Inc. to complete a Coastal Flood Adaptation Strategy – Final Technical Report.

- The goal of this project was to engage with partners (the Tla'amin Nation and the City of Powell River (CoPR)) and the public to develop a strategy that explores coastal flood adaptation options and charts a path for next steps in the region.

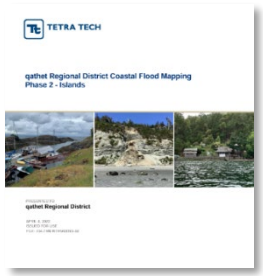
The seven Guiding Principles were:

1. Take a coordinated, consistent approach as a region.
2. Act in the best interests of future generations.
3. Collectively grow our ability to be flexible and adaptive in relation to coastal change.
4. Defend what cannot be replaced (e.g., ecosystems and cultural sites and uses).
5. Prioritize funding to protect things that benefit the most people or greatest good.
6. Enable and incentivize individuals to reduce their risk.
7. Take a phased approach over time.

Key Findings that could be considered for the Savary Island OCP:

- Work towards consistent approaches for land use along the shore (e.g., setbacks) through amendments to the OCP.
- Work towards consistent permitting and enforcement of building controls (e.g., flood proofing and flood construction levels) through amendments to the OCP.
- Identify natural systems that require protection or restoration and high hazard areas on Savary Island in the OCP.
- Cite guidebooks for coastal development in the OCP.
- Identify areas to limit growth and infill or identify areas to remain in lower risk land use designations in the OCP.

8.7 qathet Regional District Coastal Flood Mapping Phase 2 – Islands, 2022



Authors: Tetra Tech

The qRD received support from the BC Community Emergency Preparedness Fund (CEPF) to retain Tetra Tech to complete coastal flood mapping. The mapping was completed in two phases, Phase 1 focused on the mainland of the regional district and Phase 2 focused on islands in the regional district. The qathet Regional District Coastal Flood Mapping Phase 2 – Island Final Report completed in 2022 includes coastal flood mapping for Savary Island.

Key Findings that could be considered for the Savary Island OCP:

- Savary Island was identified in this study and others as having particular concerns related to erosion. Both the north and south shorelines of Savary contain areas that have a high erosion potential, but the southern shoreline is considered to be more exposed with a greater potential for more significant consequences of shoreline erosion
- The Savary Island Dune and Shoreline Study completed by Thurber Engineering in 2003 was used as a basis for a development permit area (DPA) in the Savary Island OCP. The DPA has not been implemented and to do so will require an update to the dune and shoreline study. qRD should consider engaging on a renewed erosion and flood hazard management DPA during the 2023 OCP update referencing an updated engineering study with setbacks. A tree protection bylaw would be a further consideration to regulate tree removal on or within a distance of slopes. If zoning is considered during the OCP update, setbacks from top of slope can be incorporated.
- Maps in the reports show a flood construction reference plane (FCRP) that represents a design coastal flooding event plus the influence of waves during the designated storm event. Additional freeboard is often applied to the FCRP to establish a Flood Construction Level (FCL) for planning and policy purposes. A FCL has not been included in the maps at this stage as discussion by relevant stakeholders is still necessary to help determine a suitable FCL.
- There are isolated areas along the coastline where the 2100 wave inundation potential is up to 400 m when measured perpendicular to the current shoreline. Map 5 should be consulted to determine the extent of these areas, but general locations include: North Shore Wharf Area, Whalebone Point, Indian Point. It is important to note that in areas where erosion risk is elevated, even a minor increase in coastal flooding could result in a more significant change in shoreline position.

8.8 Tsunami Mapping, 2007

Report Authors: Golder Associates

In 2007 Golder Associates created maps of potential tsunami scenarios. The region's geography offers protection from the devastating tsunamis generated by earthquakes in distant areas of the Pacific. However, the coastline is still vulnerable to strong waves and tides resulting from local seismic events. The document includes eight maps, each detailing different geographies and scenarios for tsunamis. There is no explanation or report to accompany the maps that could be found. A summary of the maps is provided below.

- Savary Island has a potential island run up maximum distance of between 30-100m (Figure 2.1). This is higher than many areas on Texada Island for comparison, which have a run up of 10-20m, with only select areas on Texada having a run up of 30-100m.

8.9 Savary Island Dune and Shoreline Study, 2003

Report Author: Thurber Engineering, Ltd. and Strix Environmental Consulting. The purpose of the study was to establish hazard setback lines for the entire perimeter of the Island to ensure building locations are safe from erosion hazards for 50- and 200-year horizons; to confirm the location, extent and sensitivity of the dune area on the Island; and to refine draft development guidelines for a Savary Island Official Community Plan.

Report Key Findings
Primarily based on the erosion rates obtained from the airphoto study, projected for 50 and 200 years, building setbacks from the current bluff crest were established from geotechnical considerations of a safe long-term slope. Recommendations for building setbacks from the current natural boundary in shoreline areas where no bluffs exist or the shoreline is bedrock are also provided. These setbacks were intended guide residential development around the Island shoreline.

The author's review of existing draft development guidelines suggests that the nonregulatory nature will not adequately protect public health and safety along high bluff areas or provide assurance over the quality and quantity of shallow aquifer utilized for domestic water supplies. The report outlines that the Island's relict and active sand dunes provide unique ecological habitats which are described with special reference to plant species and plant communities. Some modifications of existing, environmentally defined, Development Guideline areas are recommended, as are several new ones. The report states the density of septic fields and their relationship to shallow aquifers present significant potential problems on Savary Island.

Key Findings that could be considered for the Savary Island OCP:

The setbacks recommended in the report are stated as guidance only and can be revised, more likely reduced than increased, by a site-specific geotechnical study carried out by a suitably experienced geotechnical engineer. It should also be recognized that this study and its recommendations make no allowance for the rise in sea level which is projected to occur due to global warming.

A number of easy to apply and least costly hazard and risk prevention concepts are provided in the report for landowners who plan development activity:

- Do not locate residential buildings on or near the crest or base of steep slopes.
- Do not direct surface water or a significant quantity of groundwater onto any portion of a steep slope.
- Do not dump fill (including soil, rock, lawn clippings, brush cuttings or trash) on or below the crest of a steep slope.
- Do not excavate soil on any portion of a steep slope.

The report recommends a number of revisions to hazard land development guidelines for Savary Island that cover: Shoreline Areas, Bluff Residential Areas, Ecologically Sensitive Areas, the Inland Dune Area, Indican Springs Watershed, and Retention of Vegetation and Development of Large Parcels.

The report concludes with warnings to continue development of the densely subdivided island is at the risk of realizing hazards such as landslides, sea level rise, increased erosion rates, and septic contamination of aquifers.

8.10 A Preliminary Assessment of the Groundwater Resourses of Savary Island, 1996

Report Author: David W. Tupper

This was a preliminary study of the hydrogeology of the whole of the island upon which future studies and planning can be based. It included the compilation of all available data, initiation of an inventory of wells, septic disposal systems, and land use, mapping of the geology of the island, and estimating the present consumption of groundwater.

Key Findings that could be considered for the Savary Island OCP:

At the time of this study, there was a lack of data to be definitive about groundwater quantity. Groundwater consumption on the whole island is estimated to be 1.26 x 1 o7 litres/year (2.77 x 106 Imp. gal/yr.) Based on preliminary estimates, this is considered safely below the crudely calculated net groundwater recharge of between 1.0 x 109 and 2.2 x 109 litres/year (2.2 x 108 and 4.9 x 108 Jmp. gal/yr.). Provided development on the island remains for the most part seasonal recreational and per property consumption averages remain similar to what they are now, there is likely more than enough groundwater to maintain a sustainable yield for many years to come. This however does not account for local hydrogeological conditions or cumulative rates of consumption.

The quality of the groundwater, specifically for the perched and shallow aquifers, is considered more at risk than the quantity of supply.

The report recommended the development of a strategy for the management of the groundwater on Savary Island. A strategy of this kind was recommended to be formulated as part of an Official Community Plan, the broader context of which would better enable the land use controls and protected watersheds needed to protect the sustainability of this resource long into the future.

This report was completed 29 years ago. The qRD has commissioned a current groundwater study that will be forthcoming and help inform the update to the Savary Island Community Plan.

8.11 Corporate GHG Reduction Strategy Background Report, 2019

Corporate GHG Reduction Strategy Project Background Report 2020 – 2022[17]

Authors:
GHG Accounting Services

In 2019, the qRD hired GHG Accounting Services to complete a corporate GHG reduction strategy. This report is the background report to that strategy. A number of items affect Savary Island and a summary is provided below. One of the *Local Government Act* requirements for Official Community Plans is to provide GHG reduction targets and policies.

Climate change objectives specific to Savary Island:

- To reduce greenhouse gas emissions through reduced fossil fuel consumption and shifts to alternative forms of energy
- To promote the use of renewable energy and the development of renewable energy sources
- To reduce greenhouse gas emissions by 33% by the year 2020
- To consider the impacts of climate change in all land use decisions.

Key Findings that could be considered for the Savary Island OCP:

- As part of the qRD, Savary Island has climate change adaptation and mitigation objectives to reduce greenhouse gas emissions by 33% by 2020. The qRD will also reduce greenhouse gas emissions through reduced fossil fuel consumption and shifts to alternative forms of energy, promote the use of renewable energy and the development of renewable energy sources, and consider the impacts of climate change in all land use decisions. The policies in place to support these objectives are:
  - The Regional District will seek guidance and financial assistance from other levels of government in implementing its climate change adaptation and mitigation policies.
  - Islanders are encouraged to work with the Regional District and other levels of government to record and measure the current use of fossil fuels and greenhouse gas emissions. The resulting baseline data will allow

us to measure progress towards reducing fossil fuel consumption and achieving GHG emissions reduction targets.

- Education can contribute to reducing fossil fuel consumption and promoting the use of alternative energy, and the Regional District will work with islanders and other levels of government to share knowledge and meet the objectives of this plan.

- Energy efficiency and energy substitution are critical for reducing greenhouse gas emissions in rural and remote communities like Savary Island, and the Regional District will work with islanders and other levels of government to promote energy efficiency and energy substitution (switching from gasoline, diesel and propane to wood, sun, wind and biofuels) in home renovations and building.

- The Regional District and islanders will encourage the retention and enhancement of natural trees and vegetation to offset greenhouse emissions through the implementation of environmental policies in section 2.1 and island open space policies in section 5.2 of this plan.

- The Regional District will work with islanders to encourage alternative land transportation through implementation of transportation policies in section 6.1 and 6.2 of this plan.

- The Regional District will work with islanders to prepare for sea level rise by encouraging Development Guidelines for shoreline areas in section 9.1 and 9.2 of this plan.

9 SUMMARY OF FINDINGS

The Background Report was completed to document the community context, understand the development potential, and summarize the findings of reports that may provide insights, cautions, recommendations or ideas for the Savary Island Community Plan update underway.

Key factors influencing the future of Savary Island include a number of realities and competing interests.

1. The presence of significant subdivision and the lack of zoning or building regulations means that building and development on the Island largely occurs without local approvals and direct tracking.
2. Savary Island is 450 ha (1,111 acres) and has been subdivided into 1486 legal parcels. This is not a typical rural density that is able to support individual wells and septic for each parcel.
3. There is significant development potential remaining on the Island. There are no land use restrictions therefore potentially many of the remaining 670+ vacant parcels could develop unless parcel owners complete due diligence for groundwater and septic fields, and constraints of geotechnical concerns.
4. There is more potential on the west end of the Island than the east end.
5. Based on the SSID 2023 data it can be estimated that the peak population in August on Savary is around 3,000 persons. The non-peak population in January is estimated at 309 for the Island. By 2049 if the status quo continues there could be a peak summer population of 5,000 on Savary Island based on a 2% growth rate from 2023. Savary Island will experience future growth as there are no restrictions in place other than well and sanitary requirements.
6. There are significant existing hazard conditions that Islanders must be aware of when planning long term: erosion, landslides, sea level rise, extreme weather events such as tsunamis, wildfire, potential groundwater contamination due to siting of septic and saltwater infiltration, and emergency egress (leaving the island in case of emergency).

To date, Savary Island property owners have indicated they want no to little land use oversight on the Island and prefer to self-regulate. The Background Report provides insights into relevant data and trends for Savary Island that property owners and the qRD should consider as the Savary Island Official Community Plan review and update process moves forward.

10 APPENDIX: RESOURCES

The following reports, studies and plans have been cited within this report. Weblinks to the original documents are subject to change without notice.

Index	Citation
1	Tupper, D. (1996) A Preliminary Assessment of the Groundwater Resources of Savary Island, British Columbia, David Tupper in association with Pottinger Gaherty Environmental Consultants Ltd. Source: https://savaryshoreswater.ca/documents/775/tupper_waterstudy.pdf
2	Power River Regional District (2006) Savary Island Official Community Plan Bylaw No. 403, 2006 adopted February 22, 2007 consolidated to September 12, 2012. https://www.qathet.ca/wp-content/uploads/2019/12/Savary-Island-Official-Community-Plan-Bylaw-No.-403-2006-consolidated.pdf
3	Government of Canada (2014) Tla'amin Final Agreement Act (2014). Source: https://laws-lois.justice.gc.ca/eng/acts/T-11.2/page-1.html
4	qathet Regional District (2023). Housing Needs Report. Source: https://www.qathet.ca/wp-content/uploads/2024/01/qathet-2023-housing-update-Jan-11-2024.pdf
5	Tetra Tech (2023). Savary Island Slope Hazard Study. Source: https://www.qathet.ca/wp-content/uploads/2024/03/2023_Savary-Island-Slope-Hazard-Study.pdf
6	Stix Environmental Consulting (2003). Savary Island Dune and Shoreline Study. Source: https://www.qathet.ca/wp-content/uploads/2023/05/Savary-Island-Dune-Shoreline-Studies.pdf
7	Golder Associates (2007) Tsunami Maps for qathet Regional District. Source: https://www.qathet.ca/wp-content/uploads/2020/01/Tsunami_Maps.pdf
8	B.A. Blackwell & Associates (2009) Savary Island Community Wildfire Protection Plan. Source: https://www.qathet.ca/wp-content/uploads/2019/12/Savary-Island-CWPP.pdf
9	qathet Regional District (2024). Review of Rural Housing Solutions: Final Report: https://www.qathet.ca/wp-content/uploads/2024/04/20240320_Review-of-Rural-Housing-Solutions-Final-Report.pdf
10	qathet Regional District (2023). Parks and Trails Strategy: https://www.qathet.ca/wp-content/uploads/2023/08/qRD-Parks-and-Trails-Strategy-July-2023-FINAL_Compressed.pdf
11	Savary Island Land Trust (SILT) Source: https://savaryislandlandtrust.org

12	Government of BC (2025). Housing Needs Reports. Source: https://www2.gov.bc.ca/gov/content/housing-tenancy/local-governments-and-housing/policy-and-planning-tools-for-housing/housing-needs-reports
13	Vancouver Coastal Health Subdivision Guideline (2010). Source: https://www.vch.ca/en/media/3181
14	Government of BC. Ministry of Municipal Affairs (2017). Sewerage/Subdivision Best Practice Guideline. Source: https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/finance/4612subdivision_bestpracticeguide.pdf
15	Ebbwater Consulting (2022). qathet Regional Coastal Flood Adaptation Strategy FINAL TECHNICAL REPORT. Source: https://www.qathet.ca/wp-content/uploads/2023/05/qathet-Regional-Coastal-Flood-Adaptation-Strategy-Technical-Report-compressed.pdf
16	Environment and Climate Change Canada (2025). Data for Savary Island, BC. https://climatedata.ca/explore/location/?loc=JBEQU&location-select-temperature=tx_max&location-select-precipitation=rx5day&location-select-other=frost_days
17	GHG Accounting Services (2019). qRD Corporate GHG Reduction Strategy Project Background Report 2020-2022. Source: https://www.qathet.ca/wp-content/uploads/2020/06/Greenhouse-Gas-Reduction-Strategy-Project-Background-Report.pdf
18	Ebbwater Consulting (2022). qathet Regional District Coastal Flood Adaptation Strategy Report. Source: https://www.qathet.ca/wp-content/uploads/2023/01/Coastal-Flood-Mapping-Report-Phase-2-Islands.pdf
19	Tetra Tech (2022). qathet Regional District Coastal Flood Adaptation Strategy Phase 2 Islands Technical Report. Source: https://www.qathet.ca/wp-content/uploads/2023/01/Coastal-Flood-Mapping-Report-Phase-2-Islands.pdf
20	Ebbwater Consulting (2022). qathet Regional District Coastal Flood Adaptation Strategy Overview Report. Source: https://www.qathet.ca/wp-content/uploads/2023/05/qathet-Regional-Coastal-Flood-Adaptation-Strategy-Overview-Report.pdf
21	Association of Savary Island Community (ASIC) (2023). Survey Report. Source: https://www.savaryisland.ca/wp-content/uploads/ASIC-Survey_2023.pdf
22	CMIP6 Coupled Model Intercomparison Project - Climate Projections. Source: https://cds.climate.copernicus.eu/datasets/projections-cmip6?tab=overview
23	Arlington Group & EcoPlan International. Let's Talk Land Use: Public Engagement & Final Report. Source: https://www.qathet.ca/wp-content/uploads/2022/03/Lets-Talk-Land-Use-Engagement-Final-Report-January-2022.pdf