



Report

Regional Infrastructure and Service Availability



Prepared for Cowichan Valley Regional District
by IBI Group
May 13, 2022

Document Control Page

CLIENT:	Cowichan Valley Regional District
PROJECT NAME:	Cowichan Valley Regional Connectivity Strategy
REPORT TITLE:	Regional Infrastructure and Service Availability
IBI REFERENCE:	137920
VERSION:	2.0
DIGITAL MASTER:	SharePoint
ORIGINATOR:	Jason McBeath, John George, Brian Krest
REVIEWER:	Mitch Taylor
AUTHORIZATION:	Keith Ponton
CIRCULATION LIST:	Client Project Team
HISTORY:	0.1 – Initial Draft – April 19, 2022
	1.0 – Revised Report – May 10, 2022
	2.0 – Final Report – May 13, 2022

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Appendix A – Community Map of Cowichan Valley Regional District

1 Executive Summary

The current state assessment detailed herein reviews available information and datasets relating to ISP and Internet speeds in Cowichan Valley Regional District. Best efforts have been made to collect as much data as possible within the project scope and time frame, with independent 3rd party data sources used to provide a composite picture of the current state of broadband infrastructure in the Regional District over the time period of March and April 2022.

The study uses ISED road segment data (showing served and underserved classifications) as the base, then layers on premise addresses to identify the number of premises served and unserved. Within each community, CIRA Speedtest data was then used to provide a confidence factor which would support or challenge the ISED classification. ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

The classification of served or underserved is based on CRTC definitions of broadband speeds, independent of the serving technologies. CIRA speedtest data confirms that for the most part, commonly available fixed and mobile wireless technologies are not providing the minimum defined speeds of 50 Mbps download and 10 Mbps upload. . For the sake of completeness, within each community, a table of serving service providers and their respective network technologies are provided, including coaxial cable, fibre, fixed and mobile wireless, as well as satellite.

When comparing against the previous 'Communities Served' benchmark of 82%, as provided by the Government of BC's Communities Information Tool, the detailed assessment of data within this report has found the vast majority of premises within the Regional District are served with the CRTC minimum broadband speeds of 50 Mbps download and 10 Mbps upload.

Considering address density against the ISED road segments, the initial current state review indicates that 96% of premises are served, while 4% are underserved, when the region as a whole is evaluated against the CRTC minimums. The ISED data is challenged in some areas with CIRA speed test results, but overall, the regional district appears to be well served.

The gap to meet minimum speeds for underserved roads is challenging with roughly 574,107 meters of underserved road segments, or roughly 33% of Regional roads by length.

The following table summarize the key broadband metrics for the Regional District:

BROADBAND SERVICE STATUS	PREMISES		ROAD NETWORK (M)	
Served	34,054	96%	1,162,016	67%
Underserved	1,243	4%	574,107	33%
Total:	35,297	100%	1,736,123	100%

Table 1-1 Regional District Summary

This initial report will be followed by:

- Regional Needs Review and Gap Assessment.
- Regional Connectivity Strategy; and
- Community Connectivity Plans for four communities within the CVRD.

- A more wholesome executive summary will be provided once all reports are bound into a single summary report.

2 Current State Assessment

This section of the report provides an overview and understanding of the current state of broadband in Cowichan Valley Regional District.

2.1 Summary of Data Sources

Data for this analysis was sourced from federal, provincial, and local agencies. The agencies and their respective datasets are identified and explained below:

A. Innovation, Science and Economic Development Canada (ISED) – Federal – Governmental

ISED maintains the datasets used for evaluation of broadband service across the country. The data extracted for this report was available in two formats, hexagonal polygons and road segment polylines. The hexagonal data was used to show coverage maps of Internet Service Providers and the technologies they used. The road segment data gave more detailed insight into Data Speed Classification throughout the Regional District, mapping each road into individual sections of various length.

The following data was reviewed from ISED:

- a. Data Speed Classification – Hexagon
- b. Data Speed Classification – Road Segments
- c. Internet Service Provider (ISP) provided data
- d. Available Communication Technologies

B. British Columbia Data Catalogue

The Province of British Columbia maintains an extensive data catalogue. At the time of development of this report, Connecting Communities had issued an RTP (Request to Participate) event, to gather data from residents to update its data. For this report, the following data, provided and maintained by British Columbia Connecting Communities was used to verify data from other sources.

- a. Internet Zones (14 Regions/Zones)
Link: <https://catalogue.data.gov.bc.ca/dataset/internet-zones>
Description: Geographic boundaries of the zones that the Province has conceptualized for the potential administration of future funding programs.
- e. Underserved Households in BC
Link: <https://catalogue.data.gov.bc.ca/dataset/pseudo-households-underserved>
Description: A KMZ file showing pseudo-households that remain underserved in B.C., i.e., those that do not have access to 50/10 Mbps internet.
- f. Household Density Data
Link: <https://catalogue.data.gov.bc.ca/dataset/hex-underserved-households>
Description: KMZ file showing density of households in areas that remain underserved in B.C. (i.e., do not have 50/10 Mbps service). Areas outlined in blue represent areas that may be difficult to reach with terrestrial solutions and may require satellite internet for all or part of the 25m2 hexagon.

- g. B.C. Highways Without Cellular Service
Link: <https://catalogue.data.gov.bc.ca/dataset/bc-highways-without-cell-service>
Description: A map file that shows gaps in cellular coverage in B.C. for highways that have available power.

C. Cowichan Valley Regional District – Local – Governmental

The Regional District provided an extensive dataset for the purpose of this report, including:

- h. Address Points
- i. Parcels
- j. Points of Interest
- k. Road Names
- l. Zoning
- m. Electoral Boundaries
- n. Community Boundaries – The individual community boundaries used for this analysis were developed by the CVRD GIS Section to represent general areas and not specific community boundaries..
- o. Survey Dataset inclusive of Canadian Internet Registration Authority (CIRA) speed test data

D. Integrated Cadastral Information Society (ICIS)

Link: <https://www.icisociety.ca/>

The ICIS works to facilitate collaborative integration of spatial data from Local Government, Provincial Government, First Nations and major Utilities in British Columbia. Funded by the BC Provincial Government, BC Assessment Authority and the Land Title and Survey Authority, Utility companies operating in BC and Associate members, the Society supports data-sharing initiatives that standardize, aggregate, integrate and provide one-stop access to the best available geospatial data for British Columbia. As CVRD is a member of the ICIS, access to the data sources below was made available for this report.

- a. ParcelMap
BC Maintained and contributed by LTSA, ParcelMap BC represents the single, complete, trusted and sustainable spatial representation of cadastre in BC.
- b. Address
Comprehensive address data maintained and provided by Local Government and First Nations is aggregated by the Society to populate AddressBC; a central and authoritative civic address registry for BC.
- c. Infrastructure
Infrastructure data maintained and contributed by major Utility organizations operating in BC, including FortisBC Electric and Gas, as well as BC Hydro
- d. Telecommunications Infrastructure
Online, view-only maps of incumbent telecom infrastructure operators in some areas of the region were provided for a manual reference and review. No telecom data was downloaded or made available for display or distribution due to non-disclosure data sharing agreements between the telecom companies, ICISociety and IBI Group.

E. Service Providers

Publicly available coverage maps from mobile wireless service providers were

accessed and used in this assessment. Additionally, letters were sent to mobile and fixed wireless ISPs, voice cellular providers, and wireline ISPs. Responses from these letters will be utilized in future reports.

All available data noted above was used in the review of the Regional District's current state assessment.

2.2 Analysis Methodology

2.2.1 Overview

The datasets were collected and applied to a spatial project for evaluation, data verification, and analysis. The datasets were vetted for duplication of attributes, over-complexity, and accuracy. If multiple datasets were available with overlapping data, they were cross verified to confirm validity and one "master" dataset was selected. Once the data was deemed acceptable, a review and analysis were performed.

Community Information Tool versus CVRD Report Methodology

In the original RFP, the Government of British Columbia's Community Information Tool was referenced, specifically that it assessed 82% of the CVRD as having access to 50/10 internet. Their method of assessment is explained in this information pop-out from their website:

"Connectivity data is based on the National Broadband roads data. For incorporated communities, the municipal boundary was used to summary the speeds available to the roads in the community. For un-incorporated communities, a 10km radius was used instead. The speeds available were then converted to a percentage using the total length of roads associated to each community. Communities were classified as served if 75% or more of the roads show 50/10 Mbps available."

This varies from our approach, as we used specific community boundaries as provided by CVRD's GIS team rather than a 10km radius zone. This resulted in a much more inclusive look at the road data overall. Additionally, our second step compared address data to the nearest road segments, allowing for very detailed extrapolation of population density against the road segment classifications.

Overall, the results contained within this report illustrate the status of the region and its communities in finer detail and provide considerable opportunity for further assessment by community as the project continues.

2.2.2 Data Deficiencies

There is a high-level confidence in the data used for review and analysis. However, it is important to note that not all the data provided will be accurate. The following potential shortcomings have been noted:

ISED Road Segments

The data is based on ISP self reporting and may be challenged in some areas by speedtest results and other ground truths as noted in the individual community summaries herein.

ISED Hexagons

There are industry-known limitations to the ISED published hexagon data. If there is one data point within the predefined polygon, then it becomes a positive data point. For example, if all residents have <50Mbps download, but one resident within the polygon has 50Mbps+ download, then the polygon is counted as served. For this reason, the road network level data for Internet speeds is used for analysis. For all other datasets (such as provider or technology data) the hexagon is used.

Notably, these hexagons were utilized to catalogue ISP's and their technologies available in each community. As the hexagons are larger spatial polygons, an intersection function was executed and any community that fell anywhere within the boundaries of a polygon acquired the entire list of ISP's and broadband technologies from said polygon. These results, while somewhat inaccurate, can be vetted against any coverage or infrastructure maps the telecommunications infrastructure companies share in later stages of the project.

Premise Data

In some communities, premise counts show no premises, as premise data from the Province generally shows no data for First Nations. Additionally, census data for these areas is not necessarily usable, as community boundaries may not align with our community boundaries, and census data does not contain any address information, making spatial analysis difficult.

Internet Speed Tests

Broadband speed test results were collected from the Canadian Internet Registry Authority (CIRA) database. The results provided by CIRA are collected externally and cannot be confirmed to be accurate. A challenge with these self tests is that there could be limitations unknowingly imposed by the resident to limit speeds. For example, residents may be running their test device off a home WiFi network that limits speeds or may not set up in a favourable location, on legacy or out-of-date devices, in peak usage times, or other technical issues common with broadband technology.

The CIRA survey dataset was vetted to remove any test results that were performed prior to 2019. Additionally, duplicate test results executed from the same IP Address (a unique internet address that each user acquires from their service provider) were excluded to keep only the most recent test, as this gives the best opportunity for current state assessment.

This resulted in 865 individual speed test results being included for review, of the 2375 results that were provided in the full CIRA dataset.

Number of Speed Test

865 speed test results remained after the dataset validation. Given there are 40,174 premises reported in the 2021 Census, (35,297 in provincial data) in Cowichan Regional District, this translates to less than a 2.5% response rate. This sample size provides high confidence when assessing an aggregate of the entire region, but when considering community-level analyses, approximately 40% of the communities had 2 or fewer results within the sample, reducing the confidence level in those areas.

Radio Towers

Fixed wireless solutions have provided many with access to broadband. However, fixed wireless comes with limitations and is generally not considered an ultimate solution to meet CRTC standards. Limitations include the following:

- Radio transmission challenges across varying topology and existing foliage within the may limit data transmission rates;
- Towers may not have high capacity backhaul to support all users from a single tower;
- Number of active users on a single radio tower often create bottle necks for network equipment at the tower location.

As such, tower location and advertised subscriber data rates cannot be taken at full value and presents it challenging to confirm broadband information for those who have access to fixed wireless radio solutions.

2.3 Data Review

The following section provides a summary of the relevant data and information gathered from the data sources noted above.

The current state of broadband within Cowichan Valley Regional District was evaluated by assessing the available data and correlating it for a detailed look at the areas that are and are not served.

The Canadian Radio-television and Telecommunications Commission (CRTC) has set a target of 50 Mbps upload and 10 Mbps download for fixed Internet service to be classified as served. For purposes of this report, the download speed of 50Mbps was used. Anything less is deemed to be underserved. The following table provides further clarity.

DOWNLOAD SPEED	BROADBAND CLASSIFICATION
Less than 50 Mbps	Underserved
Greater than or equal to 50 Mbps	Served

Table 2-1 Broadband Classification

The following sections provide a summary of findings and analysis that will be used in determining next steps.

2.3.1 Internet Service Providers & Technologies

The following Table lists Internet Service Providers operating within the CVRD and their respective technologies for broadband delivery, based on ISED data:

ISP NAME	TECHNOLOGY
Beacon	Fixed Wireless
Bell	Mobile Wireless, High-Capacity Transport
Freedom Mobile	Mobile Wireless
Rogers	Mobile Wireless
Shaw	Cable, Mobile Wireless, High-Capacity Transport
Telus	DSL, Fibre, Fixed Wireless, Mobile Broadband, High-Capacity Transport
Xplornet	Satellite

Table 2-2 ISP and Associated Technologies

An investigatory letter was sent to ISPs, requesting details of current and planned infrastructure within the CVRD; responses to which will be leveraged in subsequent reports.

2.3.2 Existing Backbone Infrastructure

The location of backbone infrastructure has not been disclosed by the service providers, with the exception of confirming the existence of high-capacity transport services within the ISED hexagon data.

Table 2-3 and Figure 2-1 identify communities that fall within ISED hexagons that contain high-capacity transport services. Those shown with no high-capacity transport, may only have distribution infrastructure connected to transport within a neighbouring community.

COMMUNITIES THAT MAY CONTAIN HIGH-CAPACITY TRANSPORT SERVICES		
Arbutus Ridge Area	Koksilah Area	Sahtlam, Paldi, Riverbottom Area
Chemainus Area	Lake Cowichan Area	Saltair Area
Cherry Point Area	Lyackson First Nation	Shawnigan Lake Area
Cobble Hill Area	Malahat Drive Area	Somenos Area
Cowichan Bay Area	Malahat First Nation	South Shawnigan Area
Cowichan Station Area	Maple Bay Area	Stoney Hill Area
Cowichan Tribes	Maple Mountain Area	Stz'uminus First Nation
Crofton Area	Mayo Rd Area	Thetis Island
Diamond, Ladysmith Area	Mesachie Lake Area	Town of Ladysmith
Duncan Area	Mill Bay Area	Ts'uubaa-asatx Nation
Eagle Heights Area	Mt Sicker Area	Yellow Point, Cedar Area
Glenora Area	Penelakut Tribe	Youbou Area
Honeymoon Bay Area	Quamichan Lake Area	

Table 2-3: Communities that May Contain High-Capacity Transport Services

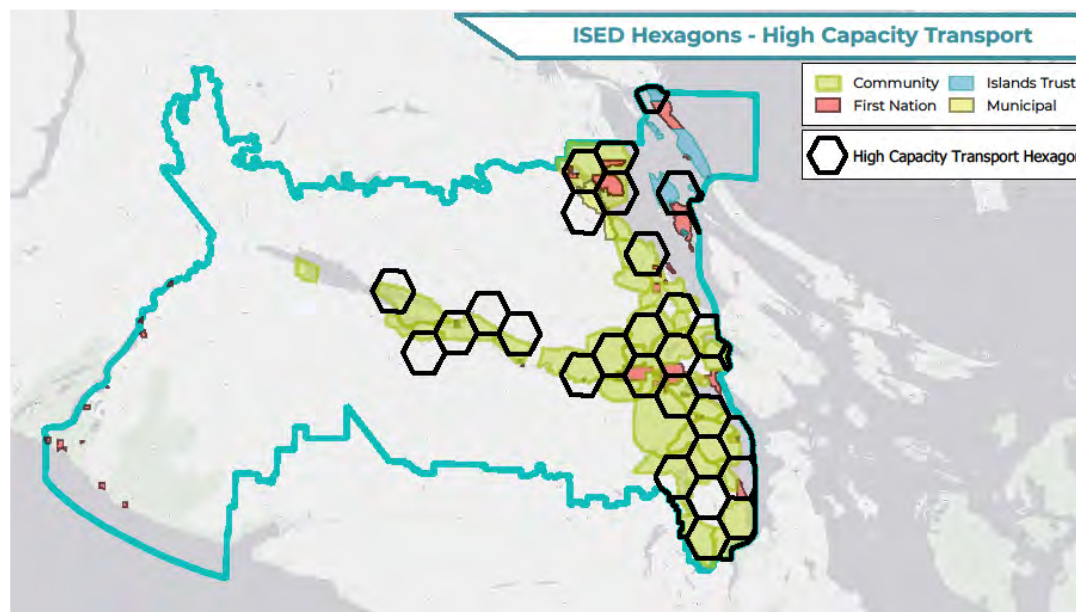


Figure 2-1: ISED Hexagons with High-Capacity Transport Services

2.3.3 Connected Coast Landing Points

The Connected Coast project is funded by the Government of Canada's Connect to Innovate (CTI) program, Indigenous Services Canada, and the Province of BC through the Connecting British Columbia program. It is managed and implemented by CityWest and the Strathcona Regional District, who form the Connected Coast Partnership. The project plans to place subsea fibre-optic cable, stretching from Prince Rupert south to Vancouver, then around

Vancouver Island. In total, it is estimated that the project has the potential to benefit 175,000 British Columbians, living in 90,000 households.

Figure 2-2 shows the planned Connected Coast landing points, with four located in the Cowichan Valley Regional District, including:

- Chemainus (Stz'uminus First Nation),
- Ditidaht,
- Lyackson; and
- Penelakut (Penelakut Tribe).

It should be noted that landing site locations may change over time, as at the time of finalizing this report, a fifth site at Carmanah Point was being considered for the Coast Guard..

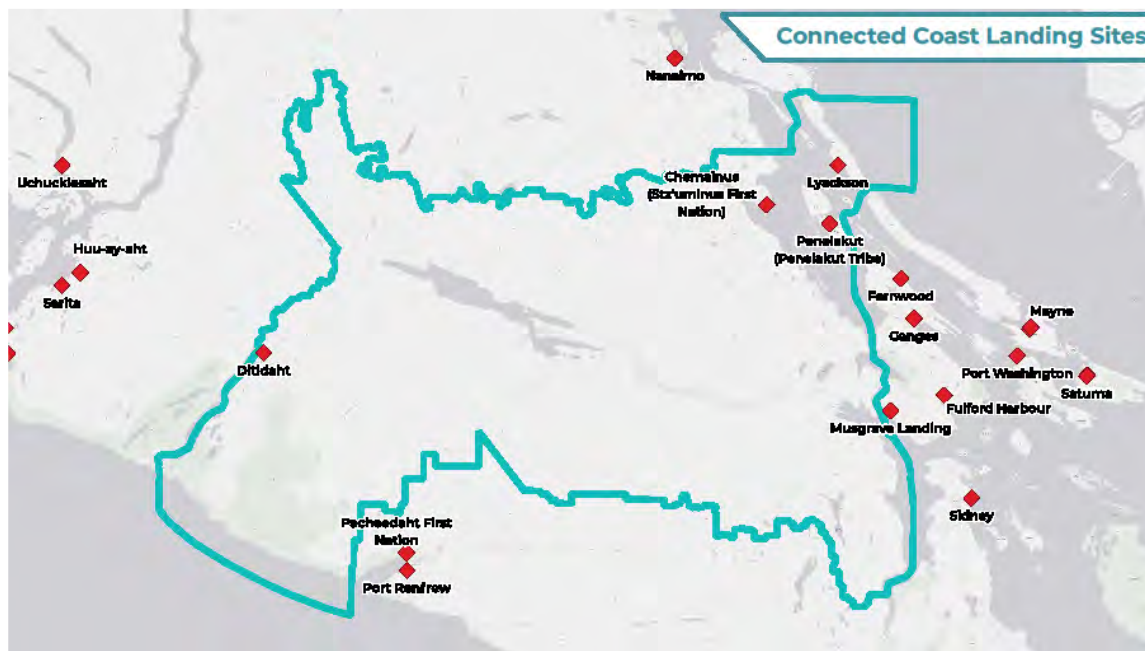


Figure 2-2: Planned Connected Coast Landing Points

2.3.4 Radio Towers

There are several radio towers within the borders of the CVRD, throughout most more densely populated areas, as depicted in Figure 2-3. This dataset was compiled from ISED databases and other various sources. The majority of towers are constructed and owned by one provider, with space leased to others, resulting in shared infrastructure that may provide options for consideration in future stages of strategy development. The Tower transmission range varies based on terrain and ground cover, and services delivered from the towers would include fixed and mobile wireless, radio broadcast, and telemetering, among others.

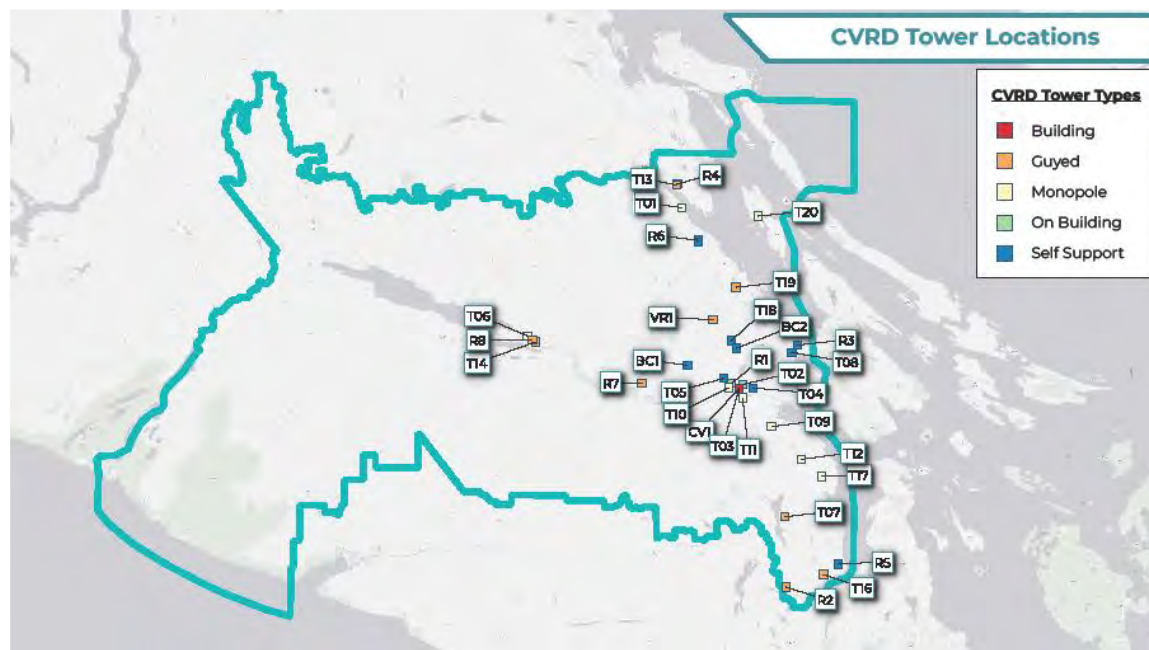


Figure 2-3: Cowichan Valley Regional District Fixed Wireless Towers

Table 2-4 shows the number of Transmit Licenses per user per tower, allowing us to see where there is tower sharing. The list of towers was parsed to exclude smaller towers, not likely viable for broadband or cellular use. For example, a tower that had only VHF or UHF channels was discarded as the tower is more than likely not heavy enough to support WISP or Cellular antenna pin wheels. For the purposes of this assessment, the owner was deemed to be the service provider with the highest number of licenses on the tower.

				ISED RADIO LICENSES ON-SITE											
SITE ID	TOWER HEIGHT (M)	SITE OWNER	TOWER TYPE	BELL	TELUS	ROGERS	SHAW	FORTIS	BC HYDRO	BC GOV	G O C	CBC	PATTISON	COWICHAN	OTHER
BCH1	37	BC Hydro	Self Support						8						
BCH2	39	BC Hydro	Self Support						10						
CBC1	107	CBC - FM	Guyed												
FTS1	45	Fortis	Self Support						6						
GBC1	45	Min of Trans	Self Support						5						
R1	42.7	Rogers	Self Support			60									
R2	79	Rogers	Guyed			31									
R3	20	Rogers	Self Support			2 33									
R4	35	Rogers	Self Support			13									
R5	40	Rogers	Self Support			21 4									
R6	60	Rogers	Self Support			27									
R7	60	Rogers	self Support			23									
T1	23	TELUS	Monopole			2 44 27									
T2	15	TELUS	Self Support			36									
T3	33	TELUS	Monopole			3 30									

				ISED RADIO LICENSES ON-SITE											
SITE ID	TOWER HEIGHT (M)	SITE OWNER	TOWER TYPE	BELL	TELUS	ROGERS	SHAW	FORTIS	BC HYDRO	BC GOV	G O C	CBC	PATTISON	COWICHAN	OTHER
T4	43	TELUS	Guyed	51			8			1					
T5	40	TELUS	Monopole	33											
T6	20	TELUS	Building	3	44	41									
T7	15	TELUS	Self Support	6											
T8	15	TELUS	Building	24											
T9	15	TELUS	Monopole	6											
T10	15	TELUS	Monopole	6											
T11	61	TELUS	Guyed	3	48	28									
T12	19	TELUS	Self Support	10											
T13	39	TELUS	Self Support	1	24										
T14	48	TELUS	Monopole	30						1		9			
T15	70	TELUS	Self Support	26											
T16	60	TELUS	Self Support	30											
T17	48	TELUS	Guyed	41											
T18	22	TELUS	Self Support	4											
VIS1	80	Vista Radio	Guyed									3 4			

Table 2-4: CVRD Tower Infrastructure

2.3.5 Cellular Coverage

The following maps are publicly available on cellular service providers' websites, and generally align with the Mobile Wireless ISP category identified within the Community breakdowns in Section 2.3.8.

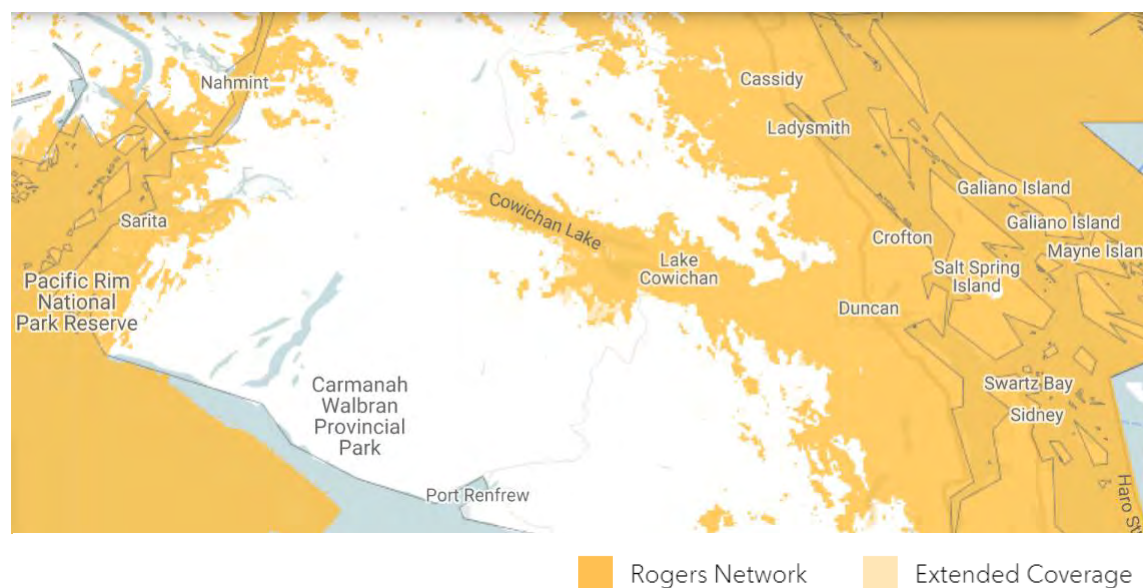


Figure 2-4: Cellular Coverage All Networks - Rogers Wireless

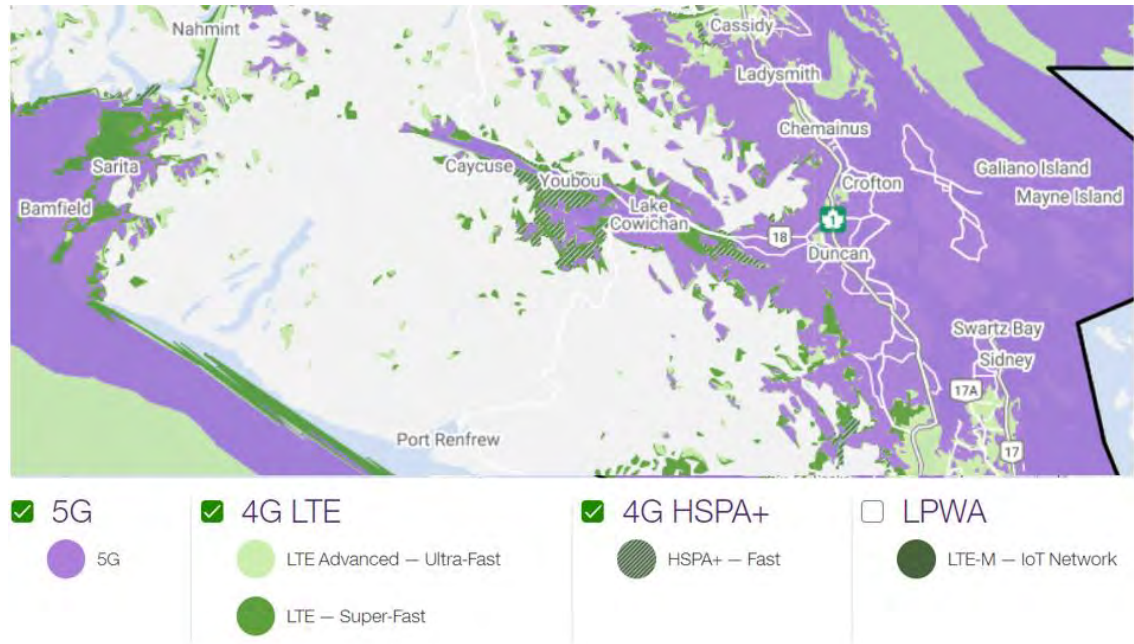


Figure 2-5: Cellular Coverage All Networks - Telus Mobility

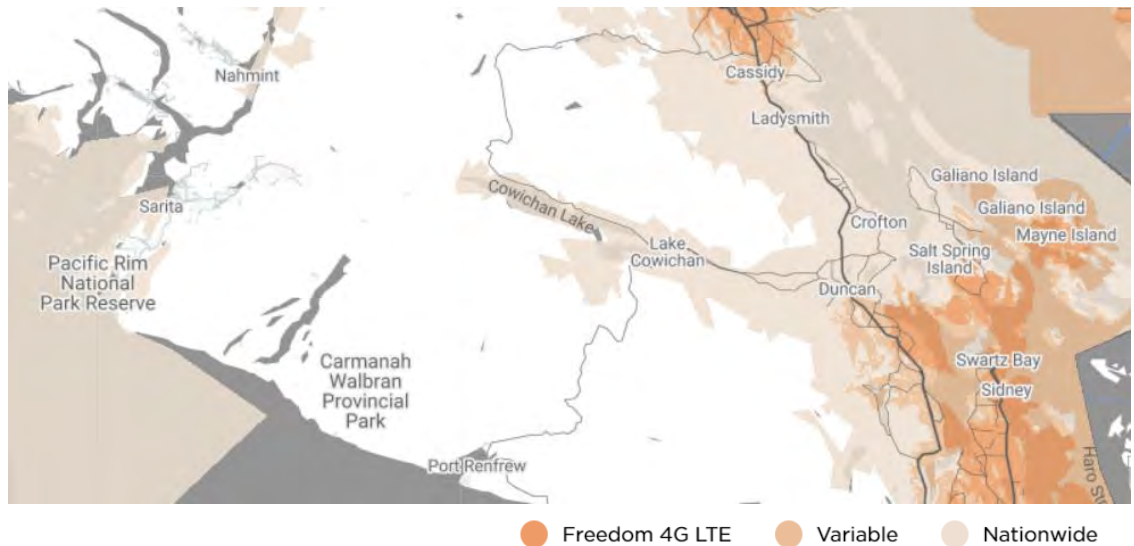


Figure 2-6: Cellular Coverage All Networks - Freedom Mobile

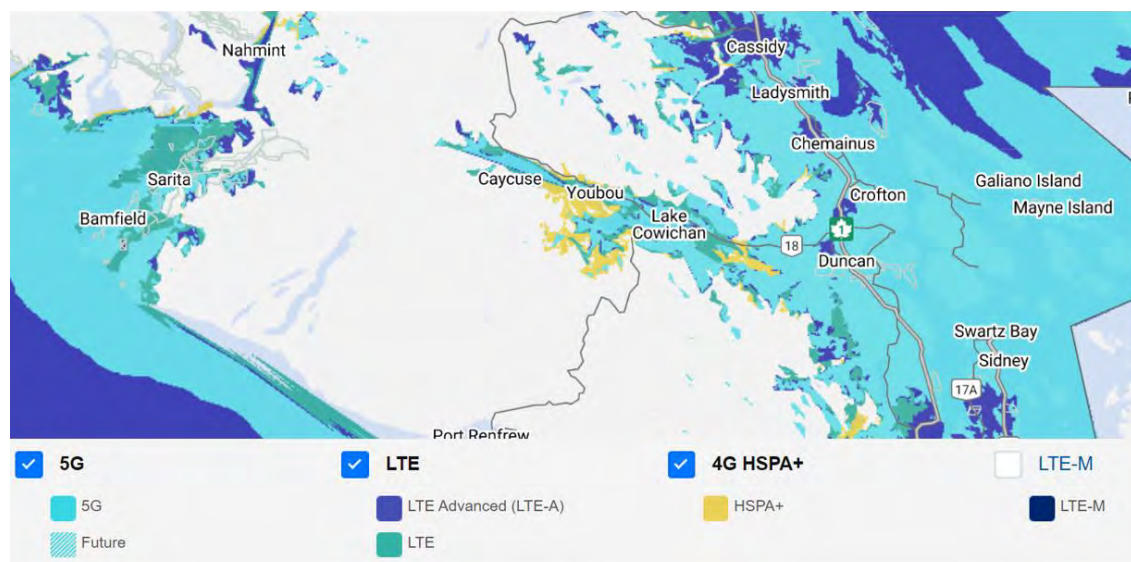


Figure 2-7: Cellular Coverage All Networks - Bell Mobility

An investigatory letter was sent to cellular service providers, requesting details of current and planned infrastructure within the CVRD; responses to which will be leveraged in subsequent reports.

2.3.6 Served and Underserved Premises

The following maps and commentary are broken out by community within the CVRD. The details provided include:

- ISED broadband road classification compared to Internet speed survey results;
- Confirmed premises meeting CRTC minimum broadband speed standards;
- Current understanding of served and underserved areas based on road segments;
- Numbers and percentages of served and underserved based on premises and road segment lengths; and
- Service providers and their network technologies (based on ISED hexagons).

A discussion of each community follows the figures. Key metrics to be carried over into subsequent sections of this report are the number and percentage of premises and road segment lengths considered served versus underserved. This information will enable an understanding of the magnitude of the broadband challenge, help provide cost estimates, and ultimately strategies on how to address the gaps.

It is understood that the most effective way to validate the various datasets is to have local site-specific data speed tests. The previously completed survey results have been used to validate the datasets. By validating Cowichan Valley survey results against ISED road segments, a picture of the true broadband status throughout the Regional District has been developed.

Cellular coverage maps were not granular enough, nor available in a format that could be integrated into the individual community assessments. It is expected that voice cellular coverage would be at least as large as mobile data coverage from networks such as LTE and 5G.

2.3.7 Regional District Summary

“Premises served vs. Underserved”, as well as “Served Area by Road Segments” are two key metrics to further review. Based on ISED road segment data documenting whether available services meet CRTC definitions (including all network technologies reported), *Table 2-5* provides

a summary of served and underserved premises in Cowichan Valley Regional District, while *Table 2-6* provides a summary of served and underserved areas of the Regional District based on length of road segment.

Community	Premises Served		Premises Underserved	
	(Count)	(%)	(Count)	(%)
Ruxton Island	0	Insufficient Data	0	Insufficient Data
Lyackson First Nation	0	Insufficient Data	0	Insufficient Data
Ditidaht First Nation	0	Insufficient Data	0	Insufficient Data
Caycuse Area	0	0.0%	3	100.0%
Thetis Island	71	21.2%	264	78.8%
Stoney Hill Area	19	24.7%	58	75.3%
Mt Sicker Area	42	54.5%	35	45.5%
UNCLASSIFIED	58	69.9%	25	30.1%
Cowichan Station Area	451	71.0%	184	29.0%
Westholme Area	69	78.4%	19	21.6%
South Shawnigan Area	226	81.3%	52	18.7%
Youbou Area	909	86.3%	144	13.7%
Stz'uminus First Nation	210	88.2%	28	11.8%
Cowichan Tribes	706	93.4%	50	6.6%
Sahtlam, Paldi, Riverbottom Area	986	93.7%	66	6.3%
Malahat Drive Area	151	93.8%	10	6.2%
Eagle Heights Area	512	94.3%	31	5.7%
Lake Cowichan Area	1,746	94.4%	104	5.6%
Honeymoon Bay Area	291	96.0%	12	4.0%
Chemainus Area	2,314	97.1%	68	2.9%
Mayo Rd Area	103	97.2%	3	2.8%
Mesachie Lake Area	116	98.3%	2	1.7%
Cowichan Bay Area	1,545	98.5%	23	1.5%
Glenora Area	294	98.7%	4	1.3%
Diamond, Ladysmith Area	308	98.7%	4	1.3%
Somenos Area	741	99.1%	7	0.9%
Shawnigan Lake Area	3,084	99.2%	26	0.8%
Yellow Point, Cedar Area	851	99.3%	6	0.7%
Saltair Area	868	99.3%	6	0.7%
Penelakut Tribe	155	99.4%	1	0.6%
Town of Ladysmith	2,518	99.8%	6	0.2%
Crofton Area	1,059	99.9%	1	0.1%
Cobble Hill Area	1,853	99.9%	1	0.1%
Arbutus Ridge Area	652	100.0%	0	0.0%
Ts'uubaa-asatx Nation	5	100.0%	0	0.0%
Mill Bay Area	1,174	100.0%	0	0.0%
Genoa Bay Area	28	100.0%	0	0.0%
Halalt First Nation	1	100.0%	0	0.0%
Duncan Area	5,854	100.0%	0	0.0%
Malahat First Nation	48	100.0%	0	0.0%

Survey Results		
Survey Count	Meets 50 DL	Fails 50 DL
0	0	0
0	0	0
0	0	0
1	0	1
19	2	17
1	0	1
1	0	1
51	27	24
39	6	33
0	0	0
2	0	2
4	2	2
4	3	1
32	22	10
32	13	19
3	1	2
14	6	8
11	2	9
2	0	2
39	24	15
2	2	0
0	0	0
56	35	21
8	4	4
9	6	3
14	8	6
41	19	22
13	5	8
18	9	9
0	0	0
48	21	27
17	12	5
76	41	35
24	19	5
1	0	1
42	26	16
0	0	0
0	0	0
166	102	64
4	3	1

ISED Data Validation	CIRA Survey Representation
Insufficient Data	Insufficient Data
Insufficient Data	Insufficient Data
Insufficient Data	Insufficient Data
Proven	Medium
Proven	High
Proven	Low
Challenged	Low
Proven	High
Proven	High
Insufficient Data	Low
Challenged	Low
Challenged	Low
Proven	Low
Proven	High
Challenged	High
Challenged	Low
Challenged	High
Challenged	Medium
Challenged	Low
Proven	Medium
Challenged	Low
Insufficient Data	Low
Challenged	High
Challenged	High
Challenged	High
Challenged	Medium
Challenged	Medium
Challenged	Medium
Challenged	High
Insufficient Data	Low
Challenged	Medium
Proven	Medium
Challenged	High
Proven	High
Challenged	Medium
Proven	High
Insufficient Data	Low
Insufficient Data	Low
Proven	High
Challenged	Medium

Community	Premises Served		Premises Underserved	
	(Count)	(%)	(Count)	(%)
Maple Bay Area	559	100.0%	0	0.0%
Maple Mountain Area	84	100.0%	0	0.0%
Koksilah Area	60	100.0%	0	0.0%
Cherry Point Area	68	100.0%	0	0.0%
Quamichan Lake Area	3,265	100.0%	0	0.0%
CVRD Total	34,054	96.5%	1243	3.5%

Survey Results		
Survey Count	Meets 50 DL	Fails 50 DL
9	5	4
0	0	0
1	1	0
1	0	1
60	34	26
865	460	405

ISED Data Validation	CIRA Survey Representation
Challenged	Medium
Insufficient Data	Low
Proven	Low
Challenged	Low
Challenged	Medium

Table 2-5 CVRD Premise Status by Community

Community	Road Length Served		Road Length Underserved	
	(m)	(%)	(m)	(%)
Ruxton Island	0	0.0%	3,166	100.0%
Caycuse Area	0	0.0%	6,919	100.0%
Lyackson First Nation	0	0.0%	1,785	100.0%
Ditidaht First Nation	0	0.0%	3,487	100.0%
UNCLASSIFIED	4,165	1.2%	337,108	98.8%
Thetis Island	5,019	16.3%	25,715	83.7%
Stoney Hill Area	2,436	21.0%	9,170	79.0%
Mt Sicker Area	5,004	43.4%	6,534	56.6%
South Shawnigan Area	10,287	44.7%	12,704	55.3%
Penelakut Tribe	8,100	51.3%	7,679	48.7%
Ts'uubaa-asatx Nation	574	53.0%	508	47.0%
Cowichan Station Area	39,810	54.4%	33,408	45.6%
Westholme Area	5,869	57.0%	4,422	43.0%
Malahat First Nation	3,013	59.9%	2,016	40.1%
Youbou Area	27,891	61.9%	17,154	38.1%
Mayo Rd Area	12,877	71.4%	5,151	28.6%
Sahtlam, Paldi, Riverbottom Area	59,378	73.3%	21,593	26.7%
Stz'uminus First Nation	20,679	73.5%	7,458	26.5%
Lake Cowichan Area	44,762	76.3%	13,883	23.7%
Mesachie Lake Area	9,259	78.9%	2,483	21.1%
Honeymoon Bay Area	11,037	79.3%	2,889	20.7%
Eagle Heights Area	15,352	79.3%	4,004	20.7%
Cowichan Tribes	36,259	81.2%	8,422	18.8%
Maple Mountain Area	5,760	82.5%	1,219	17.5%
Chemainus Area	54,051	84.3%	10,094	15.7%
Malahat Drive Area	21,413	90.5%	2,249	9.5%
Cowichan Bay Area	53,976	92.0%	4,676	8.0%
Saltair Area	26,204	93.9%	1,699	6.1%
Diamond, Ladysmith Area	15,623	95.4%	751	4.6%
Shawnigan Lake Area	118,893	95.5%	5,576	4.5%
Glenora Area	18,895	95.7%	839	4.3%
Somenos Area	54,068	96.2%	2,149	3.8%
Yellow Point, Cedar Area	52,580	96.8%	1,758	3.2%
Town of Ladysmith	63,268	96.9%	2,009	3.1%
Cobble Hill Area	100,364	97.3%	2,832	2.7%
Crofton Area	26,332	98.5%	396	1.5%
Maple Bay Area	18,737	99.4%	113	0.6%
Quamichan Lake Area	69,364	99.9%	89	0.1%

Community	Road Length Served		Road Length Underserved	
	(m)	(%)	(m)	(%)
Arbutus Ridge Area	11,231	100.0%	0	0.0%
Mill Bay Area	36,271	100.0%	0	0.0%
Genoa Bay Area	1,220	100.0%	0	0.0%
Halalt First Nation	1,816	100.0%	0	0.0%
Duncan Area	82,099	100.0%	0	0.0%
Koksilah Area	4,553	100.0%	0	0.0%
Cherry Point Area	3,527	100.0%	0	0.0%
CVRD Total	1,162,016	66.9%	574,107	33.1%

Table 2-6 CVRD Road Segment Status by Community

The above two tables indicate that roughly 96% of the Regional District premises have access to Internet speeds of at least 50 Mbps download and 10 Mbps upload. On the other hand, roughly 4% of Regional District premises do not have access to minimum broadband speeds.

In contrast, the 4% of CVRD premises underserved account for more than 33% of the Regional District's geographic area as represented by length of road. This is reflective of the rural broadband challenges that CVRD is facing.

2.3.8 Communities Lacking Sustainable Broadband Infrastructure

Based on reporting of ISED hexagons overlayed with community boundaries, *Table 2-7* identifies communities that do not currently contain coaxial cable infrastructure, and communities that do not currently have fibre to the home infrastructure. These two technologies are critical to deliver sustainable broadband services now and into the future.

Communities Without Coaxial Cable Infrastructure	Communities Without Fibre to the Home Infrastructure
Caycuse Area	Arbutus Ridge Area
Ditidaht First Nation	Caycuse Area
Penelakut Island	Ditidaht First Nation
Pylades Island	Lake Cowichan Area
Reid Island	Lyackson First Nation
Ruxton Island	Mayo Rd Area
Thetis Island	Pauquachin First Nation
	Penelakut Island
	Pylades Island
	Ruxton Island
	Ts'uubaa-asatx Nation
	Valdes Island

Table 2-7: Communities without Sustainable Broadband Infrastructure

2.3.9 Community Breakdown

2.3.9.1 Malahat Drive Area

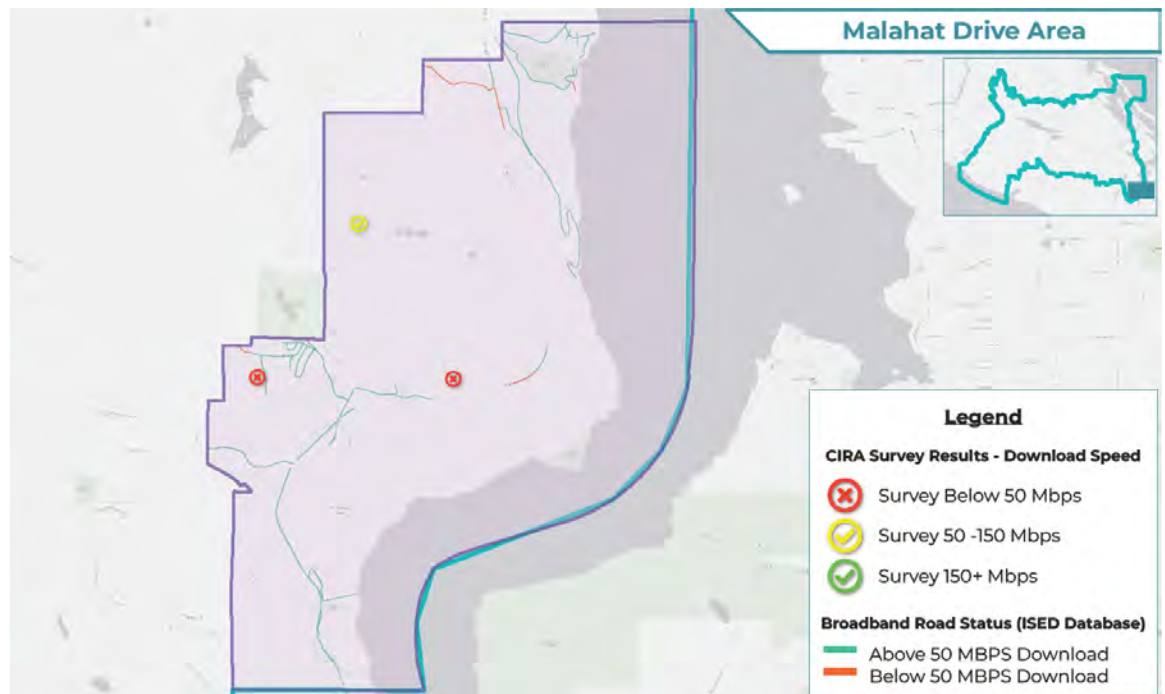


Figure 2-8: Current Assessment of Survey Data within Malahat Drive Area

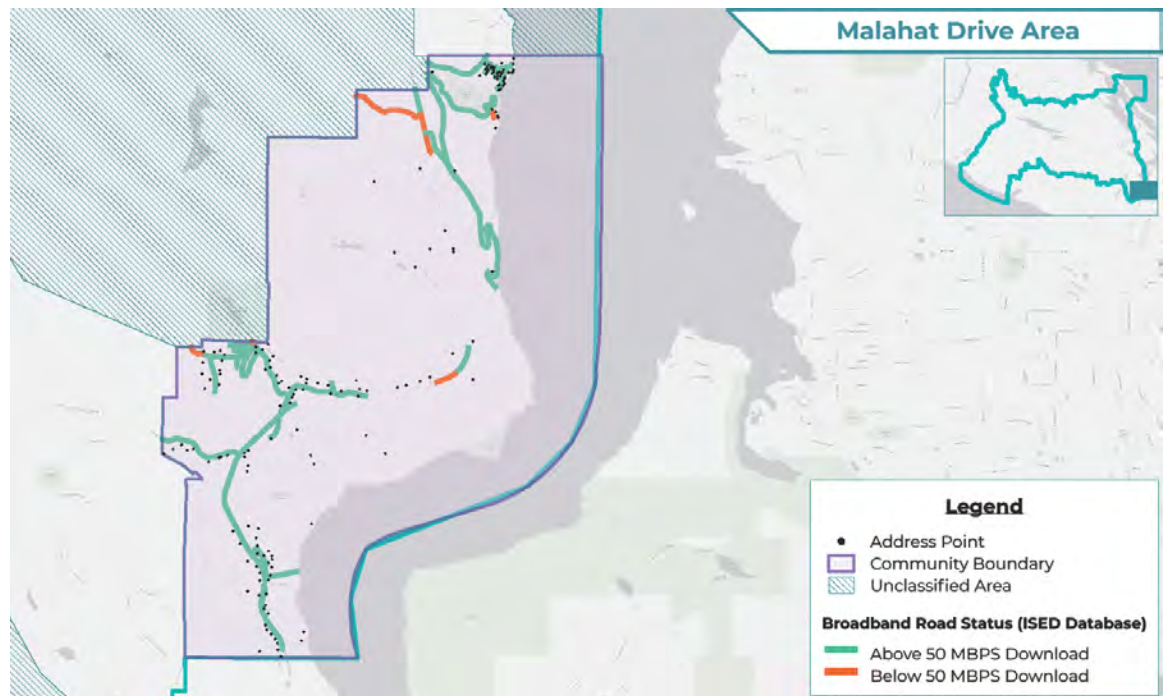


Figure 2-9: Current Understanding of Served and Underserved Areas within Malahat Drive Area

Malahat Drive Area Premise		
Community Total Premise Count	161	
% of CVRD Total Premise Count	0.5%	
Served	151	93.8%
Underserved	10	6.2%

Malahat Drive Area Roads		
Total Road Length	23,662	
% of CVRD Total Road Length	1.4%	
Served	21,413	90.5%
Underserved	2,249	9.5%

Table 2-8 Malahat Drive Area Current State

ISPs Serving Malahat Drive Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-9 ISPs in Malahat Drive Area

Malahat Drive Area is primarily served with fibre optic and cable infrastructure, with high-capacity transport along the arterial routes. There are two fixed wireless towers in the south end of the area, owned by Rogers and Telus.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Malahat Drive Area	Challenged	Low

Table 2-10 Malahat Drive Data Summary

2.3.9.2 Lake Cowichan Area

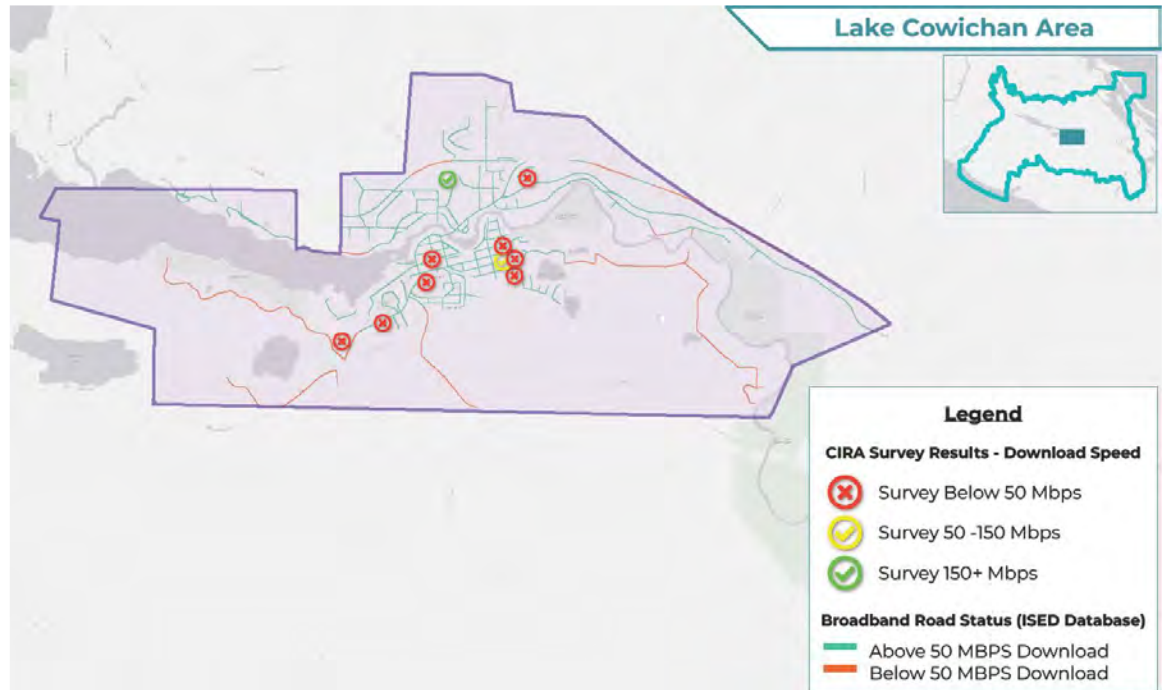


Figure 2-10: Current Assessment of Survey Data within Lake Cowichan Area

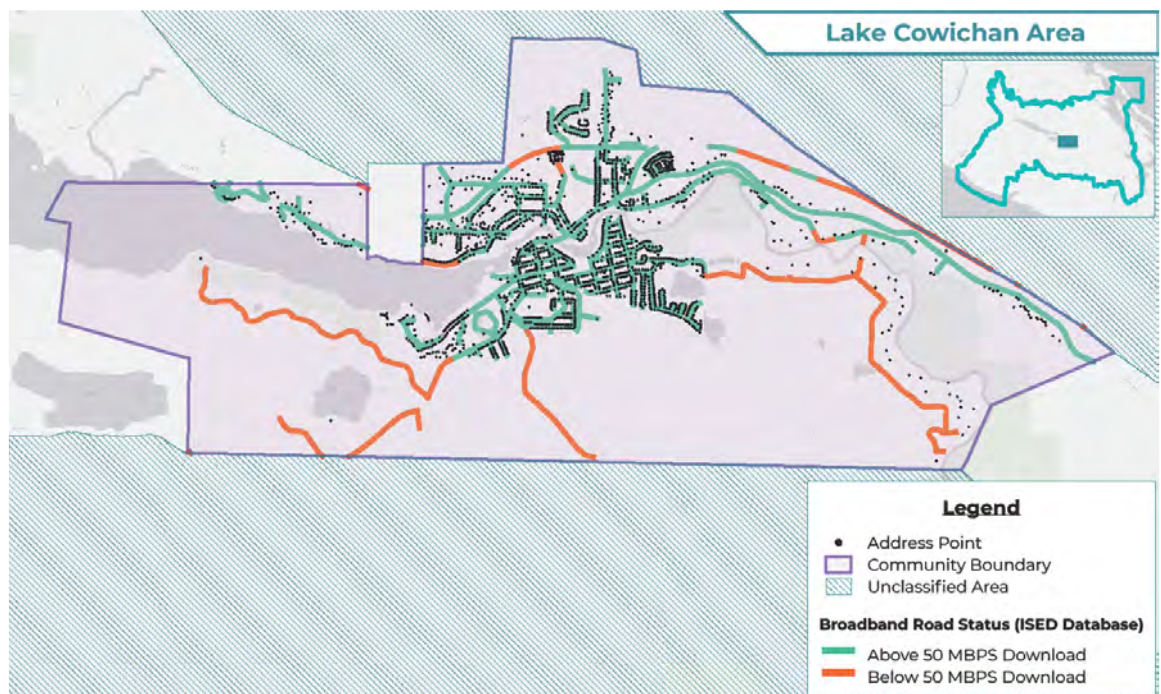


Figure 2-11: Current Understanding of Served and Unserved Areas within Lake Cowichan Area

Lake Cowichan Area Premise		
Community Total Premise Count	1,852	
% of CVRD Total Premise Count	5.2%	
Served	1,747	94.3%
Underserved	105	5.7%

Lake Cowichan Area Roads		
Total Road Length	58,933	
% of CVRD Total Road Length	3.4%	
Served	44,963	76.3%
Underserved	13,970	23.7%

Table 2-11 Lake Cowichan Area Current State

ISPs Serving Lake Cowichan Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓		✓	✓	✓	
Xplornet							✓

Table 2-12 ISPs in Lake Cowichan Area

Lake Cowichan Area consists primarily of the populated area at the east end of Cowichan Lake, stretching west to just east of Marble Bay. It is served with cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the area. There are a number of fixed wireless towers just west of the community that serve residences and businesses as well.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Lake Cowichan Area	Challenged	Medium

2.3.9.3 Arbutus Ridge Area

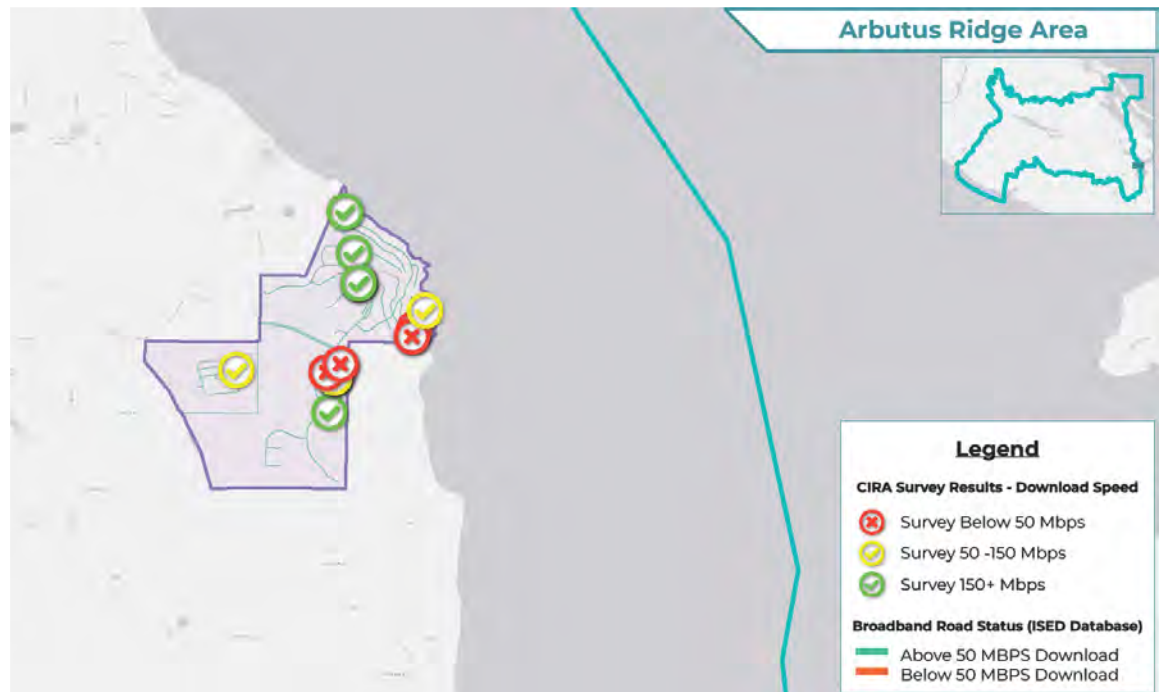


Figure 2-12: Current Assessment of Survey Data within Arbutus Ridge Area

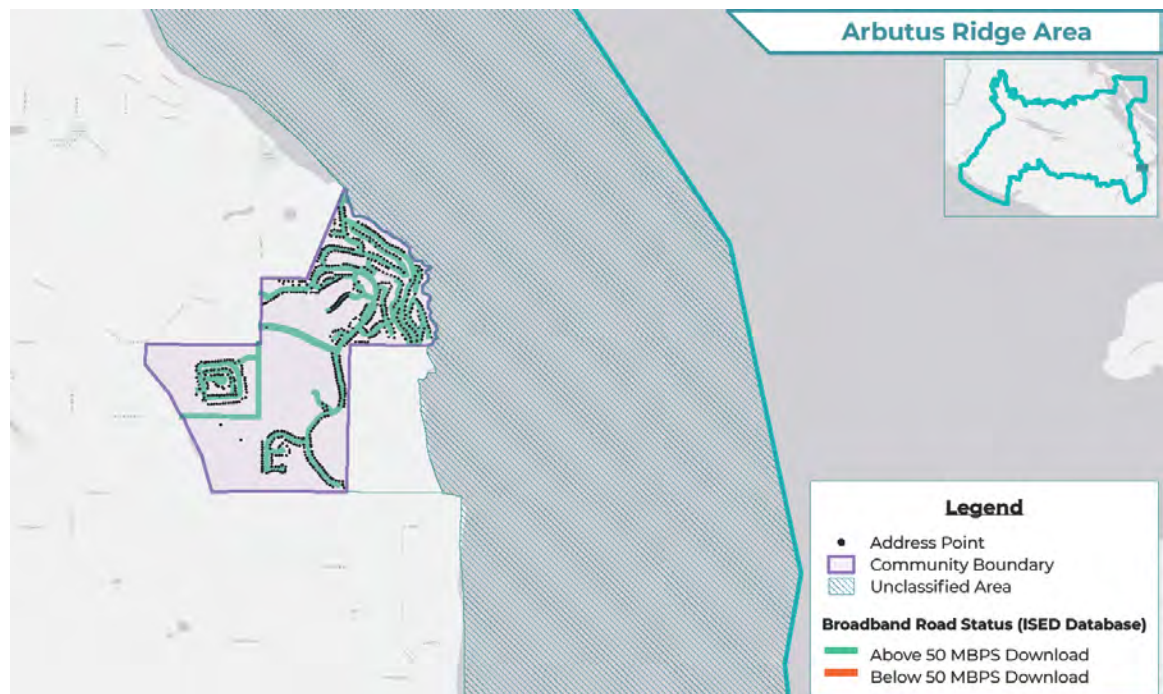


Figure 2-13: Current Understanding of Served and Underserved Areas within Arbutus Ridge Area

Arbutus Ridge Area Premise		
Community Total Premise Count	652	
% of CVRD Total Premise Count	1.8%	
Served	652	100.0%
Underserved	0	0.0%

Arbutus Ridge Area Roads		
Total Road Length	11,231	
% of CVRD Total Road Length	0.6%	
Served	11,231	100.0%
Underserved	0	0.0%

Table 2-13 Arbutus Ridge Area Current State

ISPs Serving Arbutus Ridge Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓		✓	✓	✓	
Xplornet							✓

Table 2-14 ISPs in Arbutus Ridge Area

Arbutus Ridge Area is a coastal community that is located between Cobble Hill Area and Pauquachin First Nation. It is served with cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There are two fixed wireless towers west of the community in the Cobble Hill Area but it is unclear if the range of towers will facilitate stable connections in the Arbutus Ridge Area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Arbutus Ridge Area	Proven	High

2.3.9.4 Town of Ladysmith

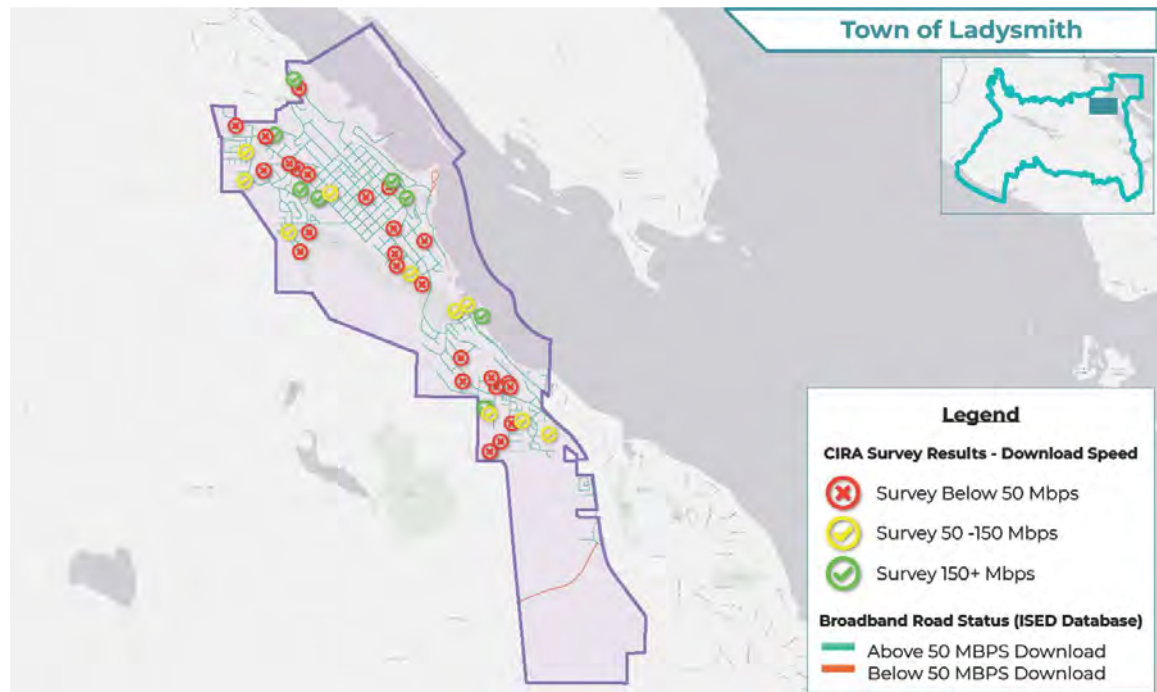


Figure 2-14: Current Assessment of Survey Data within Town of Ladysmith

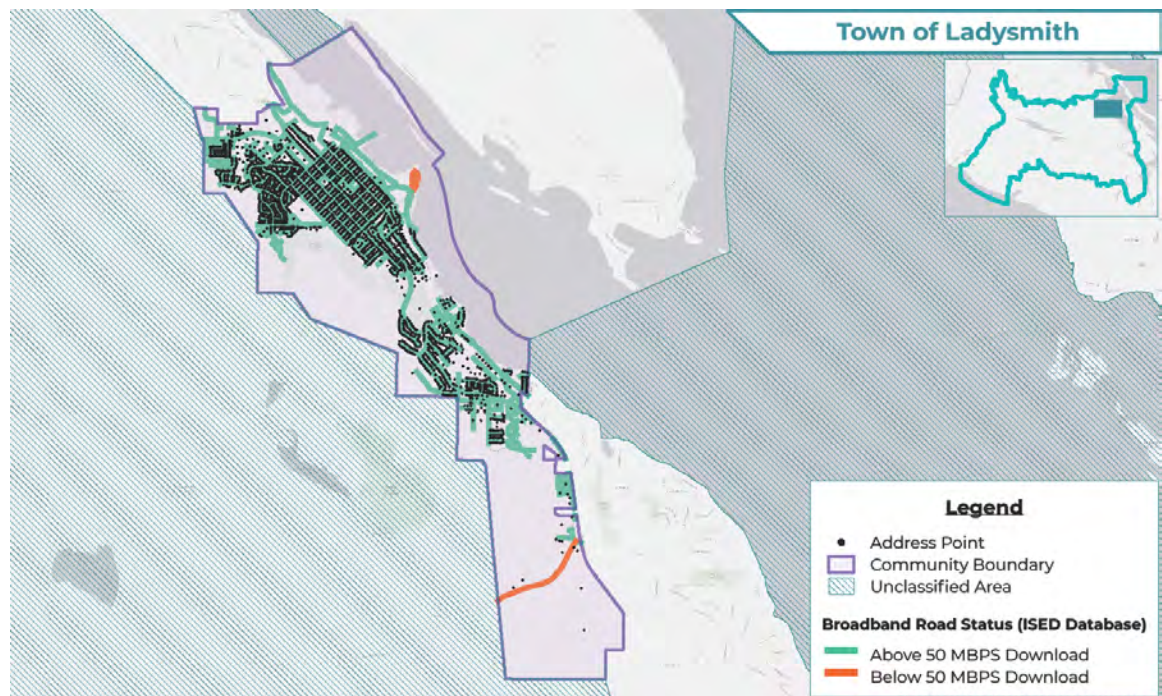


Figure 2-15: Current Understanding of Served and Underserved Areas within Town of Ladysmith

Town of Ladysmith Premise		
Community Total Premise Count	2,524	
% of CVRD Total Premise Count	7.2%	
Served	2,518	99.8%
Underserved	6	0.2%

Town of Ladysmith Roads		
Total Road Length	65,277	
% of CVRD Total Road Length	3.8%	
Served	63,268	96.9%
Underserved	2,009	3.1%

Table 2-15 Town of Ladysmith Current State

ISPs Serving Town of Ladysmith	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-16 ISPs in the Town of Ladysmith

Town of Ladysmith is a Municipality located toward the Northern end of the Cowichan Valley Regional District. It is served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There are three fixed wireless towers reported within the community.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Town of Ladysmith	Challenged	Medium

2.3.9.5 Chemainus Area

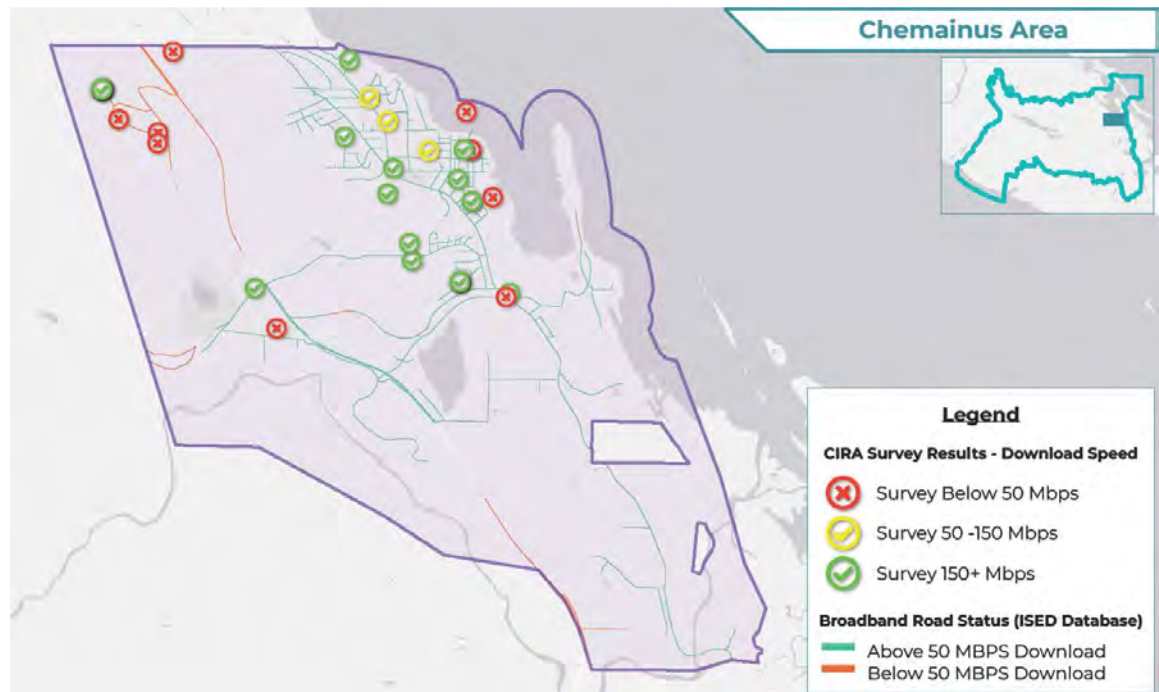


Figure 2-16: Current Assessment of Survey Data within Chemainus Area

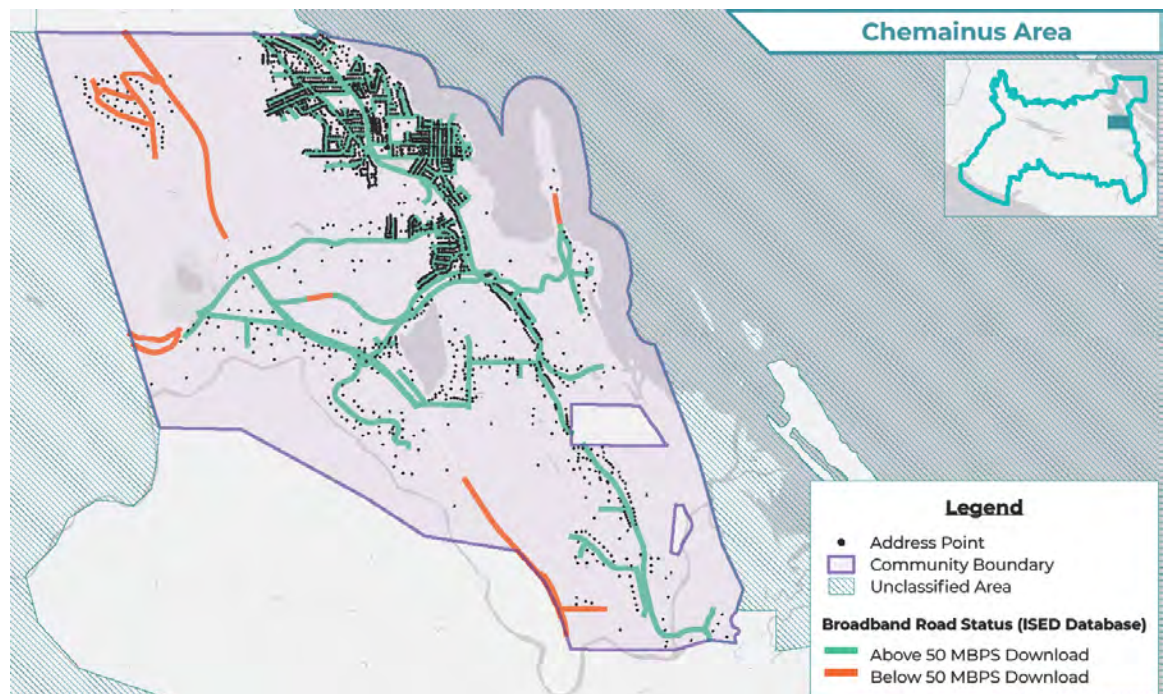


Figure 2-17: Current Understanding of Served and Underserved Areas within Chemainus Area

Chemainus Area Premise		
Community Total Premise Count	2,382	
% of CVRD Total Premise Count	6.7%	
Served	2,314	97.1%
Underserved	68	2.9%

Chemainus Area Roads		
Total Road Length	64,145	
% of CVRD Total Road Length	3.7%	
Served	54,051	84.3%
Underserved	10,094	15.7%

Table 2-17 Chemainus Area Current State

ISPs Serving Chemainus Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-18 ISPs in Chemainus Area

Chemainus Area is located north, between Saltair and Halalt First Nation. It is served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There are three fixed wireless towers reported within the community.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Chemainus Area	Proven	Medium

2.3.9.6 Glenora Area

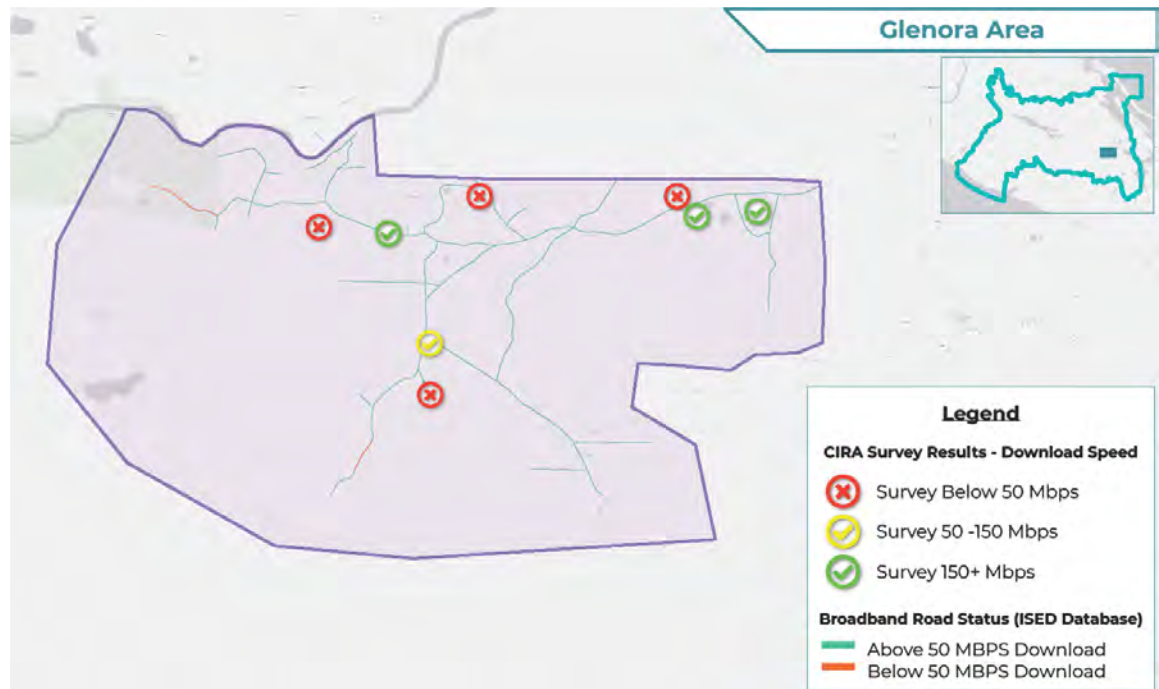


Figure 2-18: Current Assessment of Survey Data within Glenora Area

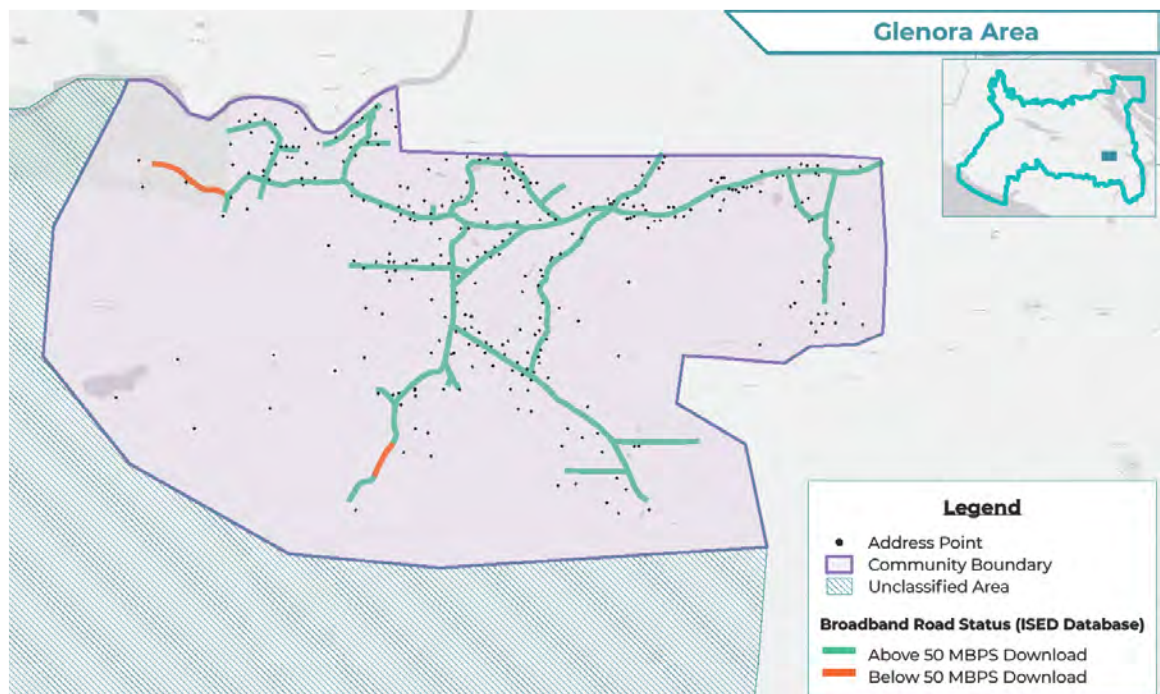


Figure 2-19: Current Understanding of Served and Underserved Areas within Glenora Area

Glenora Area Premise		
Community Total Premise Count	298	
% of CVRD Total Premise Count	0.8%	
Served	294	98.7%
Underserved	4	1.3%

Glenora Area Roads		
Total Road Length	19,734	
% of CVRD Total Road Length	1.1%	
Served	18,895	95.7%
Underserved	839	4.3%

Table 2-19 Glenora Area Current State

ISPs Serving Glenora Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					✓	✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-20 ISPs in Glenora Area

Glenora Area is located centrally in the region, south of Duncan and adjacent to the Eagle Heights Area to the West. It is served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There are multiple fixed wireless towers north of the community in the Duncan Area but it is unclear if the range of these towers will facilitate stable connections in the Glenora Area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Glenora Area	Challenged	High

2.3.9.7 Stoney Hill Area

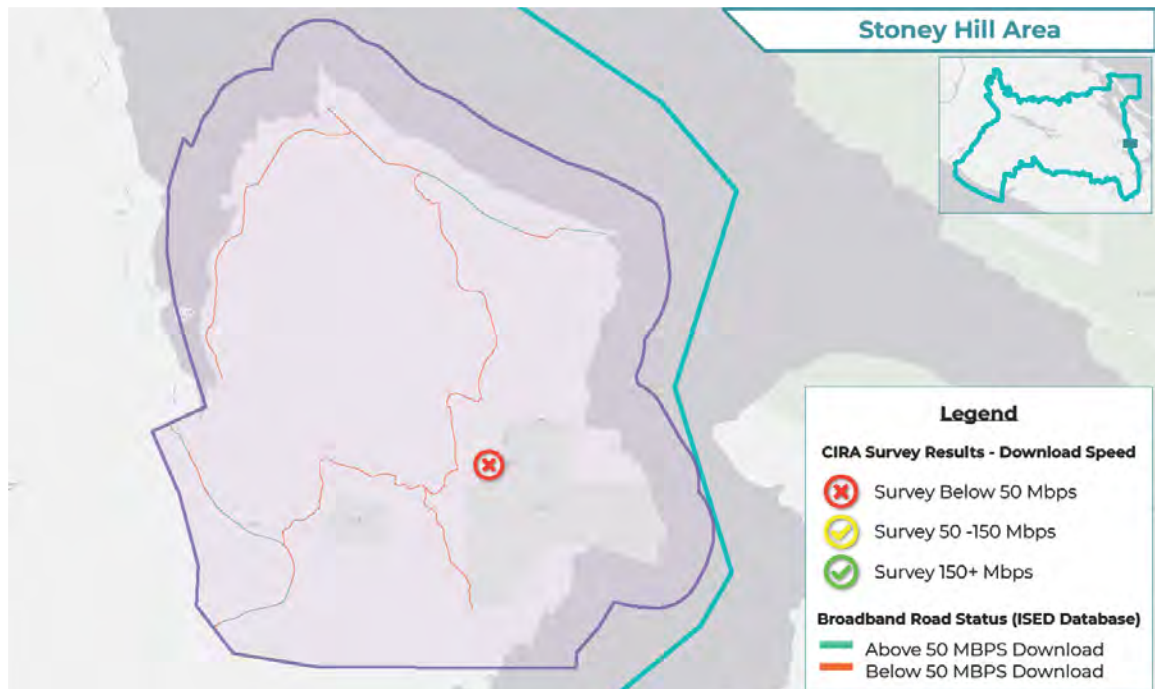


Figure 2-20: Current Assessment of Survey Data within Stoney Hill Area

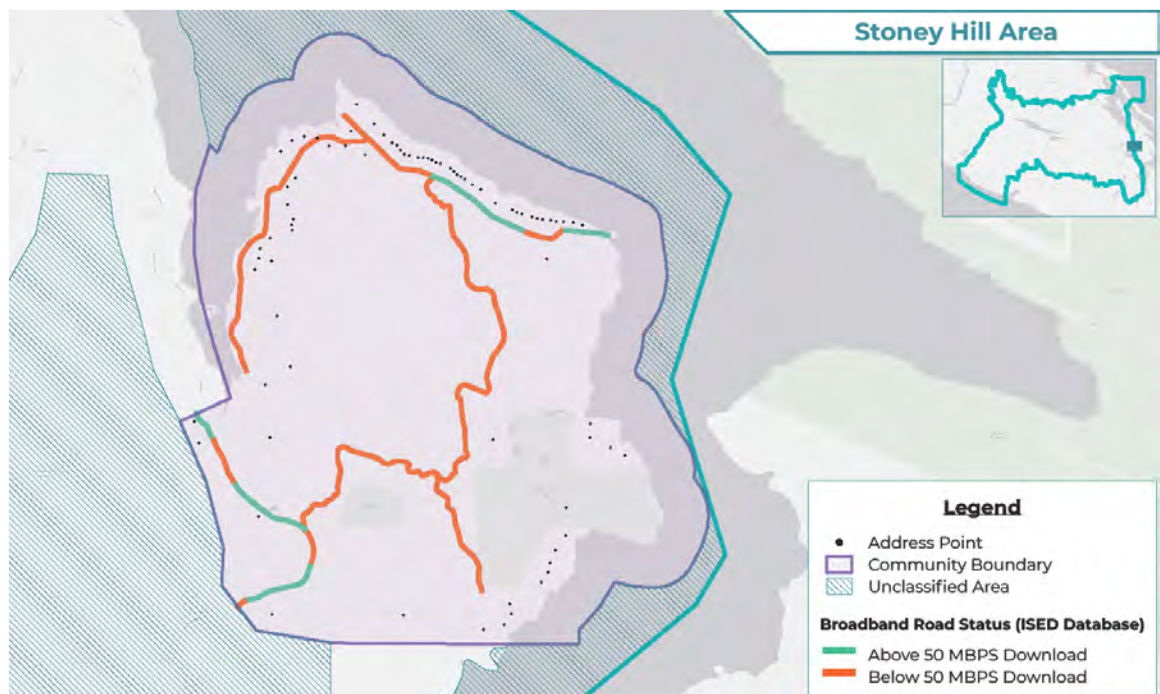


Figure 2-21: Current Understanding of Served and Underserved Areas within Stoney Hill Area

Stoney Hill Area Premise		
Community Total Premise Count	77	
% of CVRD Total Premise Count	0.2%	
Served	19	24.7%
Underserved	58	75.3%

Stoney Hill Area Roads		
Total Road Length	11,606	
% of CVRD Total Road Length	0.7%	
Served	2,436	21.0%
Underserved	9,170	79.0%

Table 2-21 Stoney Hill Area Current State

ISPs Serving Stoney Hill Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-22 ISPs in Stoney Hill Area

Stoney Hill Area is a coastal community located east central in the region, south of Maple bay and North of Cowichan Tribes. It is classified as served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure but very little infrastructure shows up on the incumbent telco cable and facility maps. Telus and Shaw both report high-capacity transport in the hexagonal area although it appears to be restricted to Genoa Bay Road. There are two wireless towers north of the Maple Bay Area, although it is unlikely they have enough range to serve the Stoney Hill Area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Stoney Hill Area	Proven	Low

2.3.9.8 Ts'uubaa-asatx Nation

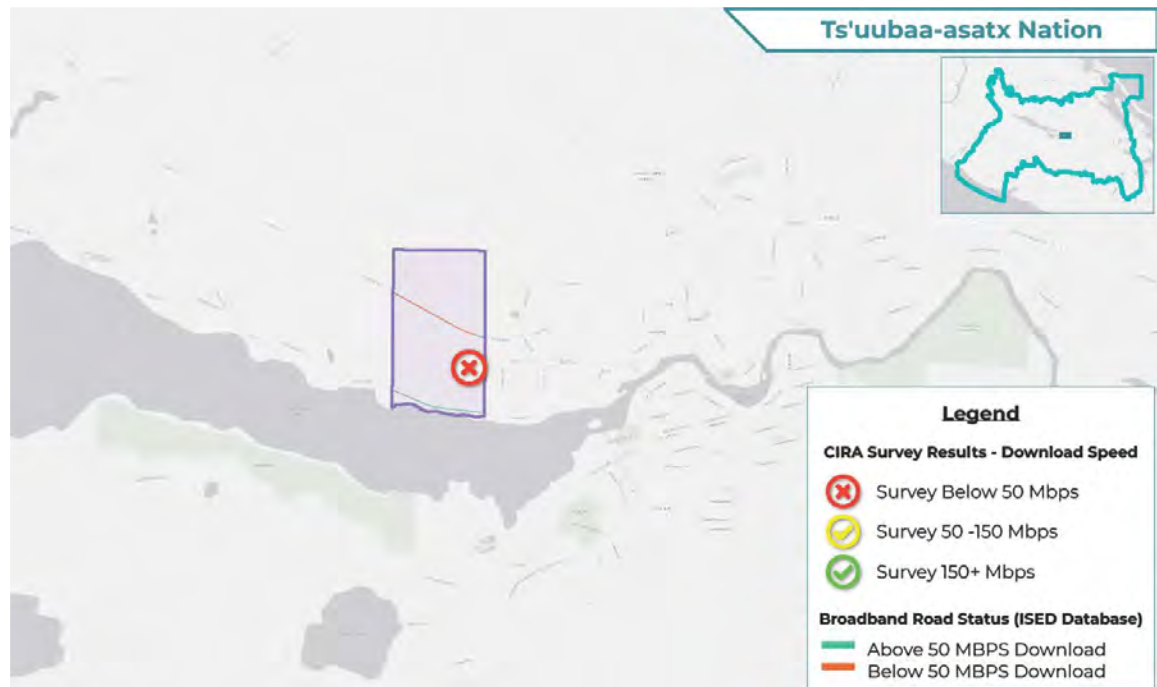


Figure 2-22: Current Assessment of Survey Data within Ts'uubaa-asatx Nation

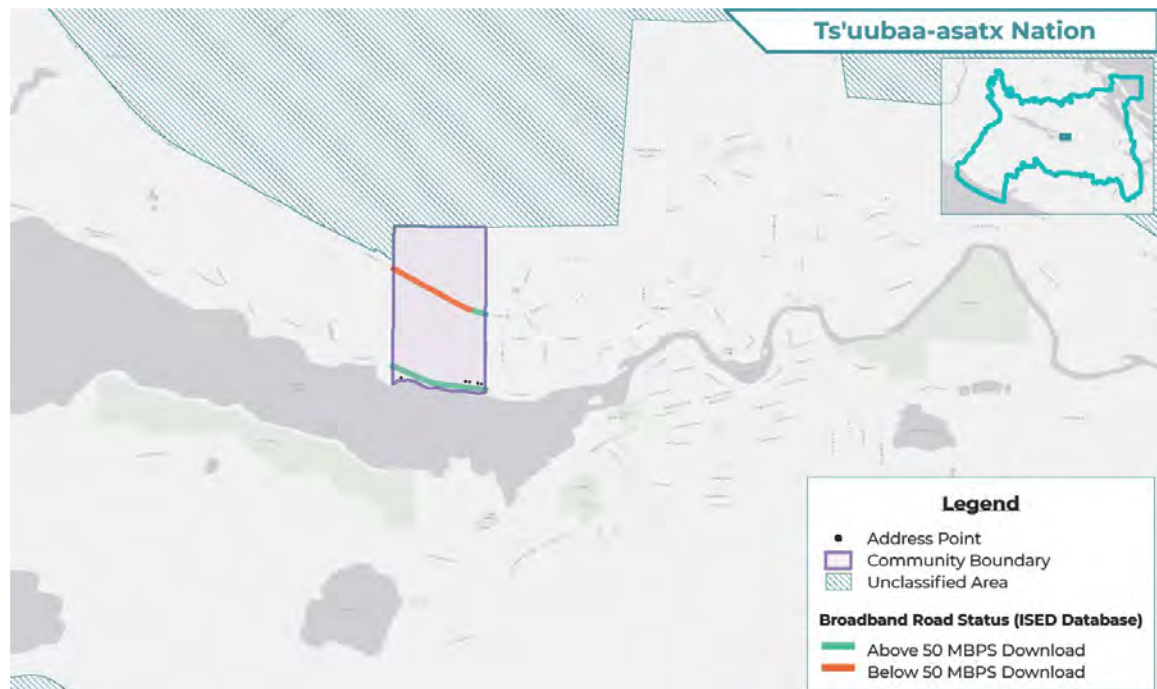


Figure 2-23: Current Understanding of Served and Underserved Areas within Ts'uubaa-asatx Nation

Ts'uubaa-asatx Nation Premise		
Community Total Premise Count	5	
% of CVRD Total Premise Count	0.0%	
Served	5	100.0%
Underserved	0	0.0%

Ts'uubaa-asatx Nation Roads		
Total Road Length	1,082	
% of CVRD Total Road Length	0.1%	
Served	574	53.0%
Underserved	508	47.0%

Table 2-23 Ts'uubaa-asatx Nation Current State

ISPs Serving Ts'uubaa-asatx Nation	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-24 ISPs in Ts'uubaa-asatx Nation

Ts'uubaa-asatx Nation is located on the north shore of Cowichan Lake, at the west end of the Lake Cowichan Area community. It is served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There are three fixed wireless towers located in close proximity to the north boundary of the Nation.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Ts'uubaa-asatx Nation	Challenged	Medium

2.3.9.9 Cobble Hill Area

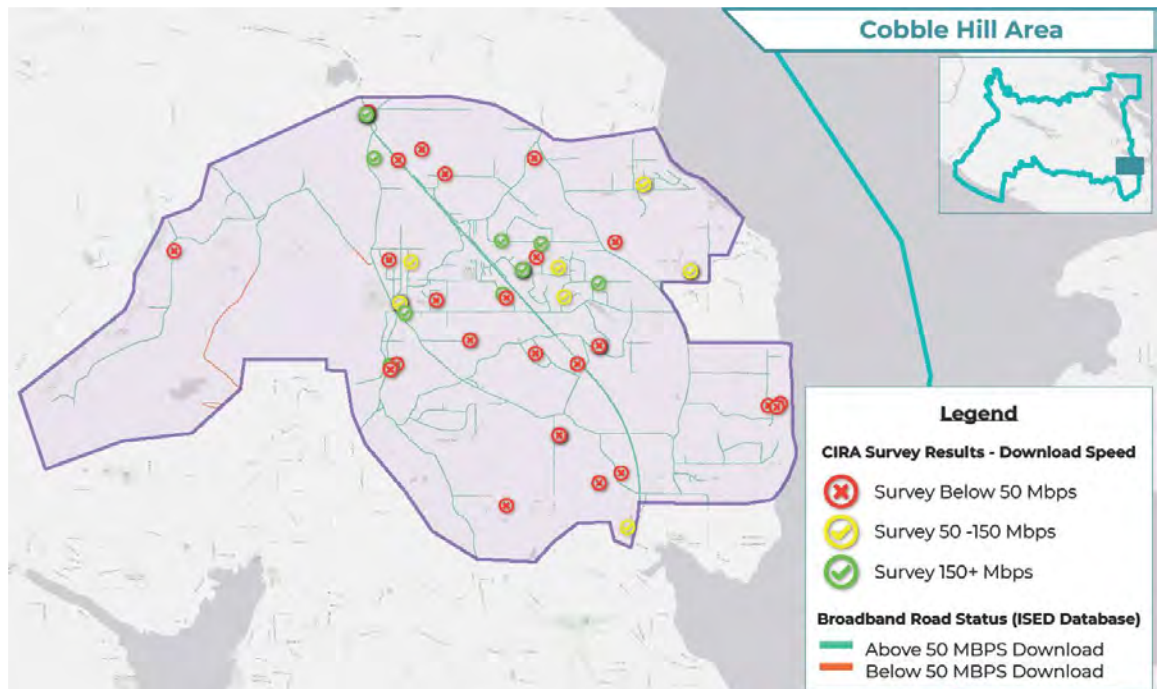


Figure 2-24: Current Assessment of Survey Data within Cobble Hill Area

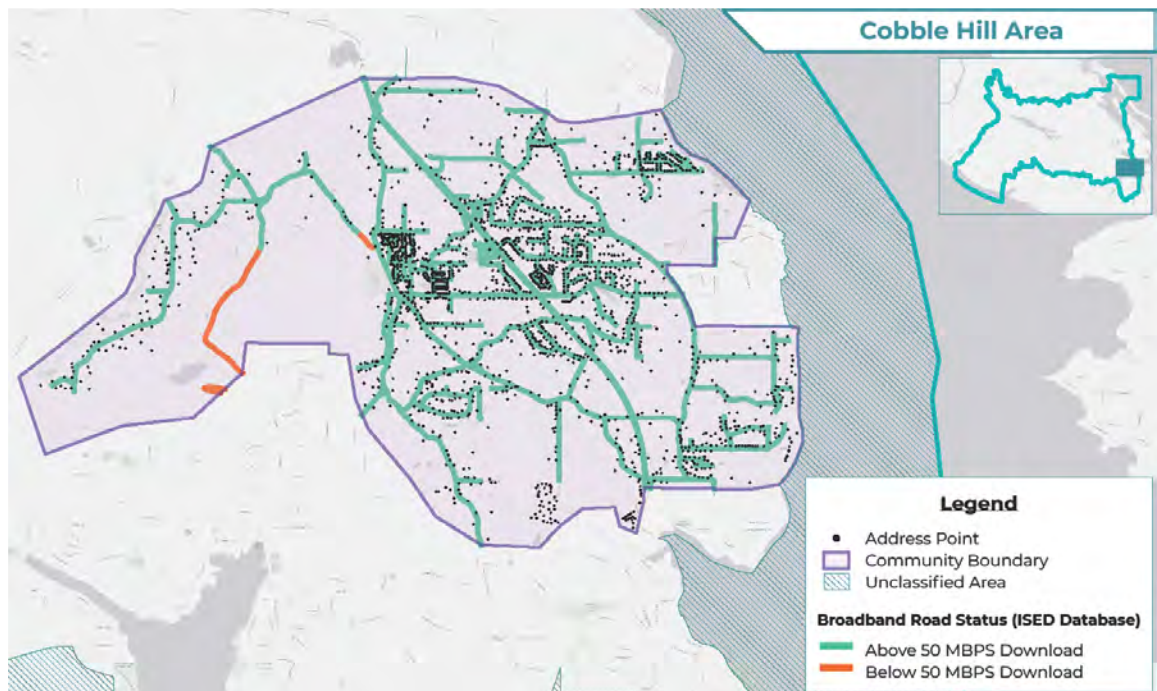


Figure 2-25: Current Understanding of Served and Underserved Areas within Cobble Hill Area

Cobble Hill Area Premise		
Community Total Premise Count	1,854	
% of CVRD Total Premise Count	5.3%	
Served	1,853	99.9%
Underserved	1	0.1%

Cobble Hill Area Roads		
Total Road Length	103,196	
% of CVRD Total Road Length	5.9%	
Served	100,364	97.3%
Underserved	2,832	2.7%

Table 2-25 Cobble Hill Area Current State

ISPs Serving Cobble Hill Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-26 ISPs in Cobble Hill Area

Cobble Hill Area is large community located toward the south end of the region, to the east of Cowichan Station Area and north of Shawnigan Lake Area. It is served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There are two fixed wireless towers located within the area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Cobble Hill Area	Challenged	High

2.3.9.10 Westholme Area

No Survey Data Included for this Community

Figure 2-26: Current Assessment of Survey Data within Westholme Area

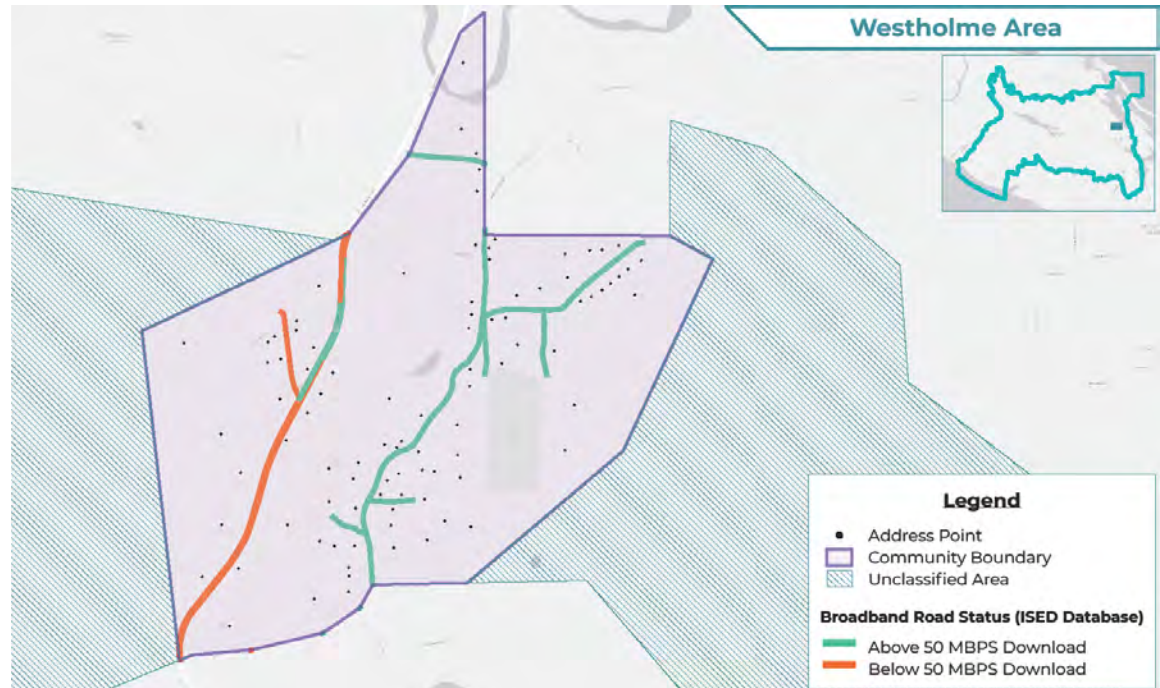


Figure 2-27: Current Understanding of Served and Underserved Areas within Westholme Area

Westholme Area Premise		
Community Total Premise Count	88	
% of CVRD Total Premise Count	0.2%	
Served	69	78.4%
Underserved	19	21.6%

Westholme Area Roads		
Total Road Length	10,291	
% of CVRD Total Road Length	0.6%	
Served	5,869	57.0%
Underserved	4,422	43.0%

Table 2-27 Westholme Area Current State

ISPs Serving Westholme Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-28 ISPs in Westholme Area

Westholme Area is located north of Duncan, with the Somenos Area to the South and Halalt First Nation to the north. It is served with fibre optic, cable and DSL services, as well as fixed wireless, mobile wireless and satellite infrastructure. Telus and Shaw both report high-capacity transport in the hexagonal area. There is one fixed wireless tower located outside the community to the west, but it is unclear if the range of this tower will facilitate stable connections in the Westholme Area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Westholme Area	No Survey Data	Low

2.3.9.11 Eagle Heights Area

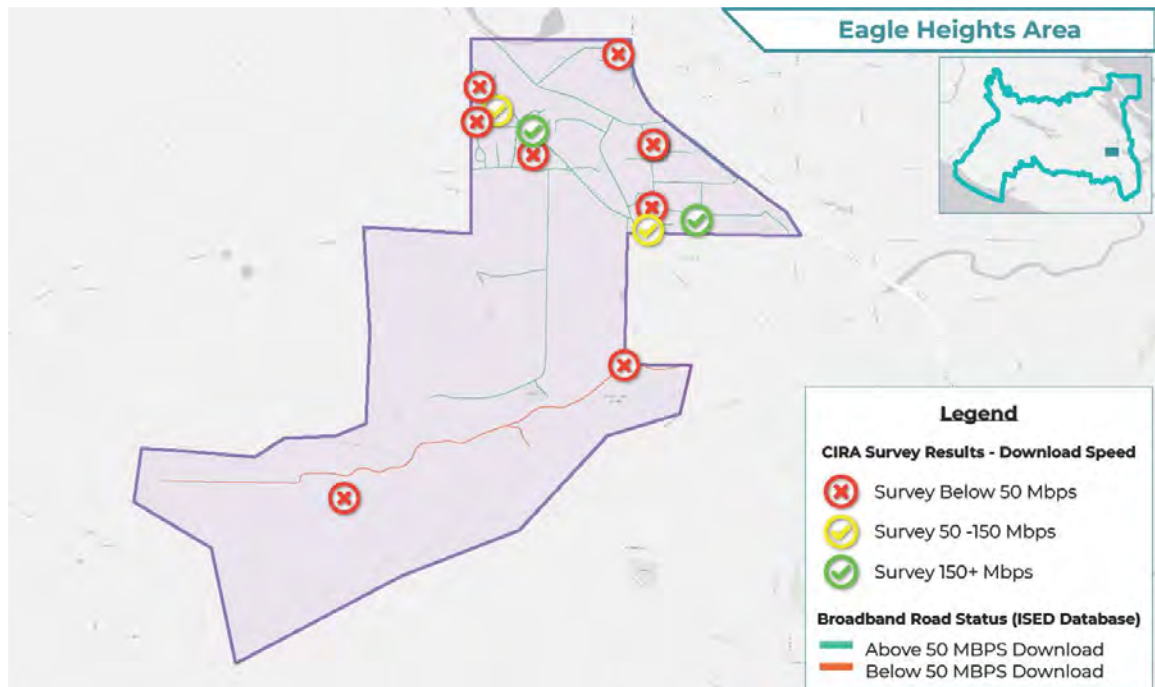


Figure 2-28: Current Assessment of Survey Data within Eagle Heights Area

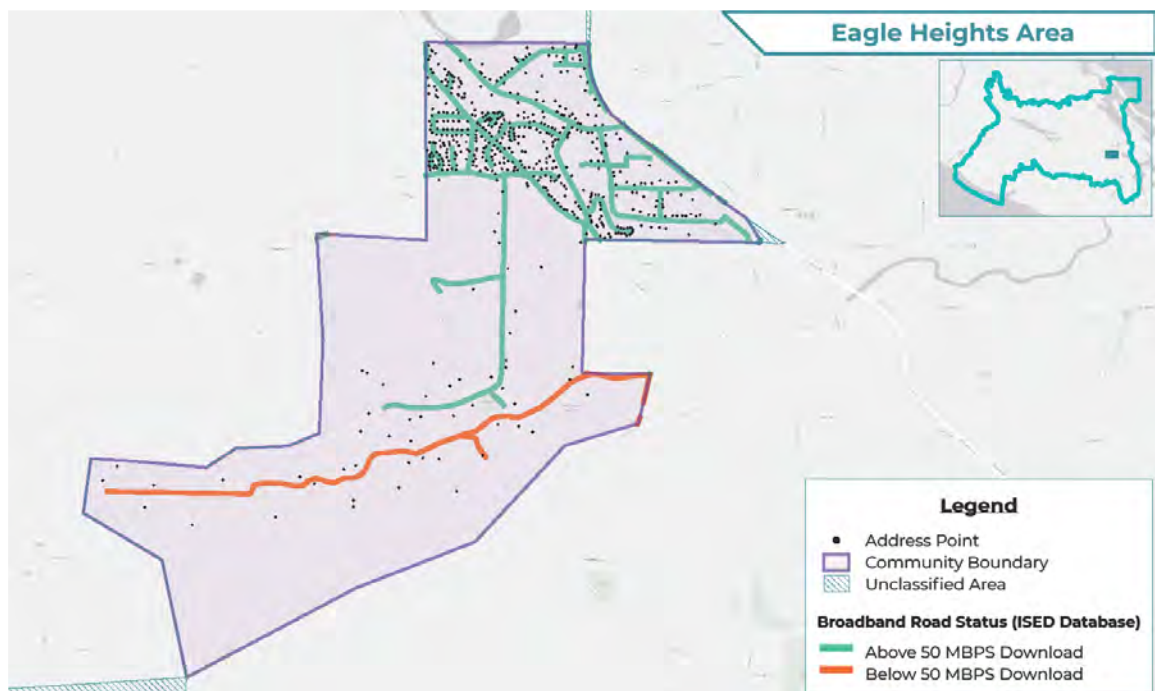


Figure 2-29: Current Understanding of Served and Underserved Areas within Eagle Heights Area

Eagle Heights Area Premise		
Community Total Premise Count	543	
% of CVRD Total Premise Count	1.5%	
Served	512	94.3%
Underserved	31	5.7%

Eagle Heights Area Roads		
Total Road Length	19,356	
% of CVRD Total Road Length	1.1%	
Served	15,352	79.3%
Underserved	4,004	20.7%

Table 2-29 Eagle Heights Area Current State

ISPs Serving Eagle Heights Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					√	√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-30 ISPs in Eagle Heights Area

Eagle Heights Area is located on the west side of Highway 1, north of Cowichan Station, south of Duncan and bordered by Cowichan Tribes and Koksilah areas. It is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. There are several towers just north of Eagle Heights in Duncan, as well as to the south in Cowichan Station.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Eagle Heights Area	Challenged	High

2.3.9.12 Mill Bay Area

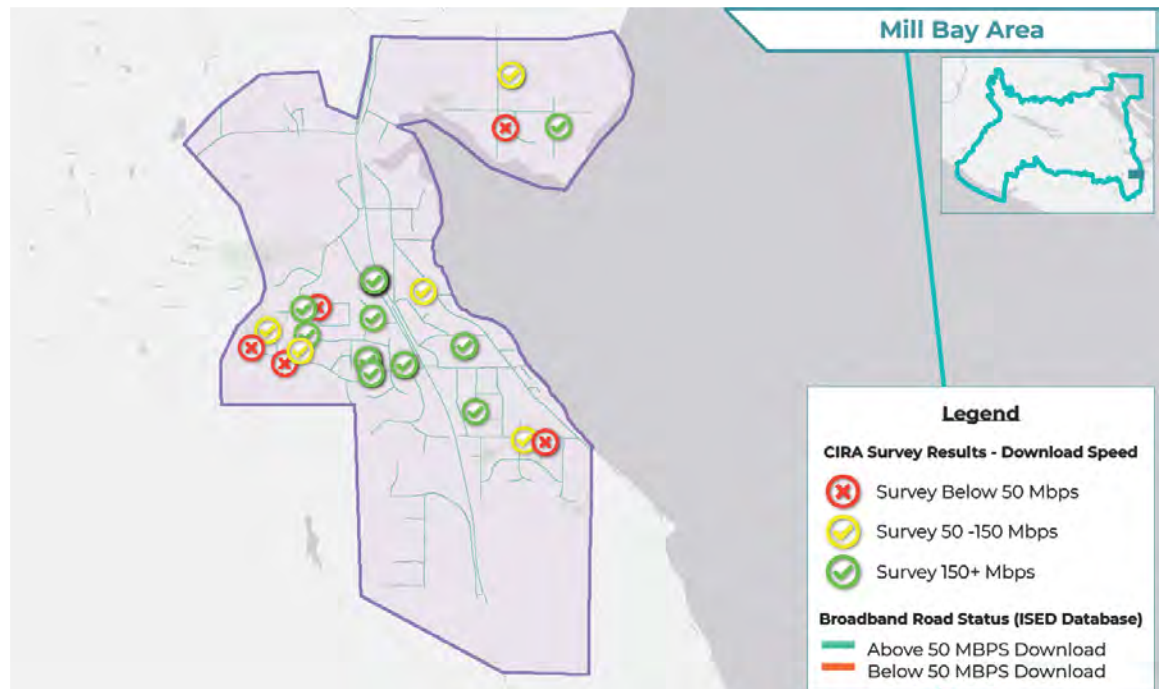


Figure 2-30: Current Assessment of Survey Data within Mill Bay Area

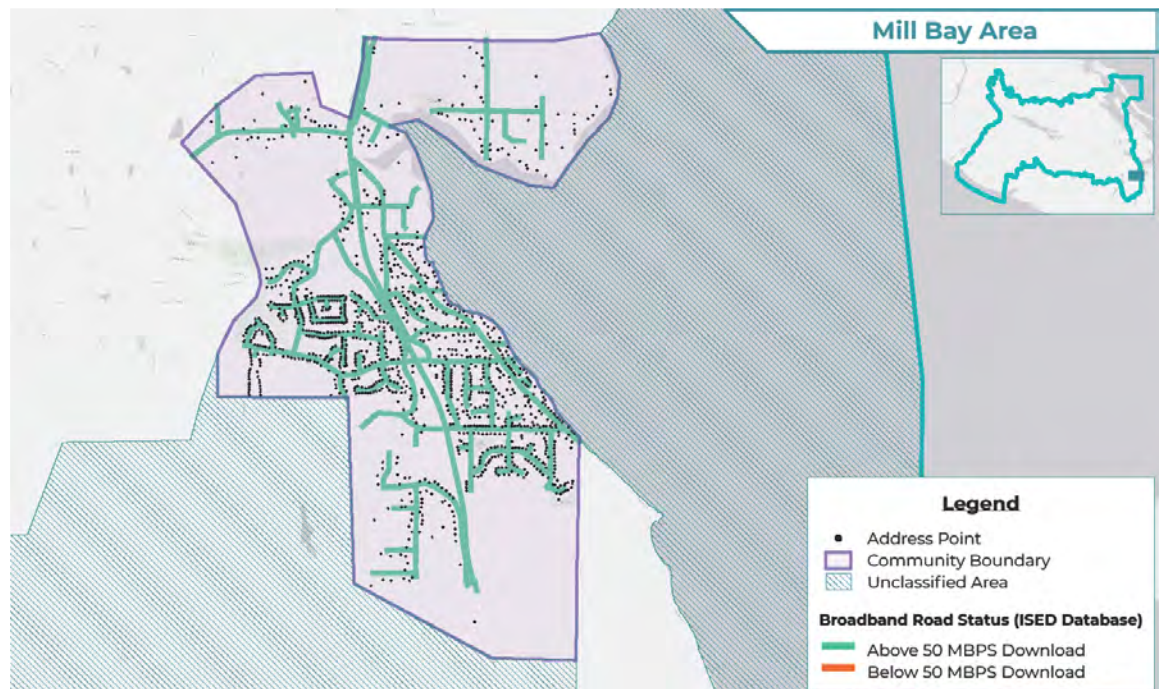


Figure 2-31: Current Understanding of Served and Underserved Areas within Mill Bay Area

Mill Bay Area Premise		
Community Total Premise Count	1,174	
% of CVRD Total Premise Count	3.3%	
Served	1,174	100.0%
Underserved	0	0.0%

Mill Bay Area Roads		
Total Road Length	36,271	
% of CVRD Total Road Length	2.1%	
Served	36,271	100.0%
Underserved	0	0.0%

Table 2-31 Mill Bay Area Current State

ISPs Serving Mill Bay Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-32 ISPs in Mill Bay Area

Mill Bay Area is a coastal community in the south end of the Regional District, bordered by Cobble Hill area to the north, and Malahat First Nation Area to the south. It is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There are towers located in Cobble Hill and just south of Shawnigan Lake area that should be within range to serve the area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Mill Bay Area	Proven	High

2.3.9.13 Ruxton Island

No Survey Data Included for this Community

Figure 2-32: Current Assessment of Survey Data within Ruxton Island

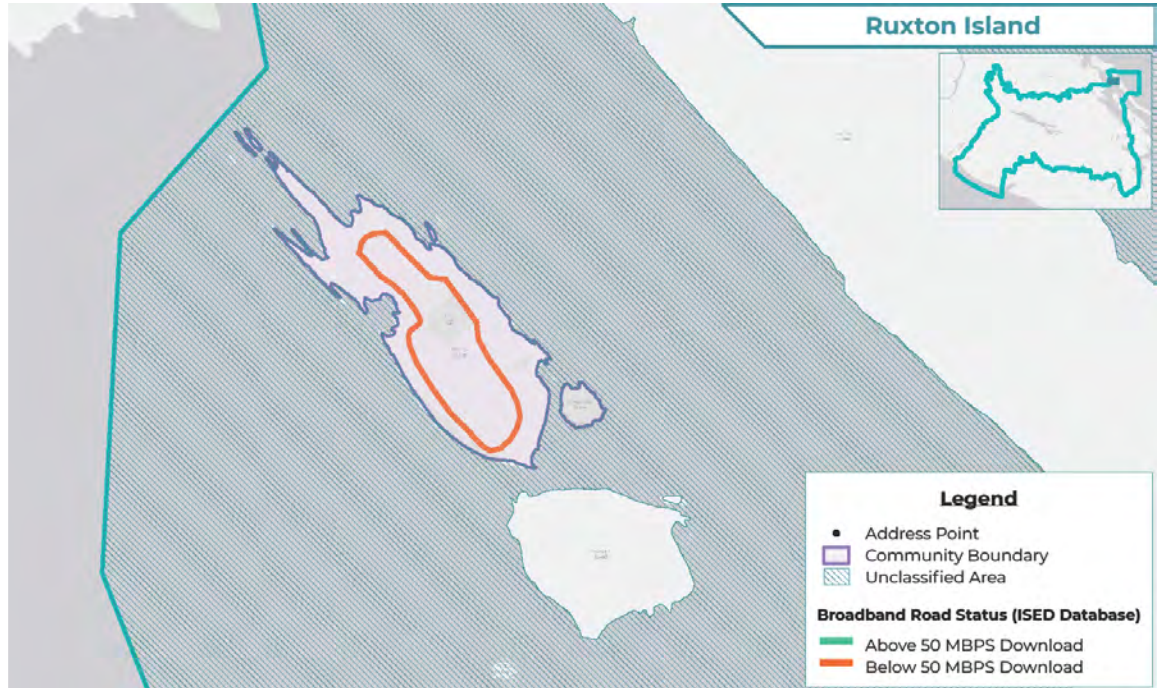


Figure 2-33: Current Understanding of Served and Underserved Areas within Ruxton Island

Ruxton Island Premise		
Community Total Premise Count	0	
% of CVRD Total Premise Count	0.0%	
Served	0	Insufficient Data
Underserved	0	Insufficient Data

Ruxton Island Roads		
Total Road Length	3,166	
% of CVRD Total Road Length	0.2%	
Served	0	0.0%
Underserved	3,166	100.0%

Table 2-33 Ruxton Island Current State

ISPs Serving Ruxton Island	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						√	
Rogers						√	
Telus						√	
Xplornet							√

Table 2-34 ISPs in Ruxton Island

Ruxton Island is located in the northeastern corner of the Regional District. It is just west of Valdes Island, and east of the Town of Ladysmith. The island has no apparent physical infrastructure. It is served via mobile wireless via towers located north of Ladysmith, in the Yellow Point, Cedar area, as well as by satellite technologies.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Ruxton Island	Insufficient Data	No Data

2.3.9.14 Yellow Point, Cedar Area

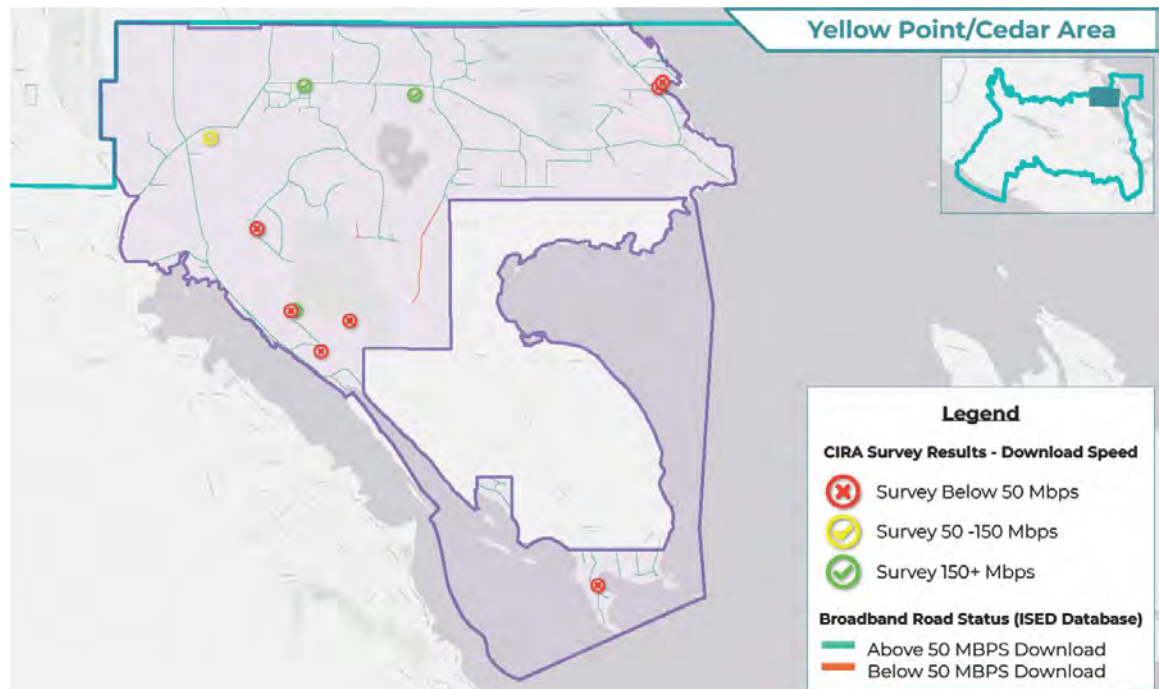


Figure 2-34: Current Assessment of Survey Data within Yellow Point, Cedar Area

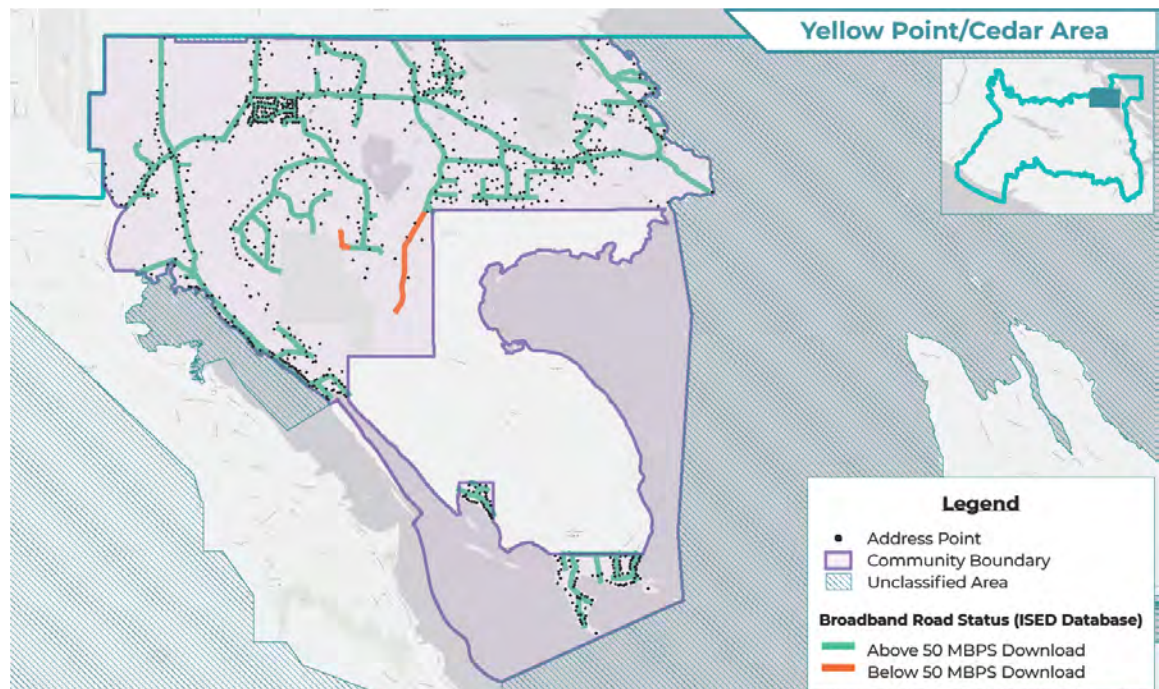


Figure 2-35: Current Understanding of Served and Underserved Areas within Yellow Point, Cedar Area

Yellow Point, Cedar Area Premise		
Community Total Premise Count	857	
% of CVRD Total Premise Count	2.4%	
Served	851	99.3%
Underserved	6	0.7%

Yellow Point, Cedar Area Roads		
Total Road Length	54,338	
% of CVRD Total Road Length	3.1%	
Served	52,580	96.8%
Underserved	1,758	3.2%

Table 2-35 Yellow Point, Cedar Area Current State

ISPs Serving Yellow Point, Cedar Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				✓			
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-36 ISPs in Yellow Point, Cedar Area

Yellow Point, Cedar Area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There are towers located in Yellow Point, Cedar Area, as well as in the Town of Ladysmith.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Yellow Point, Cedar Area	Challenged	Medium

2.3.9.15 Somenos Area

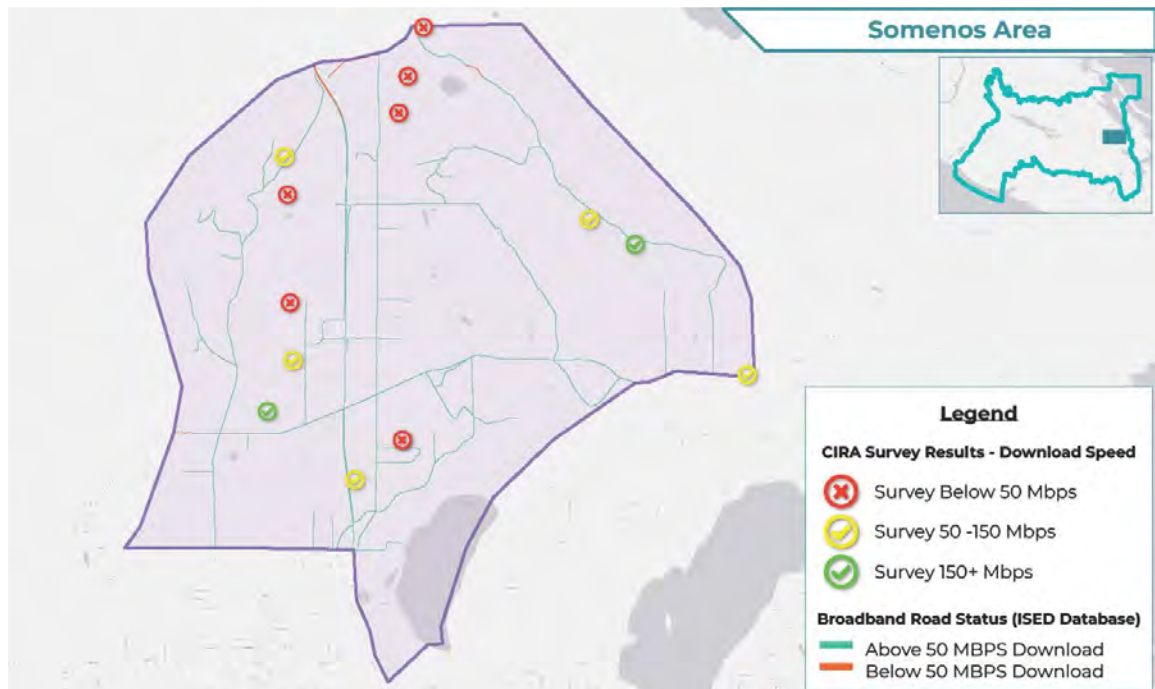


Figure 2-36: Current Assessment of Survey Data within Somenos Area

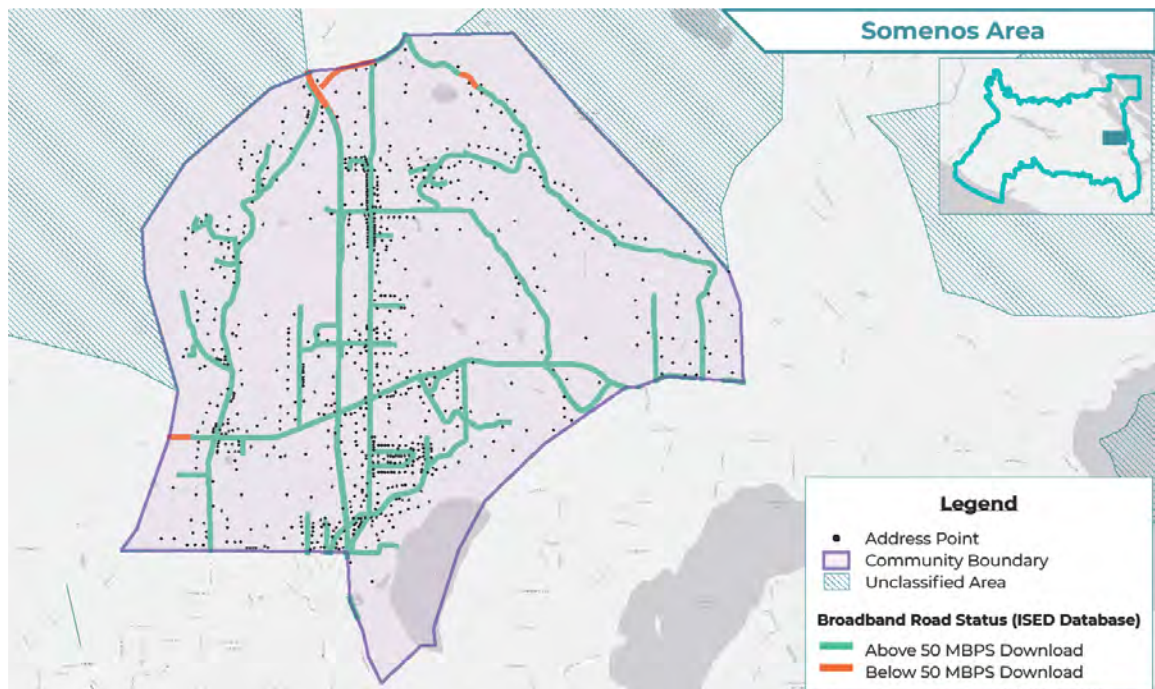


Figure 2-37: Current Understanding of Served and Underserved Areas within Somenos Area

Somenos Area Premise		
Community Total Premise Count	748	
% of CVRD Total Premise Count	2.1%	
Served	741	99.1%
Underserved	7	0.9%

Somenos Area Roads		
Total Road Length	56,217	
% of CVRD Total Road Length	3.2%	
Served	54,068	96.2%
Underserved	2,149	3.8%

Table 2-37 Somenos Area Current State

ISPs Serving Somenos Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					✓	✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-38 ISPs in Somenos Area

Somenos Area is located in the central east area of the Regional District. It is bordered by Duncan in the south, Westholme to the north, Sahtlam, Paldi, Riverbottom area to the west, and Maple Mountain are to the east. Somenos Area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Shaw, Telus and Bell report having high-capacity transport in the area. There are several towers located within the Somenos and surrounding areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Somenos Area	Challenged	Medium

2.3.9.16 Caycuse Area

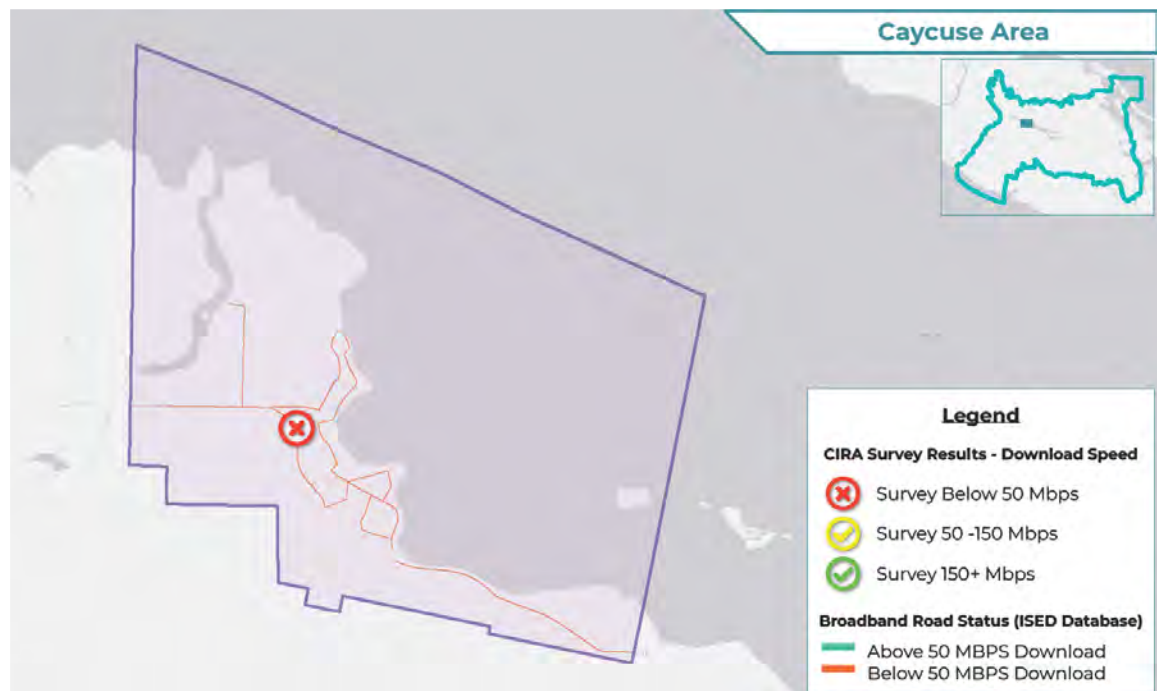


Figure 2-38: Current Assessment of Survey Data within Caycuse Area

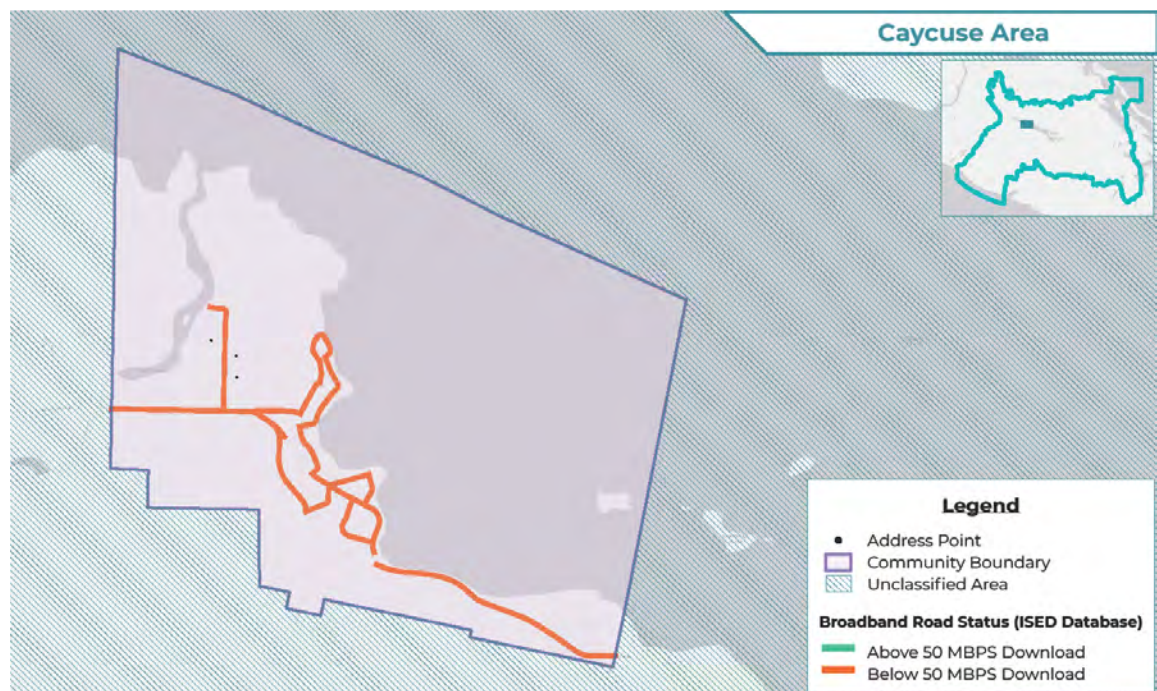


Figure 2-39: Current Understanding of Served and Underserved Areas within Caycuse Area

Caycuse Area Premise		
Community Total Premise Count	3	
% of CVRD Total Premise Count	0.0%	
Served	0	0.0%
Underserved	3	100.0%

Caycuse Area Roads		
Total Road Length	6,919	
% of CVRD Total Road Length	0.4%	
Served	0	0.0%
Underserved	6,919	100.0%

Table 2-39 Caycuse Area Current State

ISPs Serving Caycuse Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Rogers						✓	
Telus						✓	
Xplornet							✓

Table 2-40 ISPs in Caycuse Area

Caycuse Area is located on the northwestern shore of Cowichan Lake. It is surrounded by unclassified areas and has no apparent physical infrastructure. It is served via mobile wireless and satellite technologies. The nearest towers appear to be located at the southeastern end of Lake Cowichan, near the Ts'uubaa-asatx Nation.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Caycuse Area	Proven	Medium

2.3.9.17 Genoa Bay Area

No Survey Data Included for this Community

Figure 2-40: Current Assessment of Survey Data within Genoa Bay Area

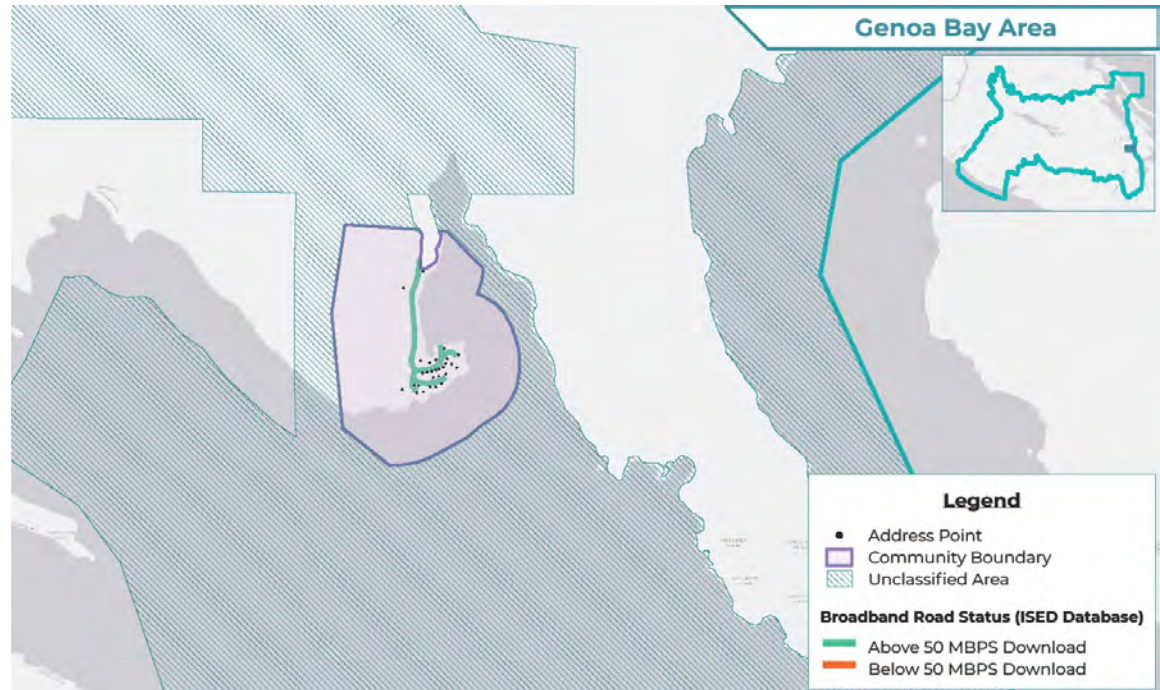


Figure 2-41: Current Understanding of Served and Unserved Areas within Genoa Bay Area

Genoa Bay Area Premise		
Community Total Premise Count	28	
% of CVRD Total Premise Count	0.1%	
Served	28	100.0%
Unserved	0	0.0%

Genoa Bay Area Roads		
Total Road Length	1,220	
% of CVRD Total Road Length	0.1%	
Served	1,220	100.0%
Unserved	0	0.0%

Table 2-41 Genoa Bay Area Current State

ISPs Serving Genoa Bay Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-42 ISPs in Genoa Bay Area

Genoa Bay Area is located on the eastern shore of the Regional District, across from Cowichan bay, and bordered by the Cowichan Tribes area to the east. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There are several towers located Duncan to the north, and Cowichan Station to the west.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Genoa Bay Area	No Survey Data	Low

2.3.9.18 Mayo Rd Area

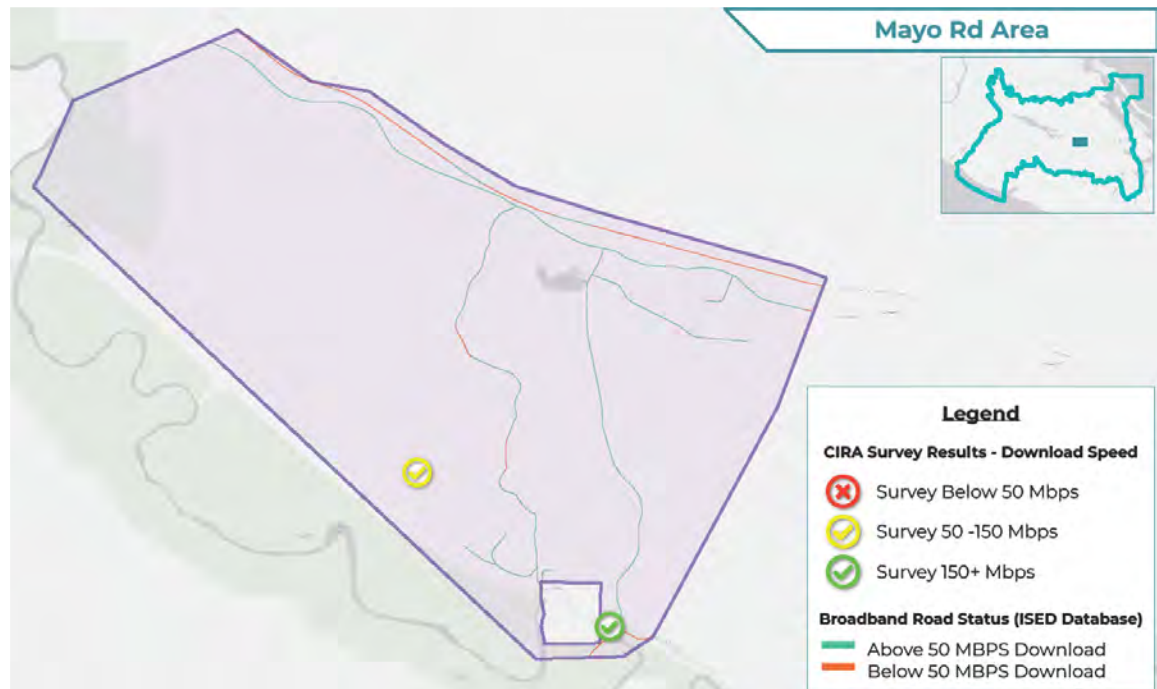


Figure 2-42: Current Assessment of Survey Data within Mayo Rd Area

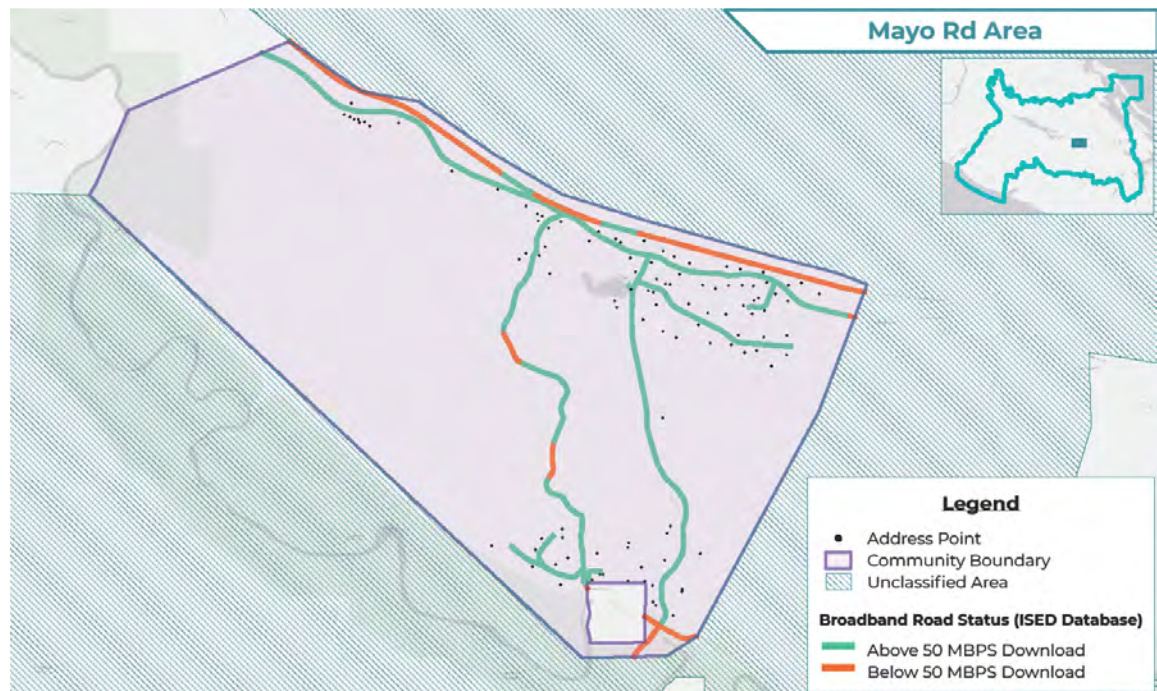


Figure 2-43: Current Understanding of Served and Underserved Areas within Mayo Rd Area

Mayo Rd Area Premise		
Community Total Premise Count	106	
% of CVRD Total Premise Count	0.3%	
Served	103	97.2%
Underserved	3	2.8%

Mayo Rd Area Roads		
Total Road Length	18,028	
% of CVRD Total Road Length	1.0%	
Served	12,877	71.4%
Underserved	5,151	28.6%

Table 2-43 Mayo Rd Area Current State

ISPs Serving Mayo Road Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-44 ISPs in Mayo Road Area

Mayo Rd Area is located southeast of Lake Cowichan area and northwest of Sahtlam, Paldi, Riverbottom area. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There are several towers located to the northwest and southeast, in and around the neighbouring areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Mayo Rd Area	Challenged	Low

2.3.9.19 Halalt First Nation

No Survey Data Included for this Community

Figure 2-44: Current Assessment of Survey Data within Halalt First Nation

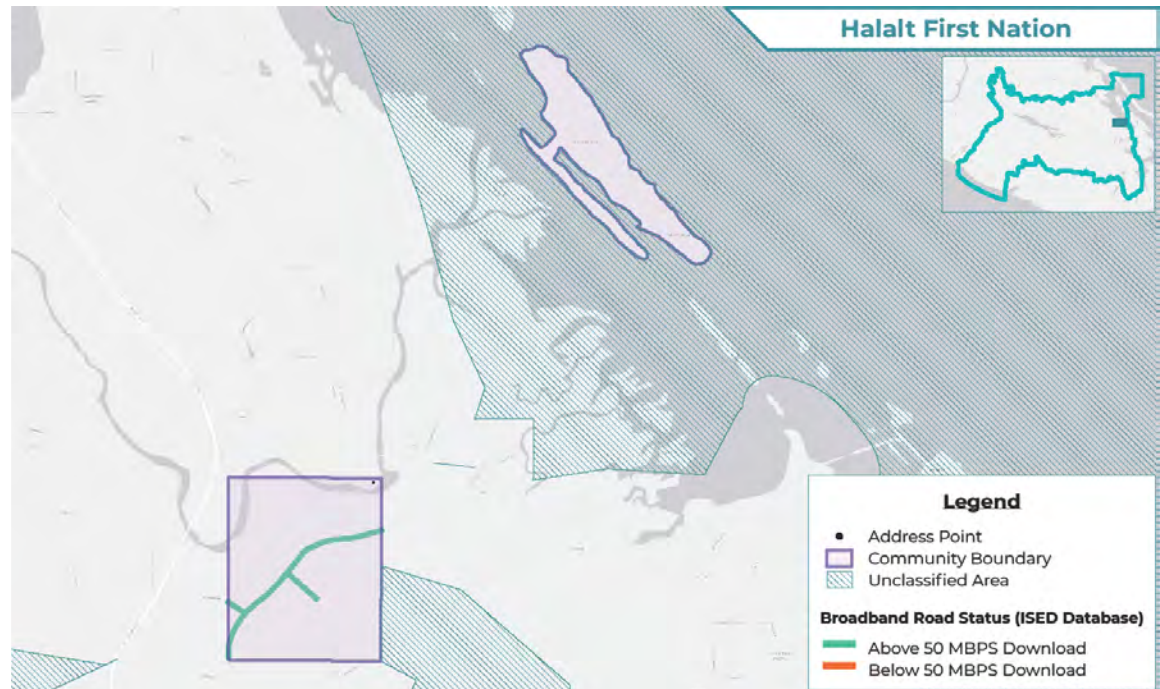


Figure 2-45: Current Understanding of Served and Underserved Areas within Halalt First Nation

Halalt First Nation Premise		
Community Total Premise Count	1	
% of CVRD Total Premise Count	0.0%	
Served	1	100.0%
Underserved	0	0.0%

Halalt First Nation Roads		
Total Road Length	1,816	
% of CVRD Total Road Length	0.1%	
Served	1,816	100.0%
Underserved	0	0.0%

Table 2-45 Halalt First Nation Current State

ISPs Serving Halalt First Nation Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√						
Telus		√	√	√		√	
Xplornet							√

Table 2-46 ISPs in Halalt First Nation Area

Halalt First Nation is located near the eastern shore, and is bordered by Westholme, Crofton, Mt Sicker and Chemainus areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Neither Shaw, nor Telus report having high-capacity transport in the area. There are several nearby towers located in the surrounding Somenos, unclassified and Chemainus areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Halalt First Nation	No Survey Data	Low

2.3.9.20 Mt Sicker Area

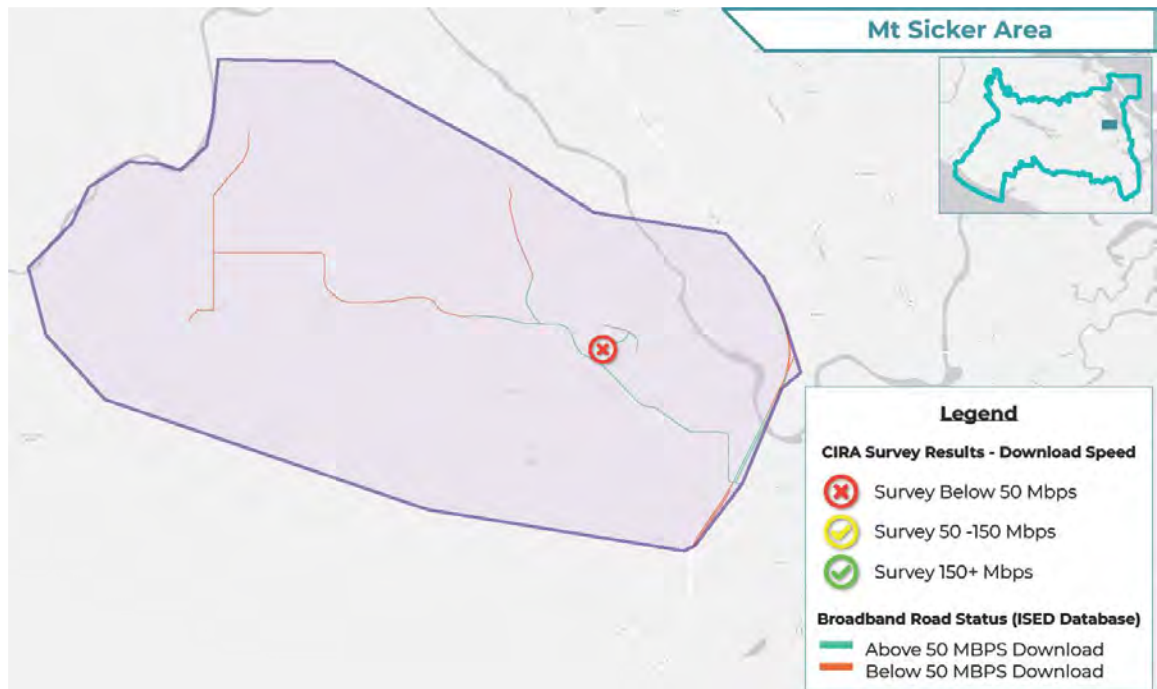


Figure 2-46: Current Assessment of Survey Data within Mt Sicker Area

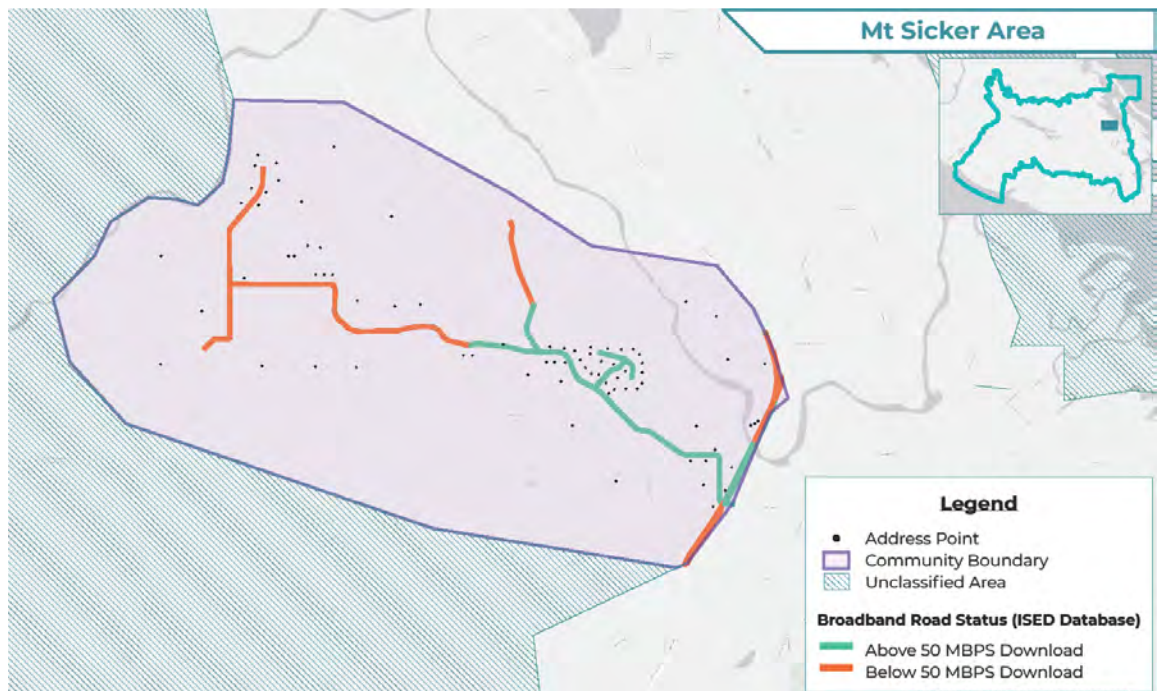


Figure 2-47: Current Understanding of Served and Underserved Areas within Mt Sicker Area

Mt Sicker Area Premise		
Community Total Premise Count	77	
% of CVRD Total Premise Count	0.2%	
Served	42	54.5%
Underserved	35	45.5%

Mt Sicker Area Roads		
Total Road Length	11,538	
% of CVRD Total Road Length	0.7%	
Served	5,004	43.4%
Underserved	6,534	56.6%

Table 2-47 Mt Sicker Area Current State

ISPs Serving Mt Sicker Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-48 ISPs in Mt Sicker Area

Mt Sicker Area is located northwest of the Halalt First Nation, just north of Westholme. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There are several nearby towers located in the surrounding Somenos, unclassified and Chemainus areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Mt Sicker Area	Challenged	Low

2.3.9.21 South Shawnigan Area

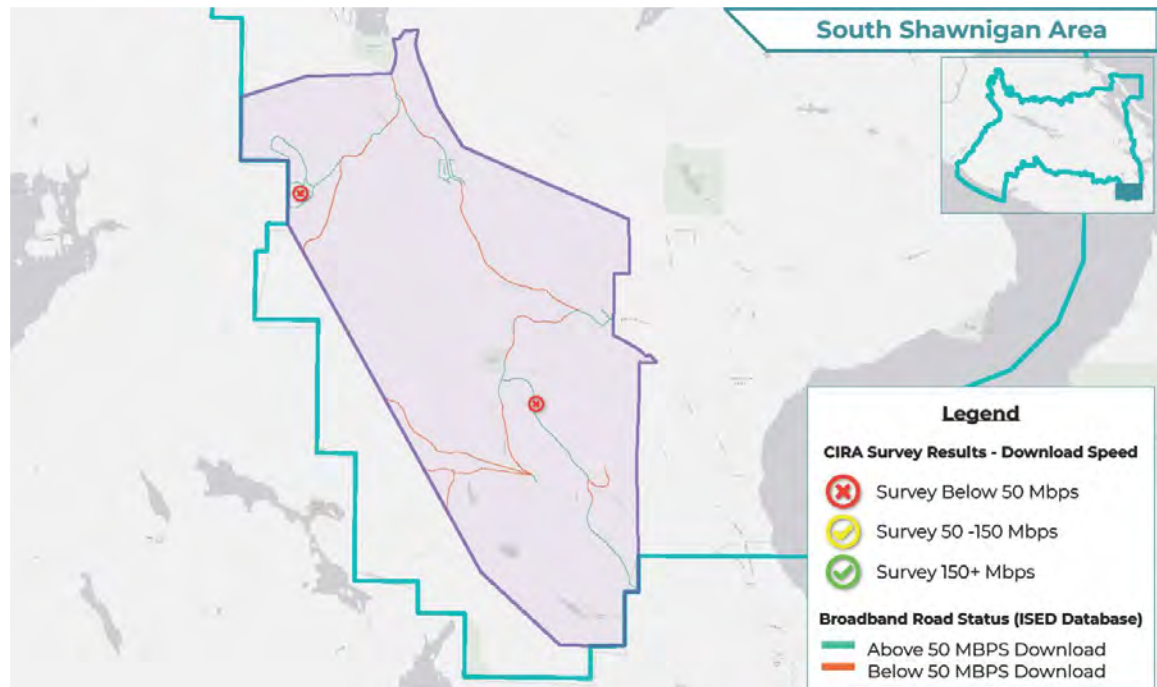


Figure 2-48: Current Assessment of Survey Data within South Shawnigan Area

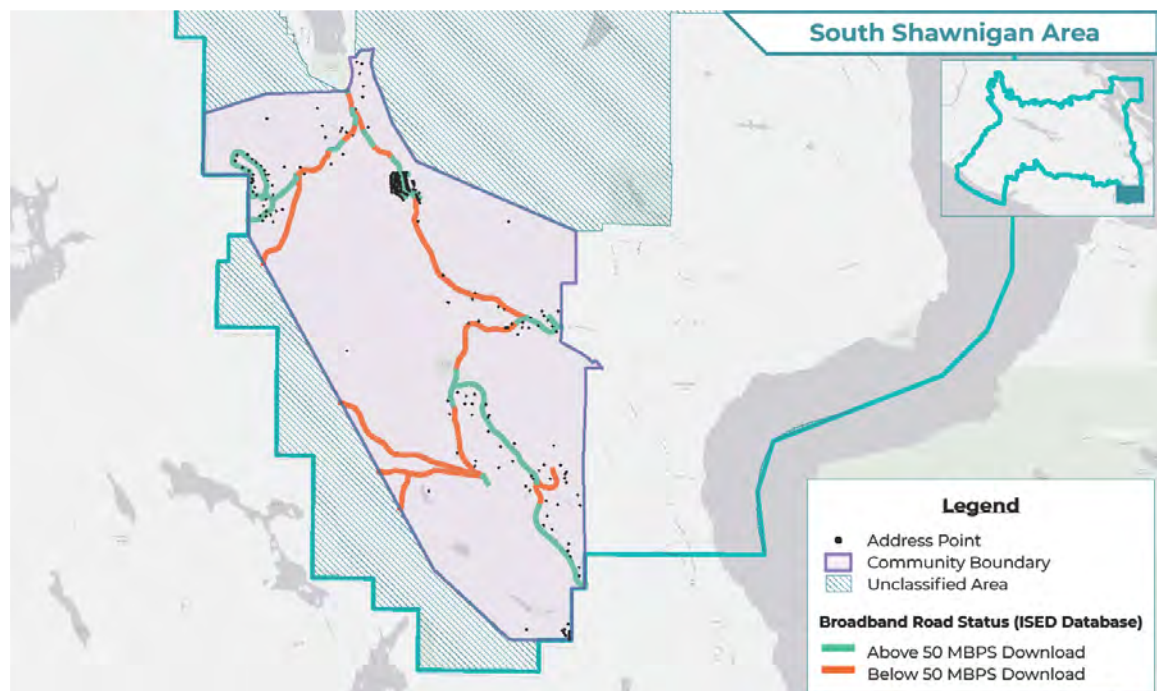


Figure 2-49: Current Understanding of Served and Unserved Areas within South Shawnigan Area

South Shawnigan Area Premise		
Community Total Premise Count	278	
% of CVRD Total Premise Count	0.8%	
Served	226	81.3%
Underserved	52	18.7%

South Shawnigan Area Roads		
Total Road Length	22,991	
% of CVRD Total Road Length	1.3%	
Served	10,287	44.7%
Underserved	12,704	55.3%

Table 2-49 South Shawnigan Area Current State

ISPs Serving South Shawnigan Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-50 ISPs in South Shawnigan Area

South Shawnigan Area is located in the far south corner of the Regional District, west of Malahat Drive area, and south of Shawnigan Lake. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There are several nearby towers in the South Shawnigan and Malahat Drive areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
South Shawnigan Area	Challenged	Low

2.3.9.22 Stz'uminus First Nation

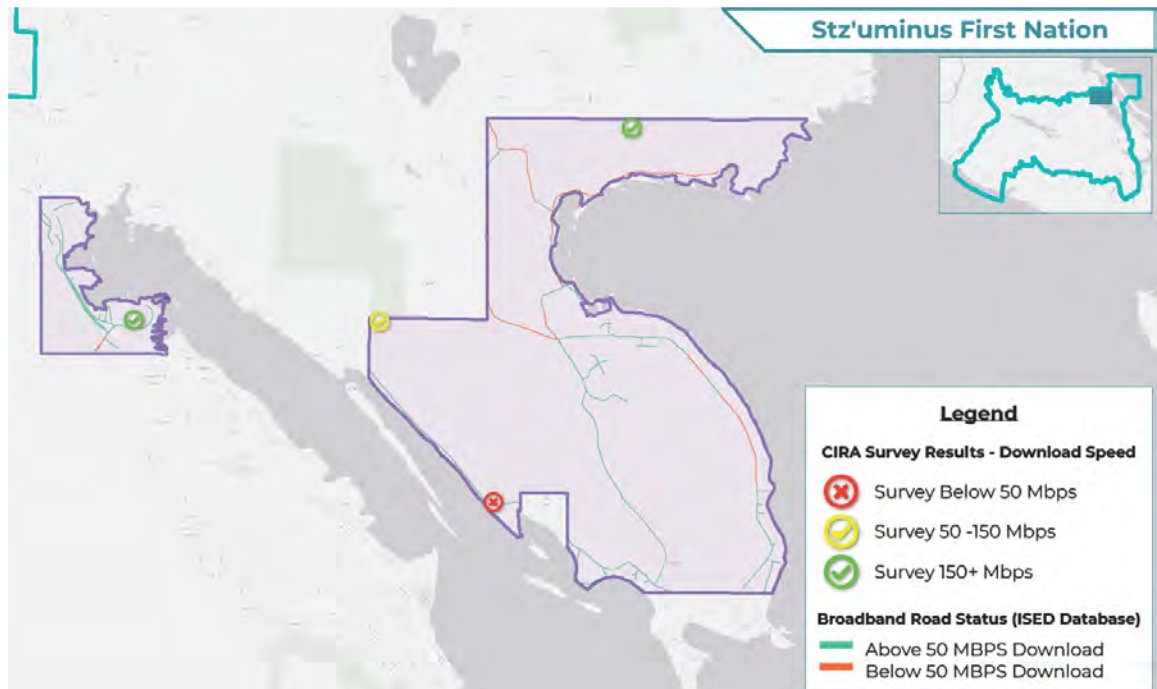


Figure 2-50: Current Assessment of Survey Data within Stz'uminus First Nation

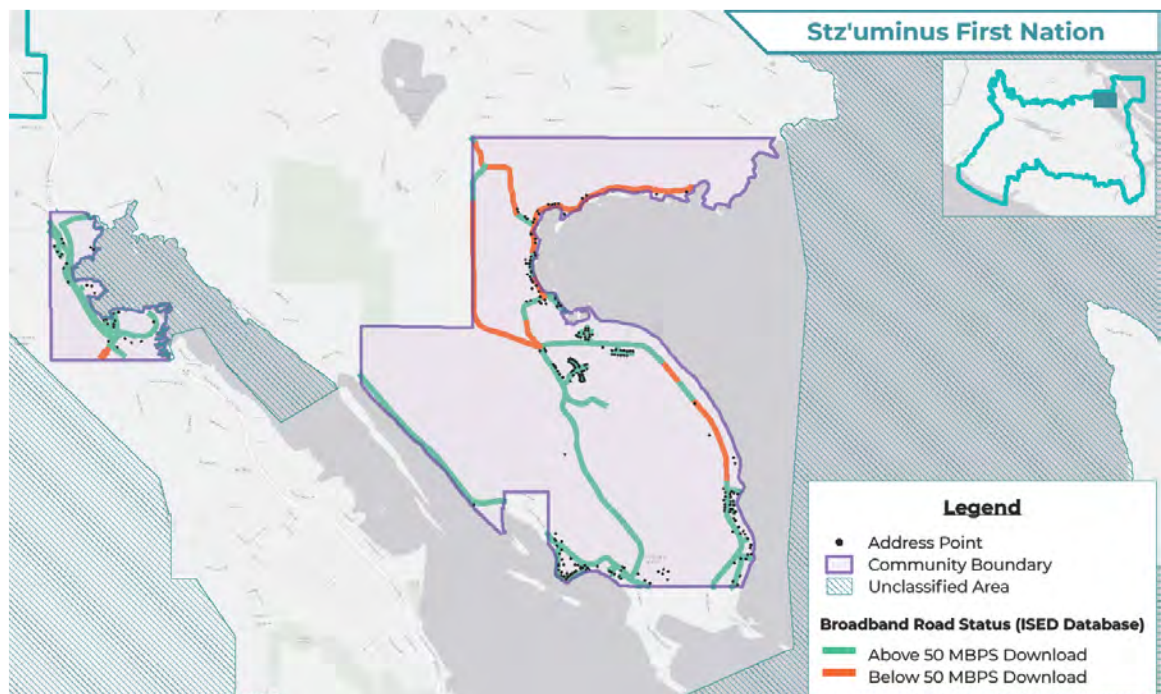


Figure 2-51: Current Understanding of Served and Underserved Areas within Stz'uminus First Nation

Stz'uminus First Nation Premise		
Community Total Premise Count	238	
% of CVRD Total Premise Count	0.7%	
Served	210	88.2%
Underserved	28	11.8%

Stz'uminus First Nation Roads		
Total Road Length	28,137	
% of CVRD Total Road Length	1.6%	
Served	20,679	73.5%
Underserved	7,458	26.5%

Table 2-51 Stz'uminus First Nation Current State

ISPs Serving Stz'uminus First Nation	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-52 ISPs in Stz'uminus First Nation Area

Stz'uminus First Nation is located east of the Town of Ladysmith and south of Yellow Point, Cedar areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Several towers are found in the Town of Ladysmith and Yellow Point Cedar areas that serve this First Nation.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Stz'uminus First Nation	Proven	Low

2.3.9.23 Cowichan Tribes

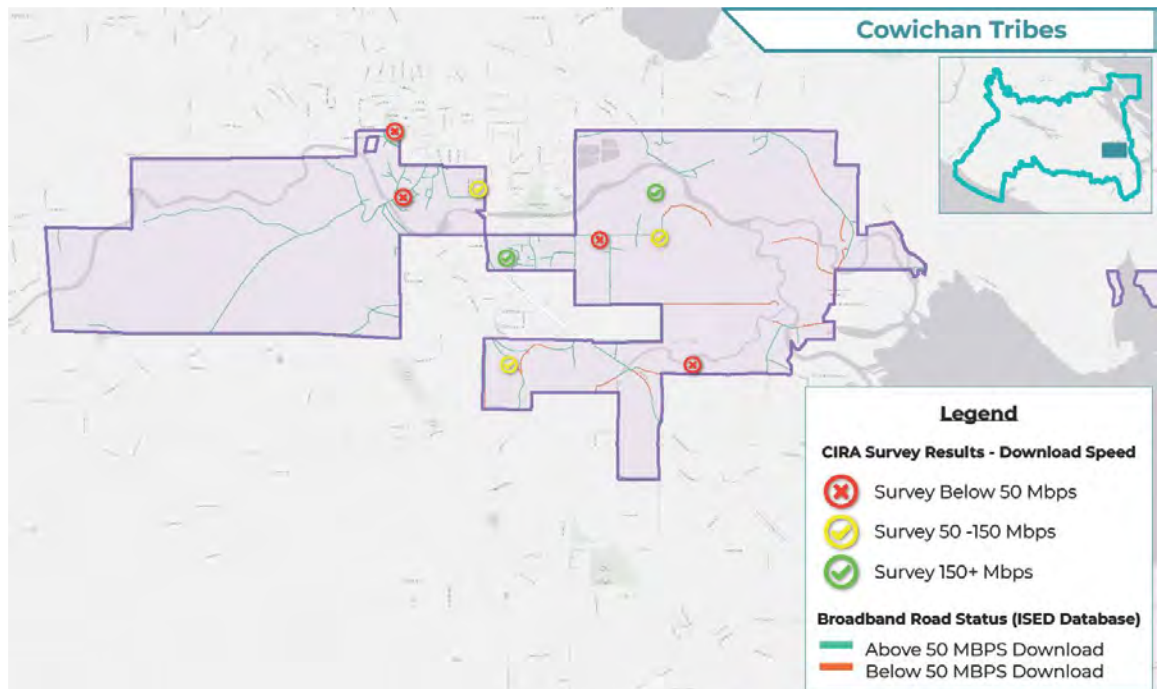


Figure 2-52: Current Assessment of Survey Data within Cowichan Tribes

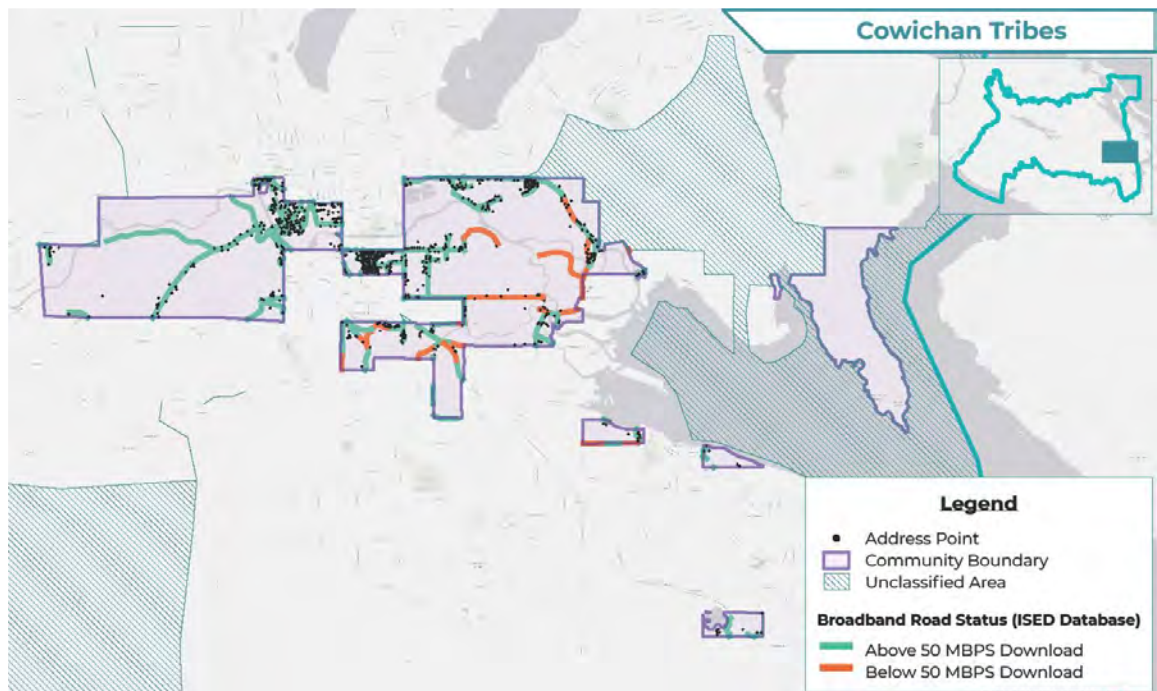


Figure 2-53: Current Understanding of Served and Underserved Areas within Cowichan Tribes

Cowichan Tribes Premise		
Community Total Premise Count	756	
% of CVRD Total Premise Count	2.1%	
Served	706	93.4%
Underserved	50	6.6%

Cowichan Tribes Roads		
Total Road Length	44,681	
% of CVRD Total Road Length	2.6%	
Served	36,259	81.2%
Underserved	8,422	18.8%

Table 2-53 Cowichan Tribes Current State

ISPs Serving Cowichan Tribes Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					✓	✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-54 ISPs in Cowichan Tribes Area

Cowichan Tribes is comprised of several areas around Duncan, Eagle Heights, Cowichan Bay and Genoa Bay. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Bell, Shaw and Telus report having high-capacity transport in the area. Several towers in surrounding areas provide coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Cowichan Tribes	Proven	High

2.3.9.24 Crofton Area

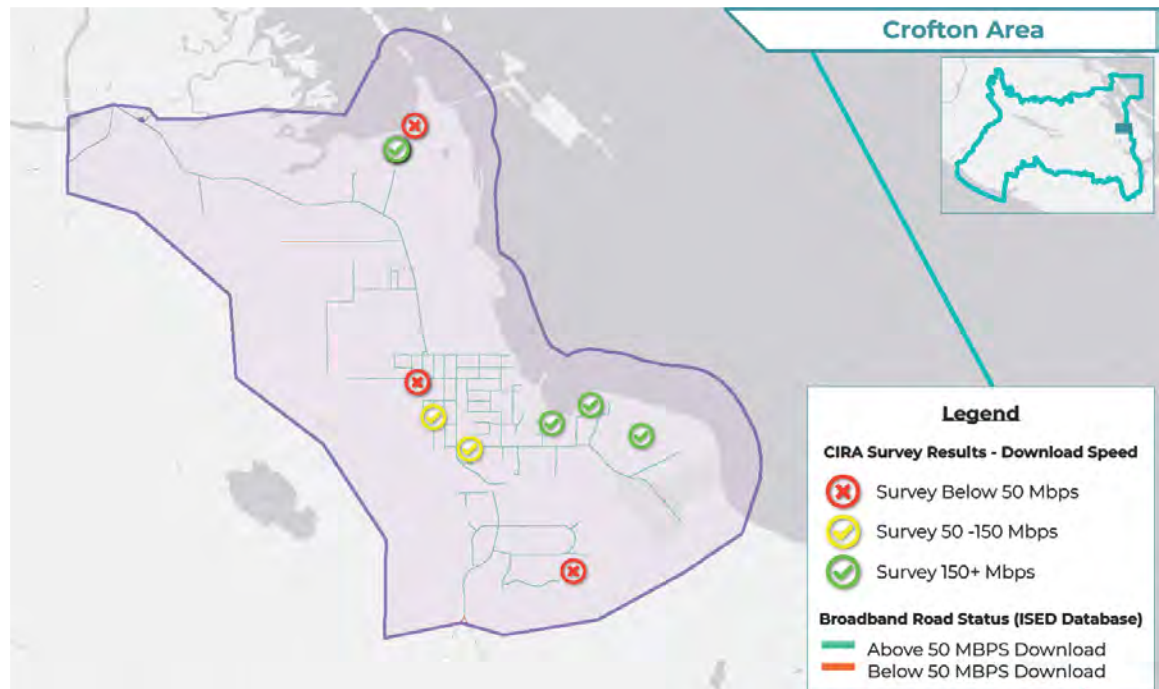


Figure 2-54: Current Assessment of Survey Data within Crofton Area

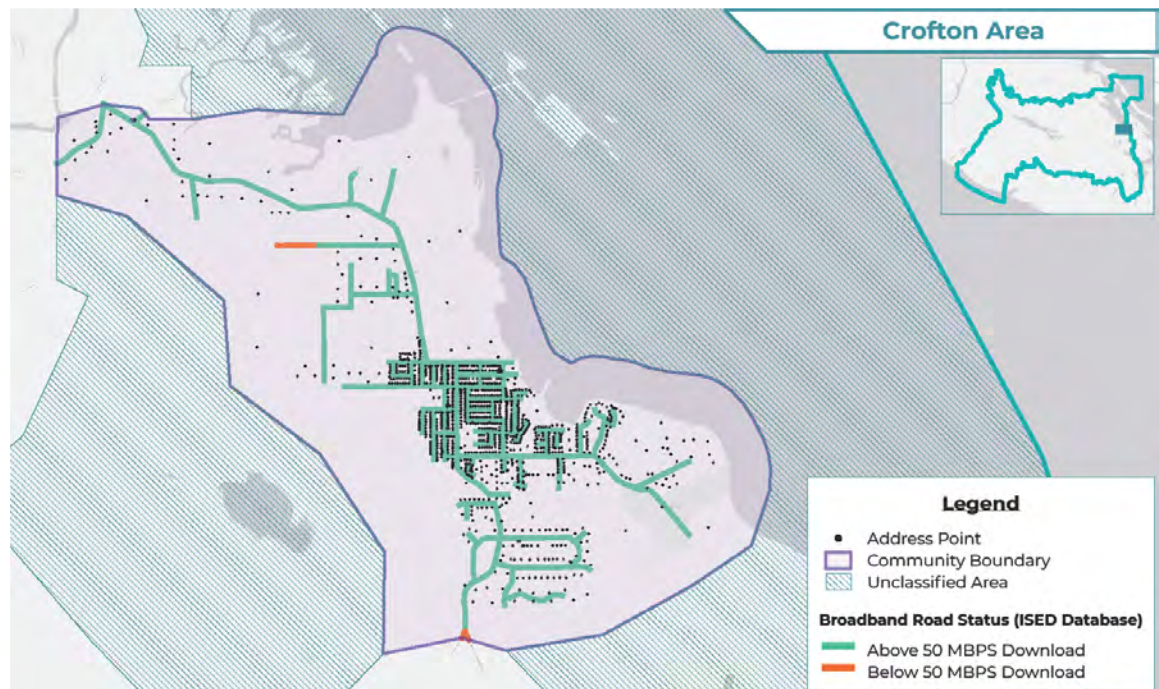


Figure 2-55: Current Understanding of Served and Underserved Areas within Crofton Area

Crofton Area Premise		
Community Total Premise Count	1,060	
% of CVRD Total Premise Count	3.0%	
Served	1,059	99.9%
Underserved	1	0.1%

Crofton Area Roads		
Total Road Length	26,728	
% of CVRD Total Road Length	1.5%	
Served	26,332	98.5%
Underserved	396	1.5%

Table 2-55 Crofton Area Current State

ISPs Serving Crofton Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-56 ISPs in Crofton Area

Crofton Area is a coastal area west of Westholme and Somenos areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Several towers in surrounding areas provide coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Crofton Area	Proven	Medium

2.3.9.25 Duncan Area

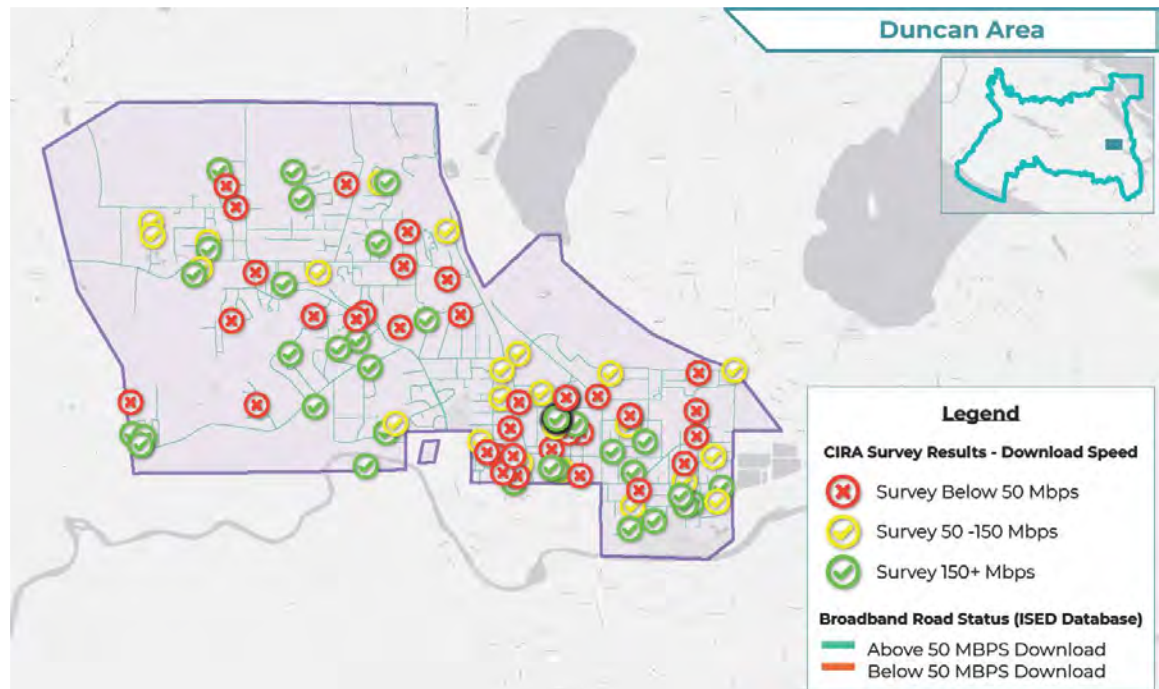


Figure 2-56: Current Assessment of Survey Data within Duncan Area

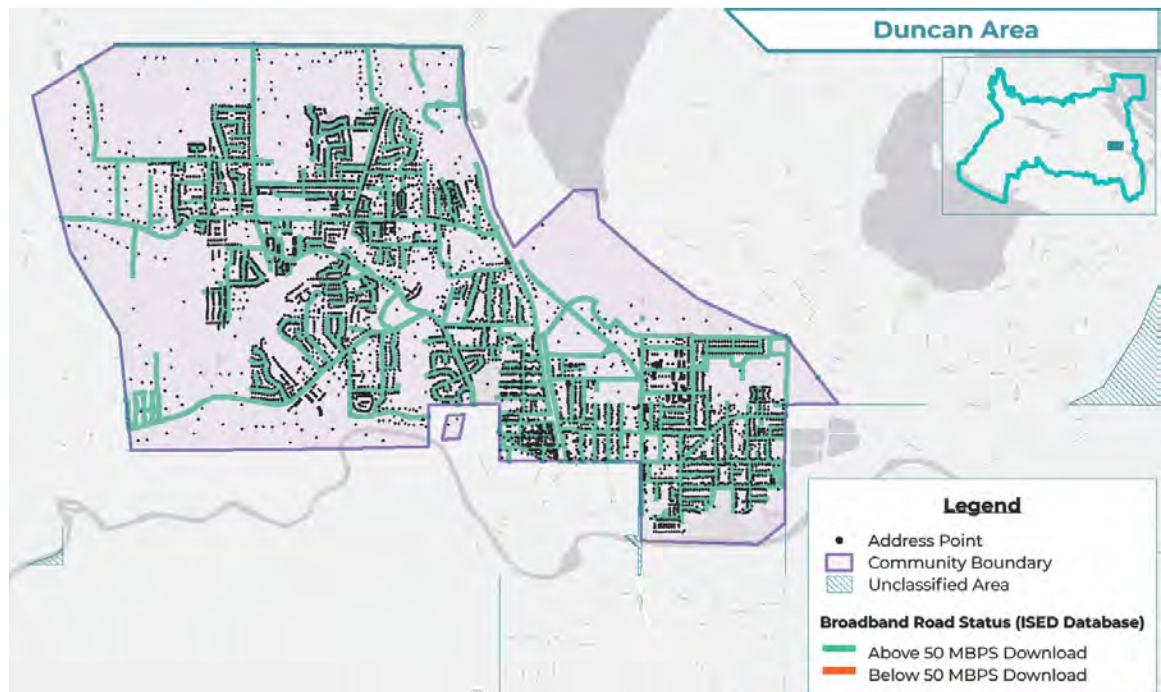


Figure 2-57: Current Understanding of Served and Underserved Areas within Duncan Area

Duncan Area Premise		
Community Total Premise Count	5,854	
% of CVRD Total Premise Count	16.6%	
Served	5,854	100.0%
Underserved	0	0.0%

Duncan Area Roads		
Total Road Length	82,099	
% of CVRD Total Road Length	4.7%	
Served	82,099	100.0%
Underserved	0	0.0%

Table 2-57 Duncan Area Current State

ISPs Serving Duncan Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					✓	✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-58 ISPs in Duncan Area

Duncan Area is located south of Somenos and north of Eagle Heights. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Bell, Shaw and Telus report having high-capacity transport in the area. Several towers in and around the Duncan area provide coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Duncan Area	Proven	High

2.3.9.26 Thetis Island

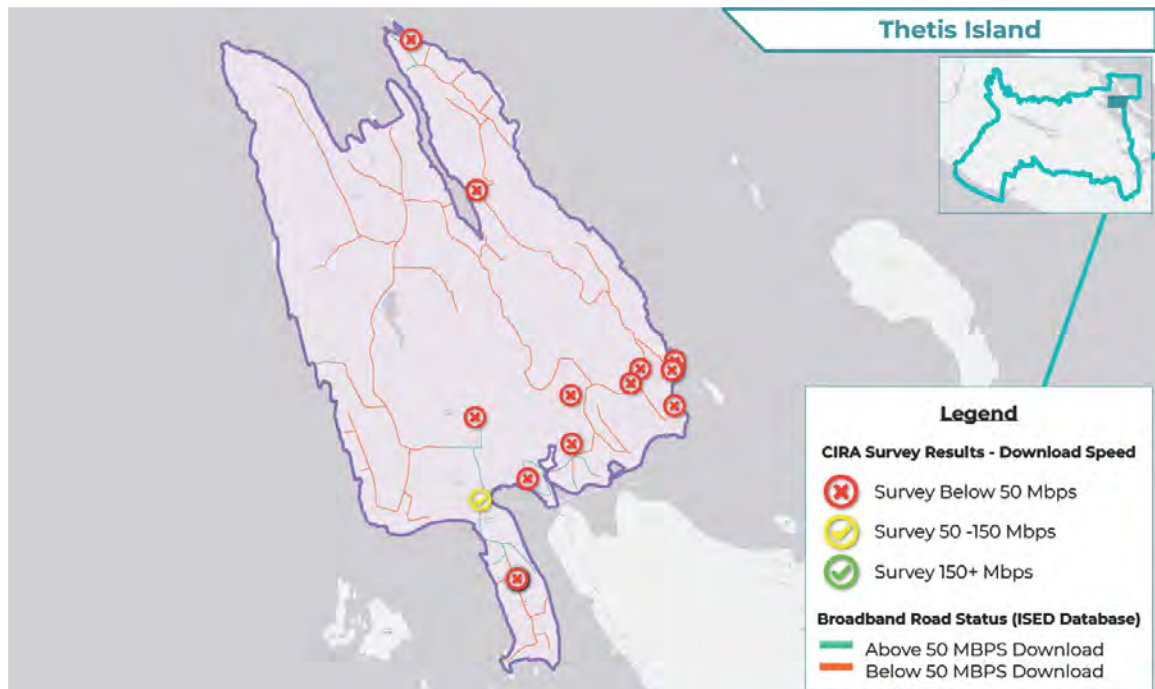


Figure 2-58: Current Assessment of Survey Data within Thetis Island

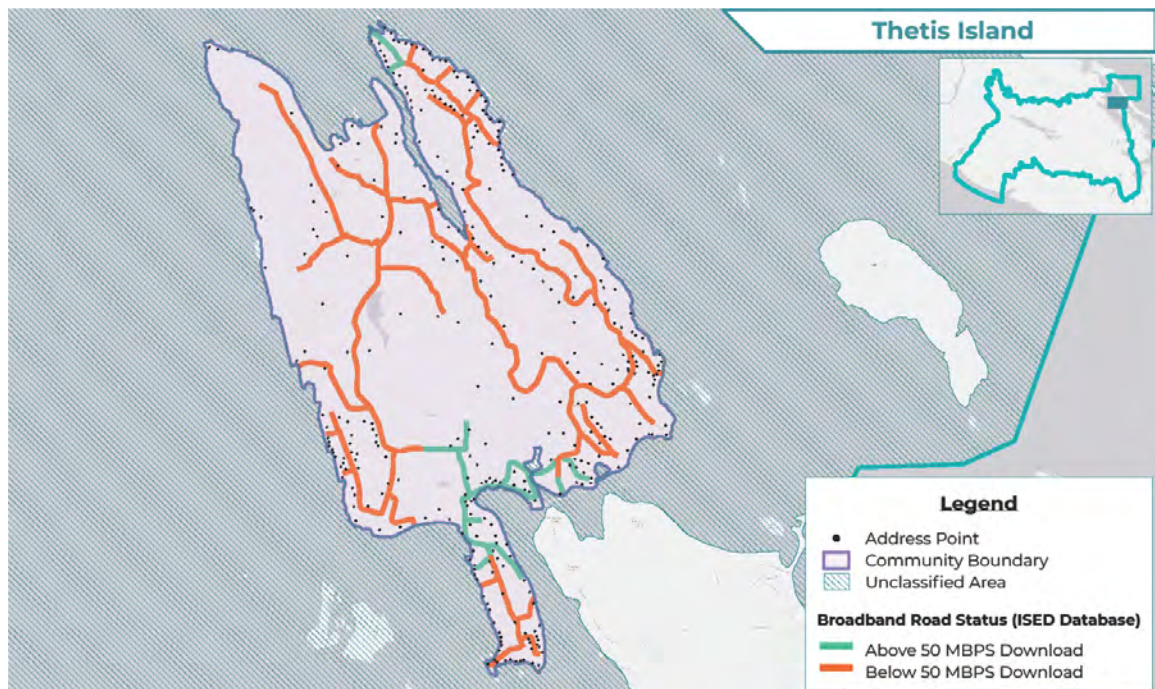


Figure 2-59: Current Understanding of Served and Unserved Areas within Thetis Island

Thetis Island Premise		
Community Total Premise Count	335	
% of CVRD Total Premise Count	0.9%	
Served	71	21.2%
Underserved	264	78.8%

Thetis Island Roads		
Total Road Length	30,734	
% of CVRD Total Road Length	1.8%	
Served	5,019	16.3%
Underserved	25,715	83.7%

Table 2-59 Thetis Island Current State

ISPs Serving Thetis Island	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Telus		√	√	√	√	√	
Xplornet							√

Table 2-60 ISPs in Thetis Island Area

Thetis Island is located on east side of the Regional District, north of Penelakut Island, east of Saltair and Ladysmith. Only 16% of the area (by road length) is served by fibre optic cables, and DSL, but no cable infrastructure. It is also served via fixed, mobile wireless and satellite services. Only Telus reports having high-capacity transport in the area. There is one tower on the island.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Thetis Island	Proven	High

2.3.9.27 Malahat First Nation

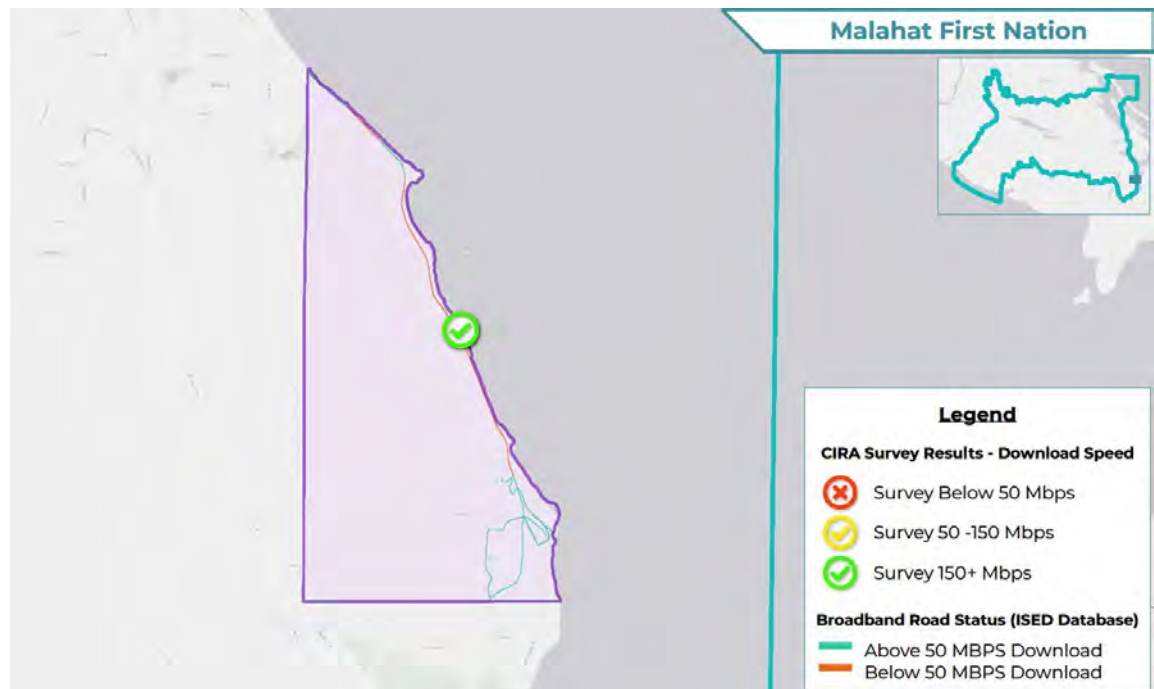


Figure 2-60: Current Assessment of Survey Data within First Nation

Note that four survey results were documented for this community, spatially overlapping on the map above.

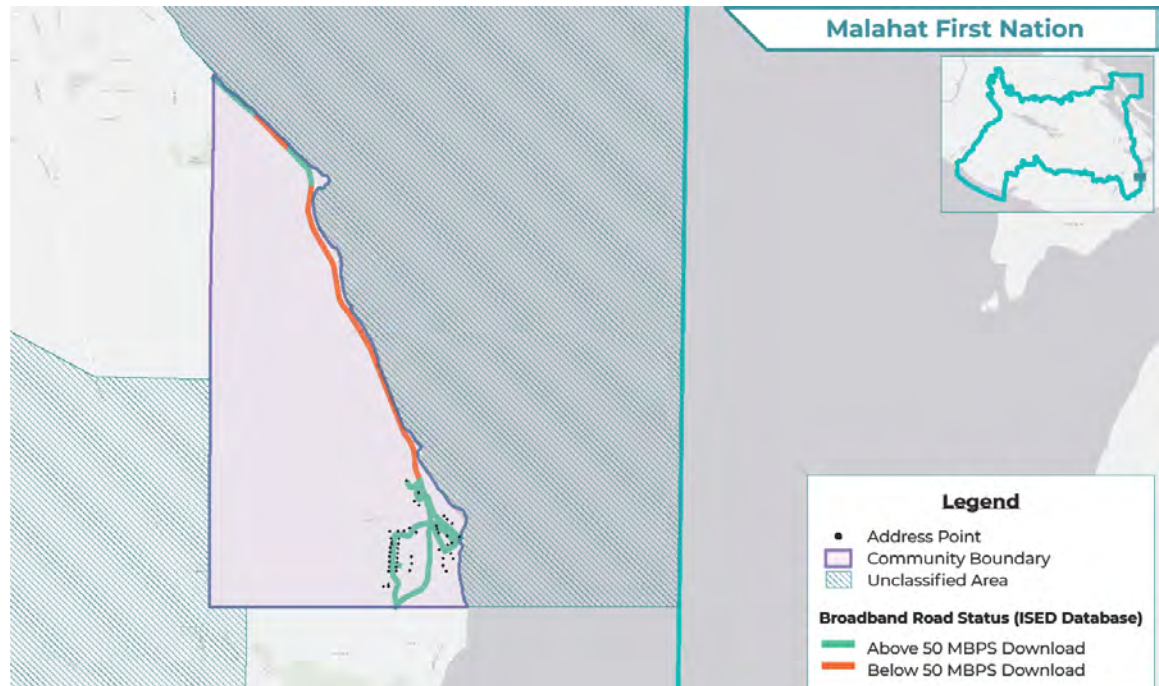


Figure 2-61: Current Understanding of Served and Underserved Areas within Malahat First Nation

Malahat First Nation Premise		
Community Total Premise Count	48	
% of CVRD Total Premise Count	0.1%	
Served	48	100.0%
Underserved	0	0.0%

Malahat First Nation Roads		
Total Road Length	5,029	
% of CVRD Total Road Length	0.3%	
Served	3,013	59.9%
Underserved	2,016	40.1%

Table 2-61 Malahat First Nation Current State

ISPs Serving Malahat First Nation	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓		✓	
Xplornet							✓

Table 2-62 ISPs in Malahat First Nation Area

Malahat First Nation is located at the southern end of the Regional District, north of Malahat Drive area and south of Mill Bay. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Only Shaw reports having high-capacity transport in the area. The nearest towers are located in Mill Bay and in the Malahat Drive areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Malahat First Nation	Challenged	Medium

2.3.9.28 Diamond, Ladysmith Area

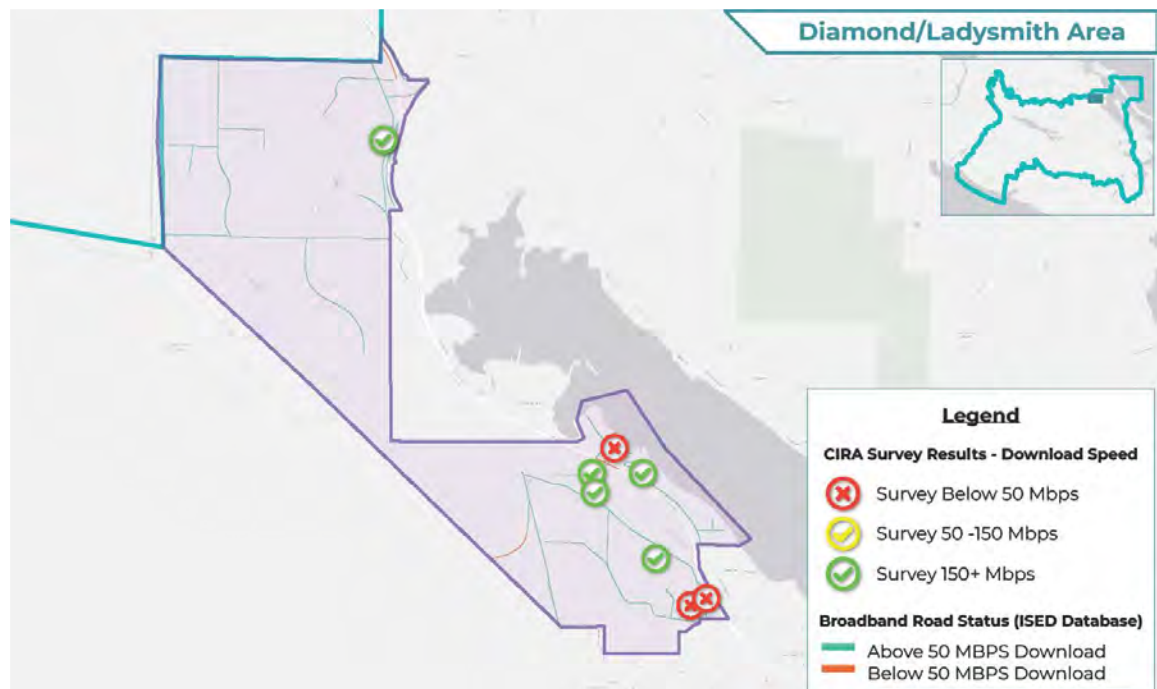


Figure 2-62: Current Assessment of Survey Data within Diamond, Ladysmith Area

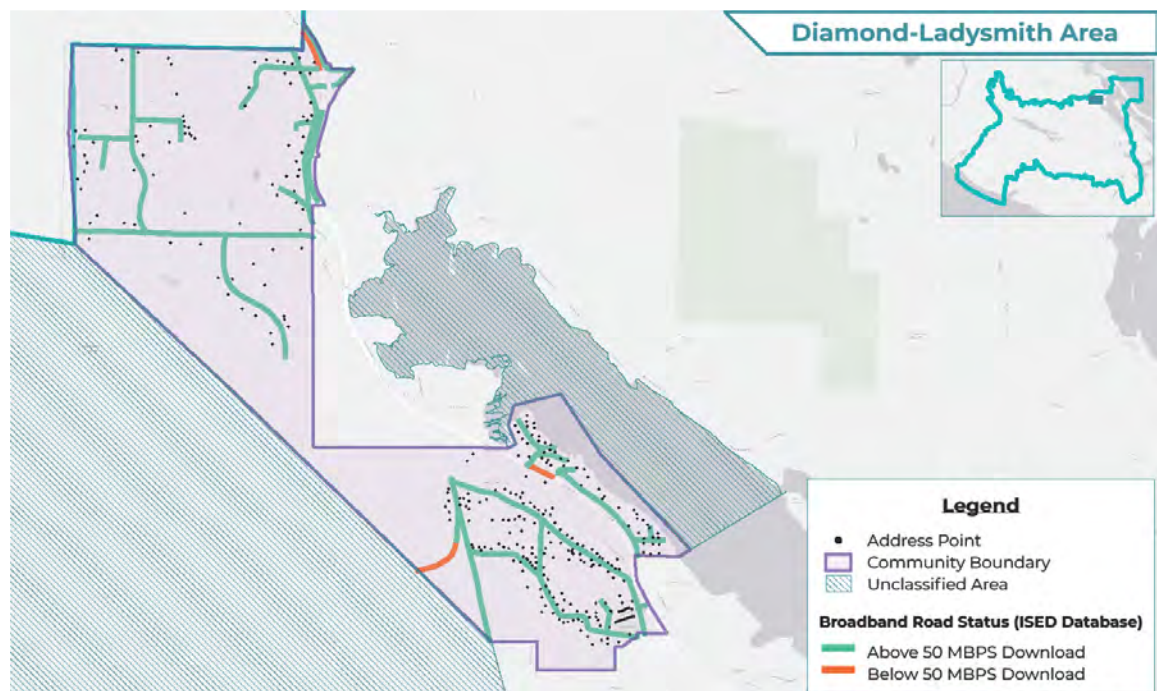


Figure 2-63: Current Understanding of Served and Underserved Areas within Diamond, Ladysmith Area

Diamond, Ladysmith Area Premise		
Community Total Premise Count	312	
% of CVRD Total Premise Count	0.9%	
Served	308	98.7%
Underserved	4	1.3%

Diamond, Ladysmith Area Roads		
Total Road Length	16,374	
% of CVRD Total Road Length	0.9%	
Served	15,623	95.4%
Underserved	751	4.6%

Table 2-63 Diamond, Ladysmith Area Current State

ISPs Serving Diamond, Ladysmith Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-64 ISPs in Diamond, Ladysmith Area

Diamond, Ladysmith Area is located to the north of the Town of Ladysmith, adjacent to Stz'uminus First Nation and Yellow Point, Cedar areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. The nearest tower is located in the southern end of Yellow Point, Cedar area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Diamond, Ladysmith Area	Challenged	High

2.3.9.29 Maple Bay Area

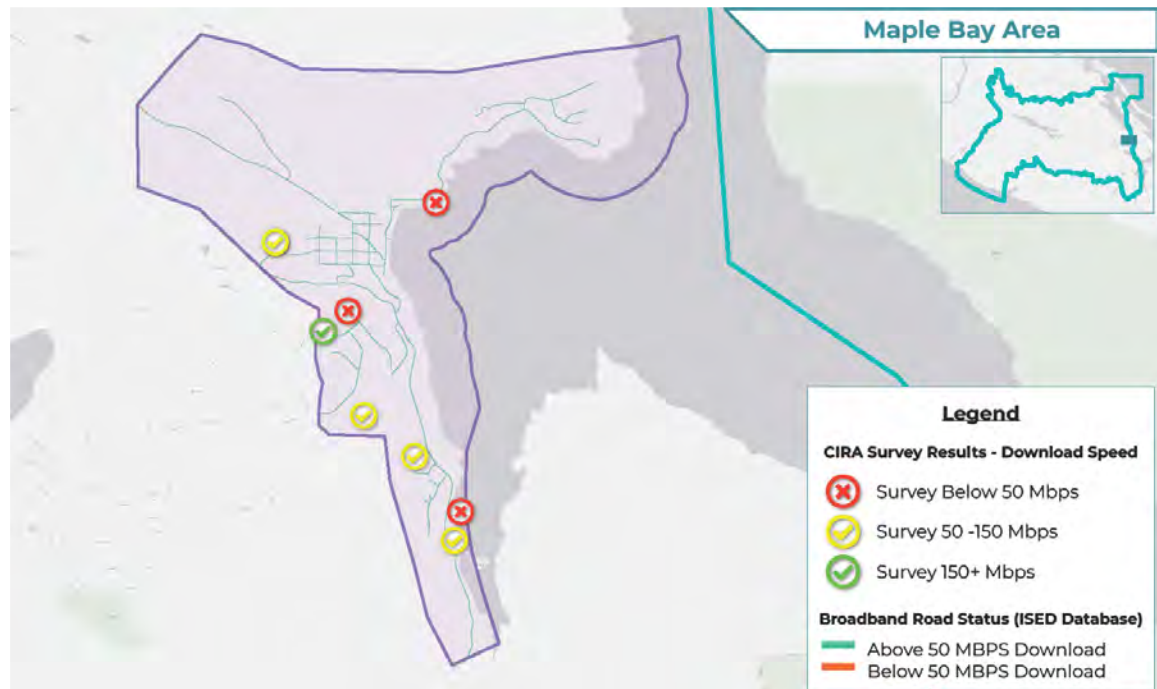


Figure 2-64: Current Assessment of Survey Data within Maple Bay Area

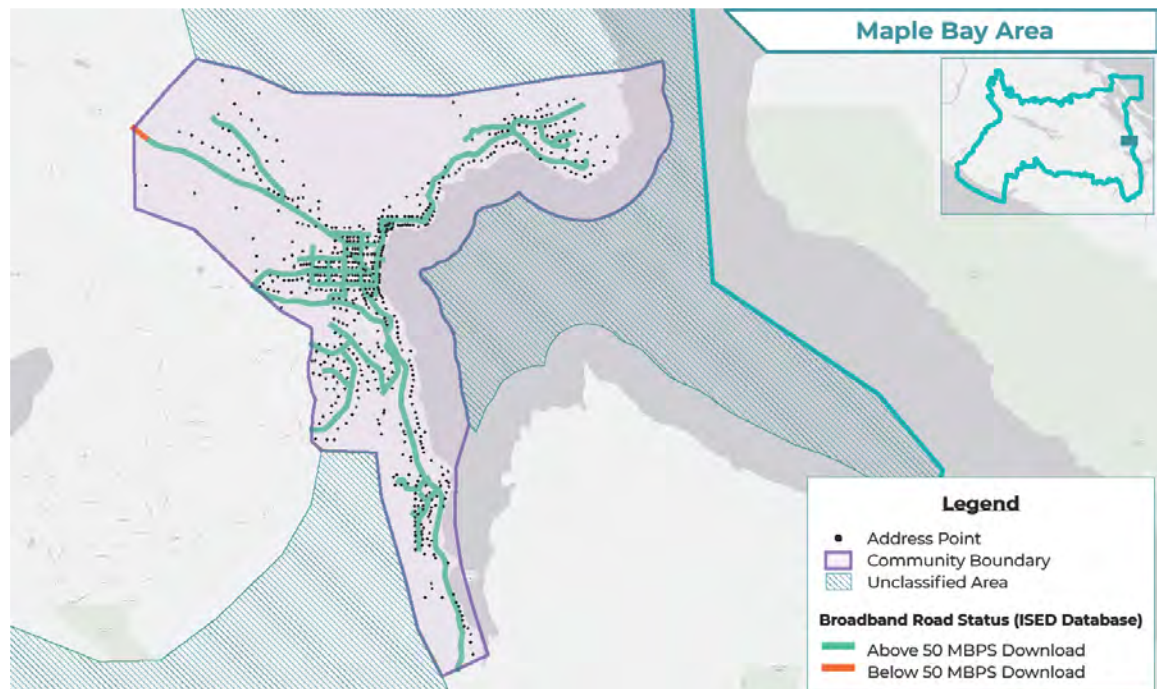


Figure 2-65: Current Understanding of Served and Underserved Areas within Maple Bay Area

Maple Bay Area Premise		
Community Total Premise Count	559	
% of CVRD Total Premise Count	1.6%	
Served	559	100.0%
Underserved	0	0.0%

Maple Bay Area Roads		
Total Road Length	18,850	
% of CVRD Total Road Length	1.1%	
Served	18,737	99.4%
Underserved	113	0.6%

Table 2-65 Maple Bay Area Current State

ISPs Serving Maple Bay Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-66 ISPs in Maple Bay Area

Maple Bay Area is located along the south-central east coastline of the Regional District, and is bordered by Maple Mountain, Quamichan Lake, and Stoney Hill areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. There towers in, and just north of Maple Bay area, providing coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Maple Bay Area	Challenged	Medium

2.3.9.30 Youbou Area

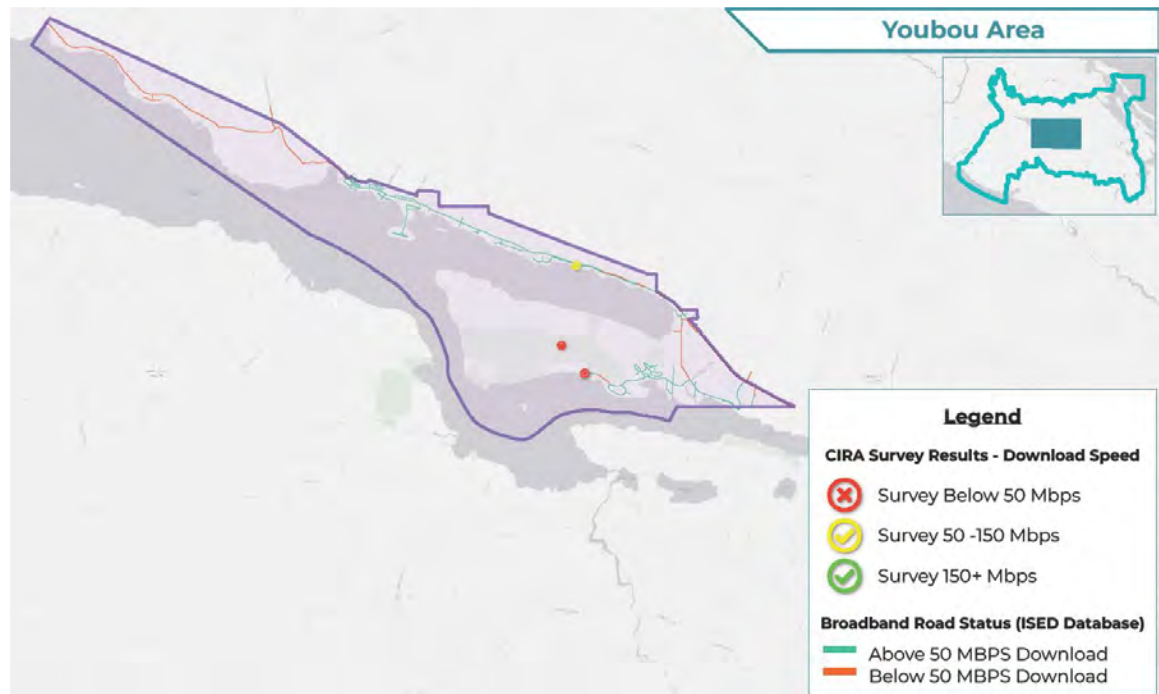


Figure 2-66: Current Assessment of Survey Data within Youbou Area

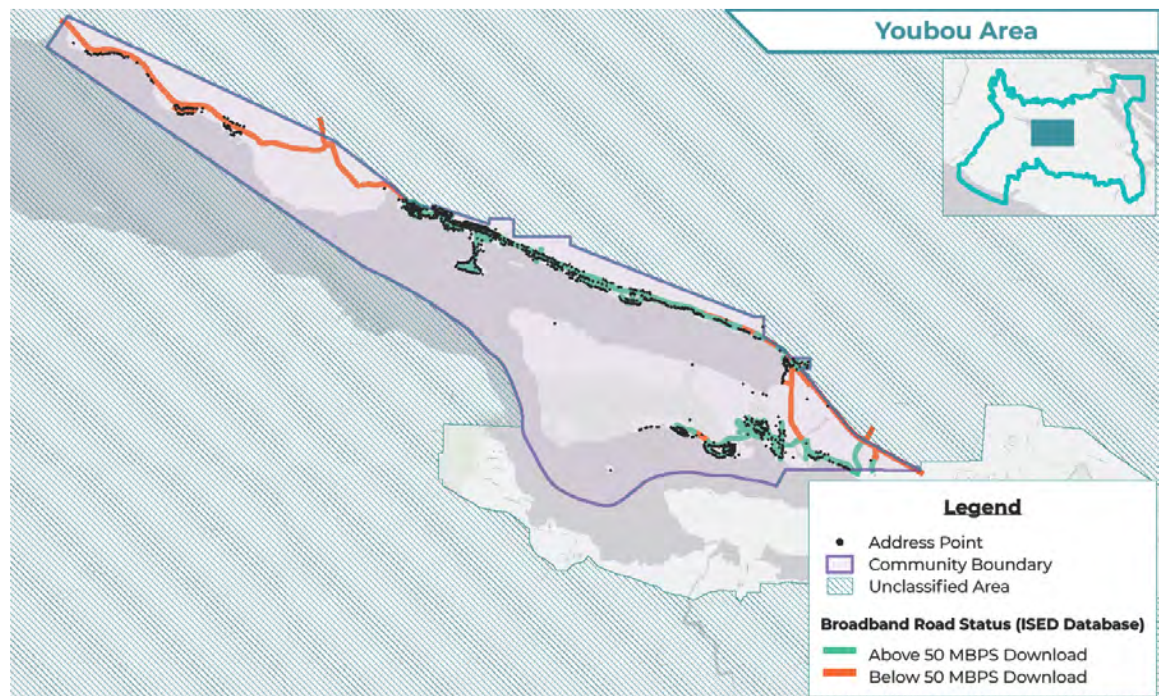


Figure 2-67: Current Understanding of Served and Underserved Areas within Youbou Area

Youbou Area		Premise
Community Total Premise Count		1,053
% of CVRD Total Premise Count		3.0%
Served	909	86.3%
Underserved	144	13.7%

Youbou Area Roads		
Total Road Length		45,045
% of CVRD Total Road Length		2.6%
Served	27,891	61.9%
Underserved	17,154	38.1%

Table 2-67 Youbou Area Current State

ISPs Serving Youbou Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-68 ISPs in Youbou Area

Youbou Area is located on the north shore of Cowichan Lake, adjacent to the Lake Cowichan, Mesachie Lake and Honeymoon Bay areas. The area is served by fibre optic cables, DSL and cable services, fixed wireless, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Nearby towers can be found at the southern end of the area in the Ts'uubaa-asatx Nation and adjacent unclassified areas.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Youbou Area	Challenged	Low

2.3.9.31 Shawnigan Lake Area

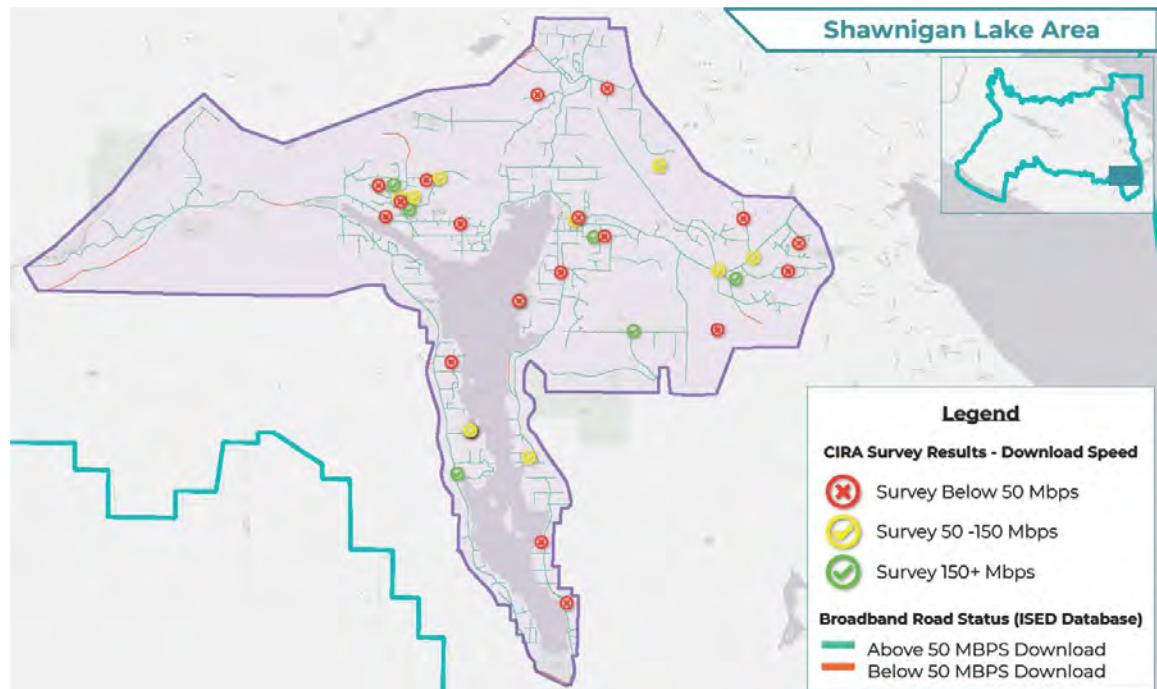


Figure 2-68: Current Assessment of Survey Data within Shawnigan Lake Area

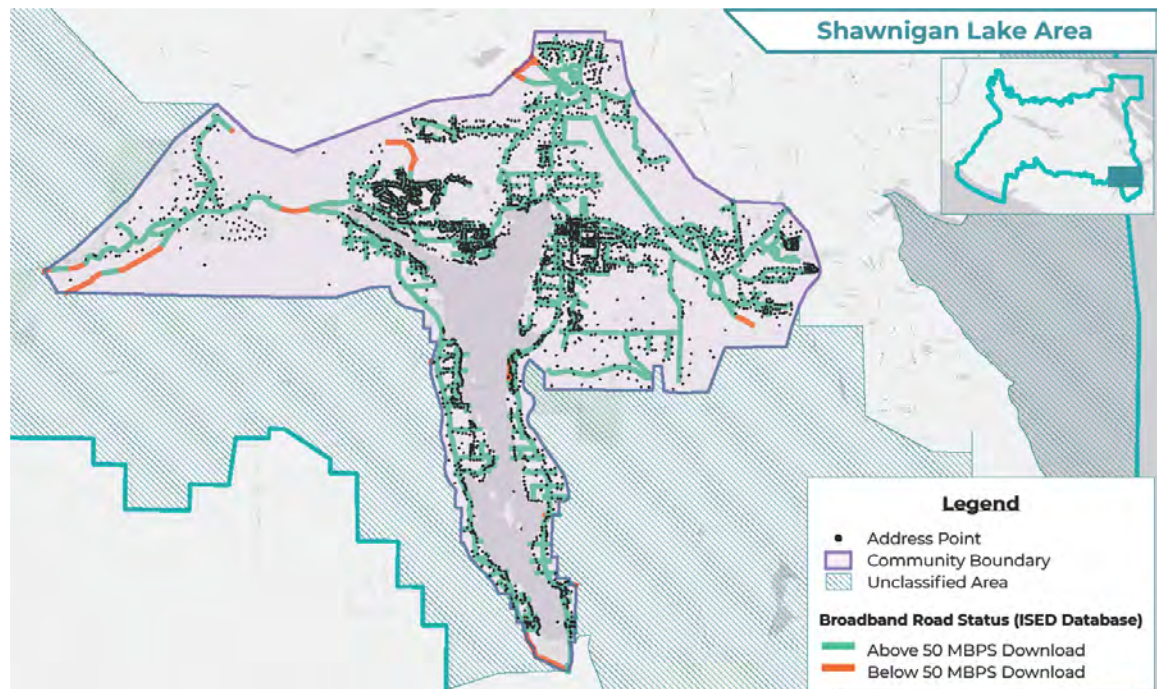


Figure 2-69: Current Understanding of Served and Underserved Areas within Shawnigan Lake Area

Shawnigan Lake Area Premise		
Community Total Premise Count	3,110	
% of CVRD Total Premise Count	8.8%	
Served	3,084	99.2%
Underserved	26	0.8%

Shawnigan Lake Area Roads		
Total Road Length	124,469	
% of CVRD Total Road Length	7.2%	
Served	118,893	95.5%
Underserved	5,576	4.5%

Table 2-69 Shawnigan Lake Area Current State

ISPs Serving Shawnigan Lake Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-70 ISPs in Shawnigan Lake Area

Shawnigan Lake Area is located in the southern end of the Regional District, north of South Shawnigan, and adjacent to Cobble Hill and Mill Bay areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. A tower located in an adjacent unclassified area north of Cliffside may provide partial coverage of the area.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Shawnigan Lake Area	Challenged	Medium

2.3.9.32 Maple Mountain Area

No Survey Data Included for this Community

Figure 2-70: Current Assessment of Survey Data within Maple Mountain Area

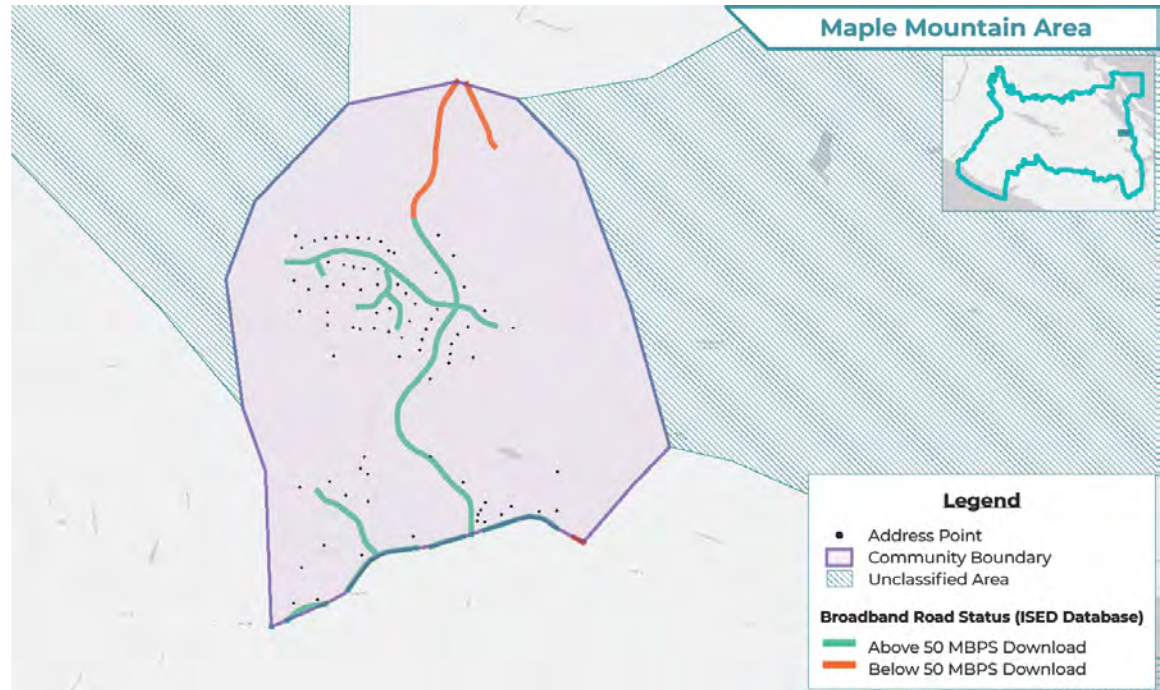


Figure 2-71: Current Understanding of Served and Unserved Areas within Maple Mountain Area

Maple Mountain Area Premise		
Community Total Premise Count	84	
% of CVRD Total Premise Count	0.2%	
Served	84	100.0%
Unserved	0	0.0%

Maple Mountain Area Roads		
Total Road Length	6,979	
% of CVRD Total Road Length	0.4%	
Served	5,760	82.5%
Unserved	1,219	17.5%

Table 2-71 Maple Mountain Area Current State

ISPs Serving Maple Mountain Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-72 ISPs in Maple Mountain Area

Maple Mountain Area is bordered by Somenos, Quamichan Lake, Maple Bay and Crofton areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Several towers in neighbouring areas may provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Maple Mountain Area	No Survey Data	Low

2.3.9.33 Lyackson First Nation

No Survey Data Included for this Community

Figure 2-72: Current Assessment of Survey Data within Lyackson First Nation

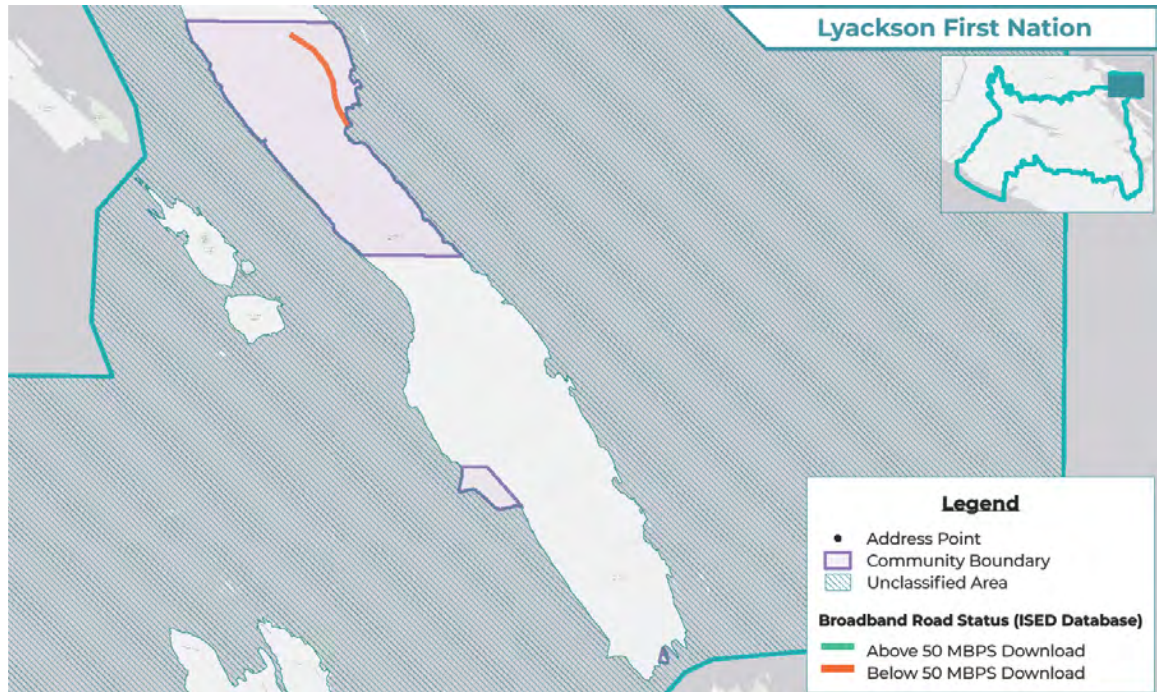


Figure 2-73: Current Understanding of Served and Underserved Areas within Lyackson First Nation

Lyackson First Nation Premise		
Community Total Premise Count	0	
% of CVRD Total Premise Count	0.0%	
Served	0	Insufficient Data
Underserved	0	Insufficient Data

Lyackson First Nation Roads		
Total Road Length	1,785	
% of CVRD Total Road Length	0.1%	
Served	0	0.0%
Underserved	1,785	100.0%

Table 2-73 Lyackson First Nation Current State

ISPs Serving Lyackson First Nation	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√						
Telus		√		√	√	√	
Xplornet							√

Table 2-74 ISPs in Lyackson First Nation Area

Lyackson First Nation is located in three distinct sectors of Valdes Island. ...The area is served by DSL and cable services, as well as fixed, mobile wireless and satellite services. Only Telus reports having high-capacity transport in the area. Towers located in Yellow Point, Cedar, Thetis Island and Ladysmith, may provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Lyackson First Nation	Insufficient Data	Insufficient Data

2.3.9.34 Cowichan Bay Area

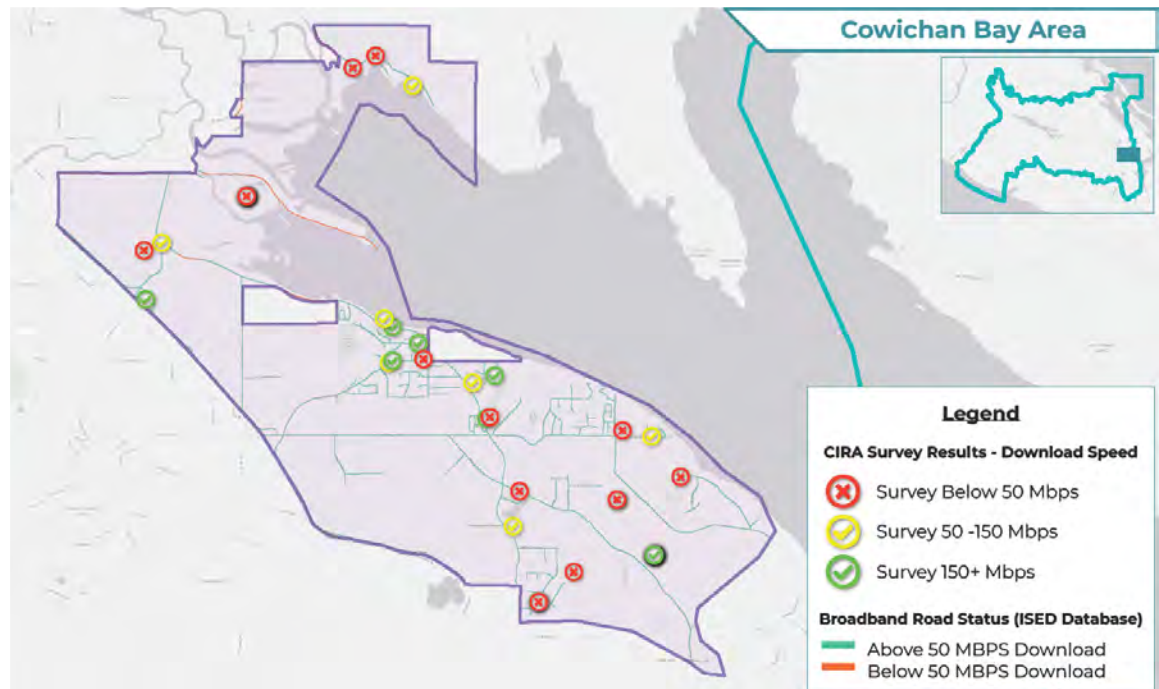


Figure 2-74: Current Assessment of Survey Data within Cowichan Bay Area

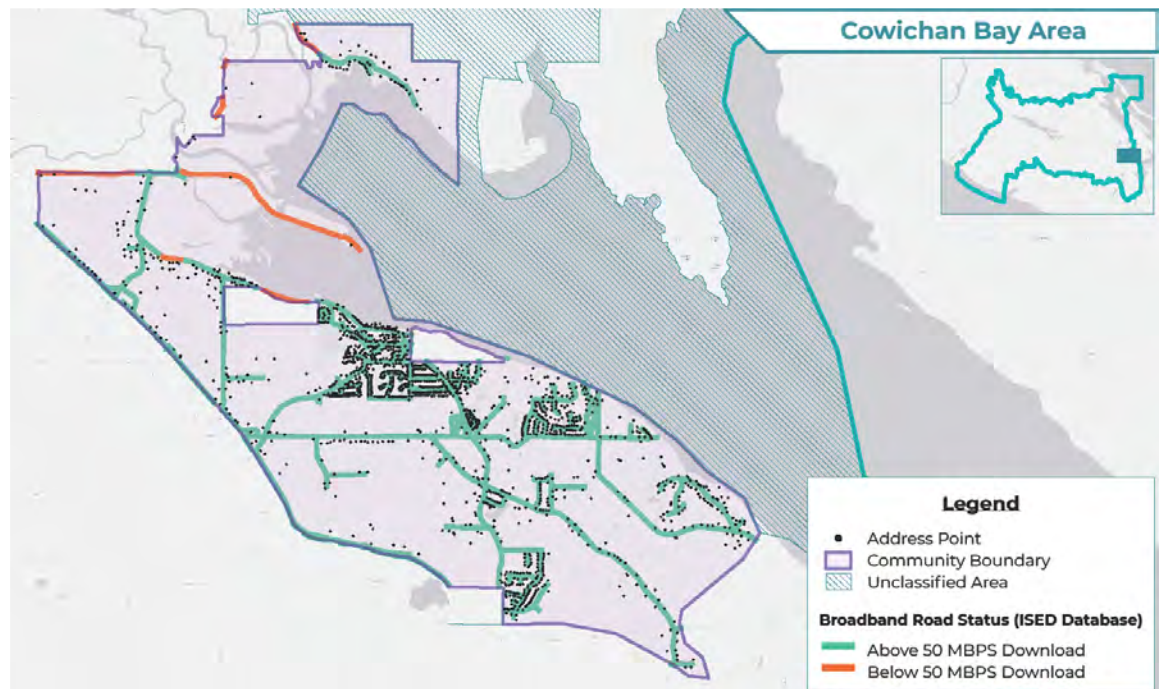


Figure 2-75: Current Understanding of Served and Underserved Areas within Cowichan Bay Area

Cowichan Bay Area Premise		
Community Total Premise Count	1,568	
% of CVRD Total Premise Count	4.4%	
Served	1,545	98.5%
Underserved	23	1.5%

Cowichan Bay Area Roads		
Total Road Length	58,652	
% of CVRD Total Road Length	3.4%	
Served	53,976	92.0%
Underserved	4,676	8.0%

Table 2-75 Cowichan Bay Area Current State

ISPs Serving Cowichan Bay Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-76 ISPs in Cowichan Bay Area

Cowichan Bay Area is a coastal area north of Cobble Hill, east of Cowichan Station, and south of Cowichan Tribes areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Towers located in Cobble Hill and Cowichan Station provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Cowichan Bay Area	Challenged	High

2.3.9.35 Koksilah Area

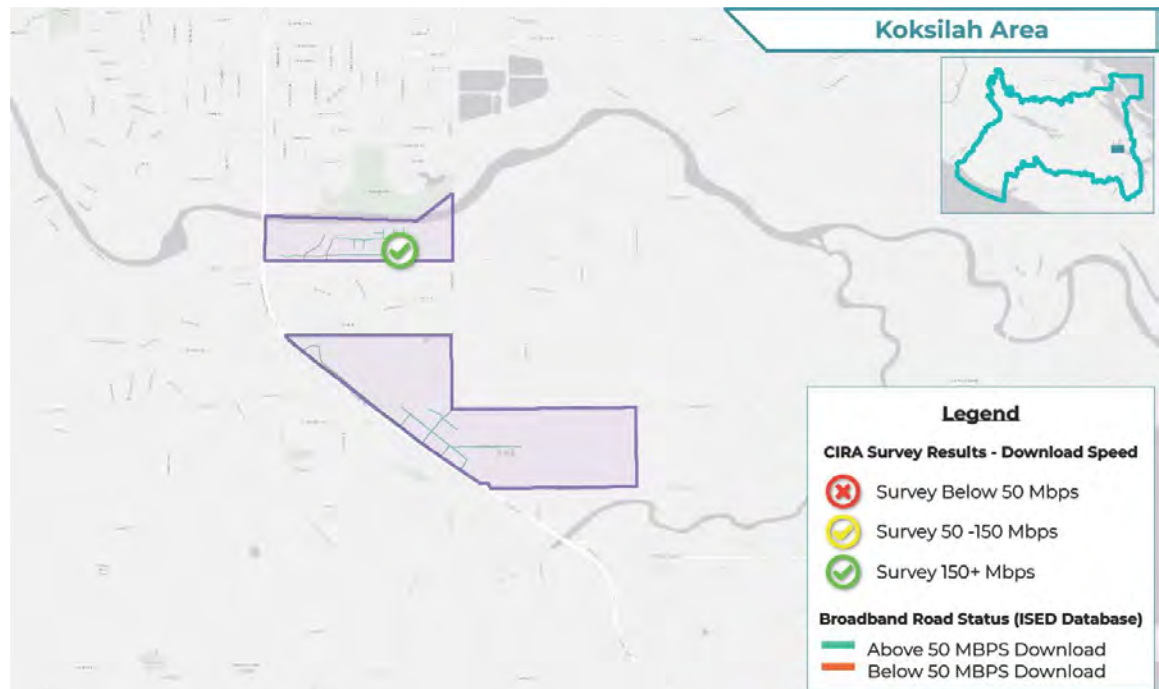


Figure 2-76: Current Assessment of Survey Data within Koksilah Area

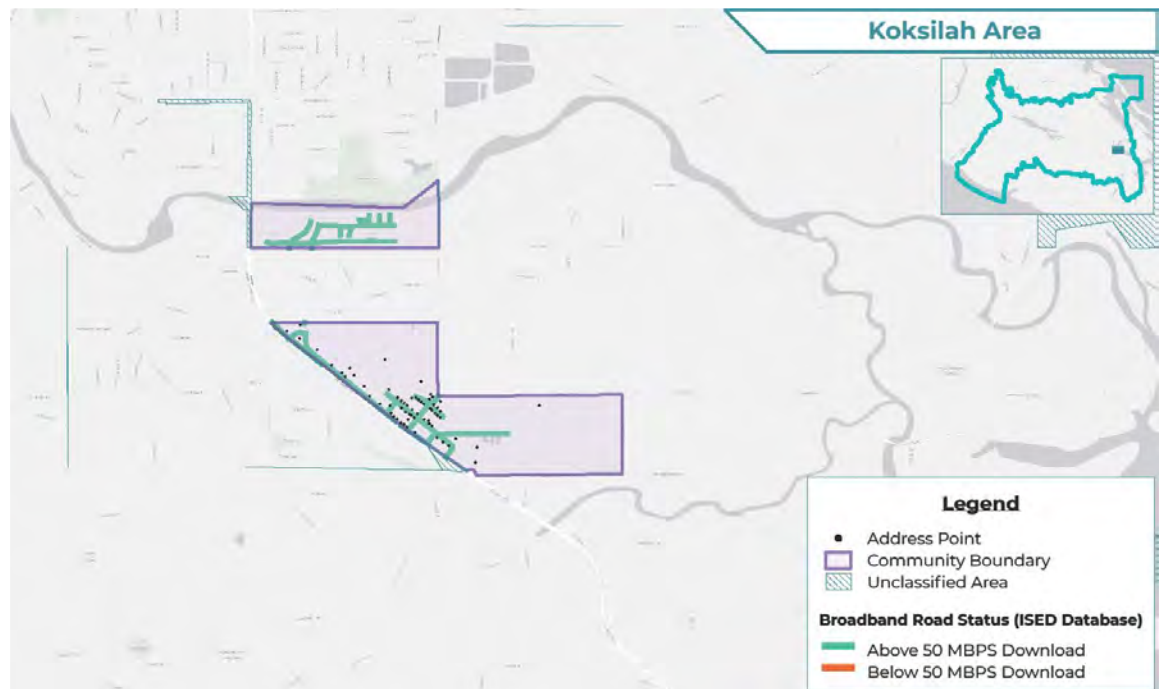


Figure 2-77: Current Understanding of Served and Underserved Areas within Koksilah Area

Koksilah Area Premise		
Community Total Premise Count	60	
% of CVRD Total Premise Count	0.2%	
Served	60	100.0%
Underserved	0	0.0%

Koksilah Area Roads		
Total Road Length	4,553	
% of CVRD Total Road Length	0.3%	
Served	4,553	100.0%
Underserved	0	0.0%

Table 2-77 Koksilah Area Current State

ISPs Serving Koksilah Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					✓	✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-78 ISPs in Koksilah Area

The Koksilah Area is comprised of two distinct sectors, east of Eagle Heights, and south of Duncan. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Bell, Shaw and Telus report having high-capacity transport in the area. A nearby tower in Eagle Heights provides coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Koksilah Area	Proven	Low

2.3.9.36 Sahtlam, Paldi, Riverbottom Area

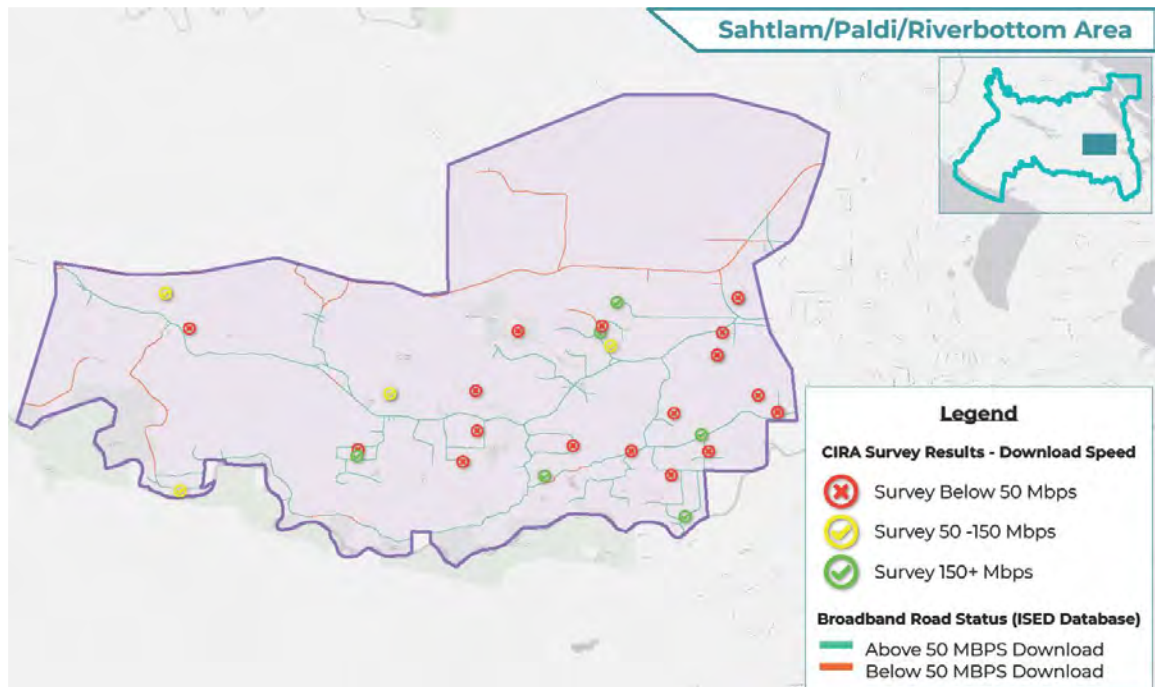


Figure 2-78: Current Assessment of Survey Data within Sahtlam, Paldi, Riverbottom Area

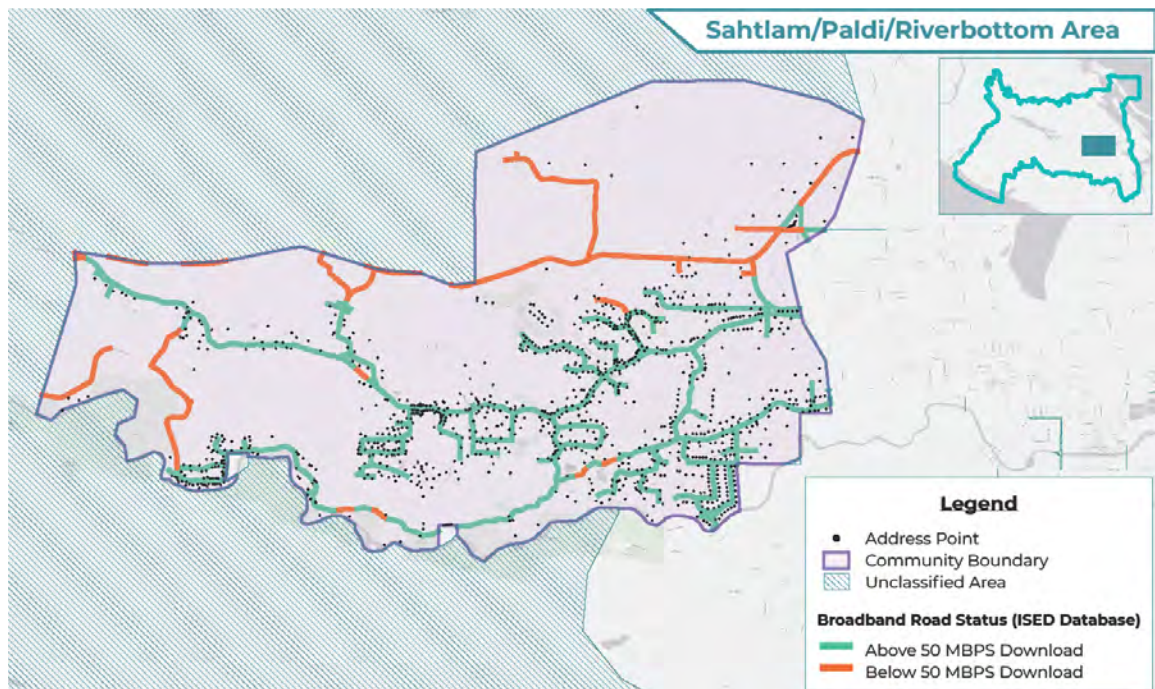


Figure 2-79: Current Understanding of Served and Unserved Areas within Sahtlam, Paldi, Riverbottom Area

Sahtlam, Paldi, Riverbottom Area Premise		
Community Total Premise Count	1,052	
% of CVRD Total Premise Count	3.0%	
Served	986	93.7%
Underserved	66	6.3%

Sahtlam, Paldi, Riverbottom Area Roads		
Total Road Length	80,971	
% of CVRD Total Road Length	4.7%	
Served	59,378	73.3%
Underserved	21,593	26.7%

Table 2-79 Sahtlam, Paldi, Riverbottom Area Current State

ISPs Serving Sahtlam, Paldi, Riverbottom Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-80 ISPs in Sahtlam, Paldi, Riverbottom Area

Sahtlam, Paldi, Riverbottom Area is located adjacent to Somenos and Duncan areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Towers in Duncan and Somenos areas complement the towers in Sahtlam, Paldi, Riverbottom area to provide coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Sahtlam, Paldi, Riverbottom Area	Challenged	High

2.3.9.37 Mesachie Lake Area

No Survey Data Included for this Community

Figure 2-80: Current Assessment of Survey Data within Mesachie Lake Area

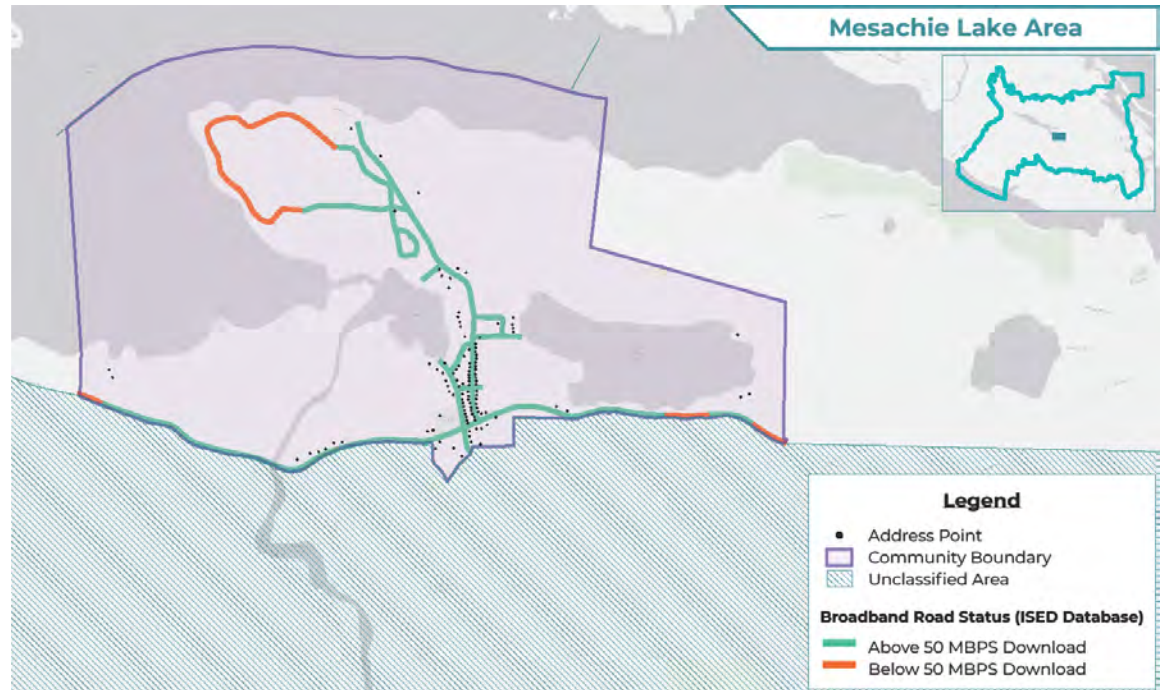


Figure 2-81: Current Understanding of Served and Underserved Areas within Mesachie Lake Area

Mesachie Lake Area Premise		
Community Total Premise Count	118	
% of CVRD Total Premise Count	0.3%	
Served	116	98.3%
Underserved	2	1.7%

Mesachie Lake Area Roads		
Total Road Length	11,742	
% of CVRD Total Road Length	0.7%	
Served	9,259	78.9%
Underserved	2,483	21.1%

Table 2-81 Mesachie Lake Area Current State

ISPs Serving Mesachie Lake Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-82 ISPs in Mesachie Lake Area

Mesachie Lake Area is located in the central Regional District, adjacent to Lake Cowichan, Honeymoon Bay and Youbou areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Towers on the north shore of the lake provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Mesachie Lake Area	No Survey Data	Low

2.3.9.38 Saltair Area

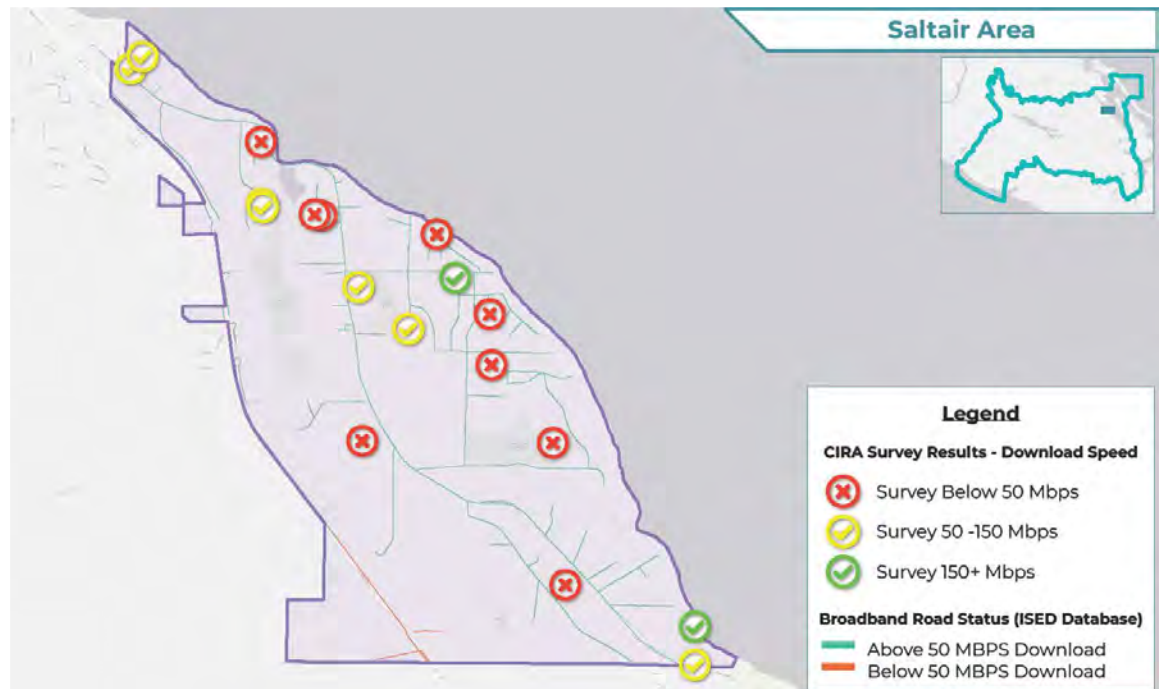


Figure 2-82: Current Assessment of Survey Data within Saltair Area

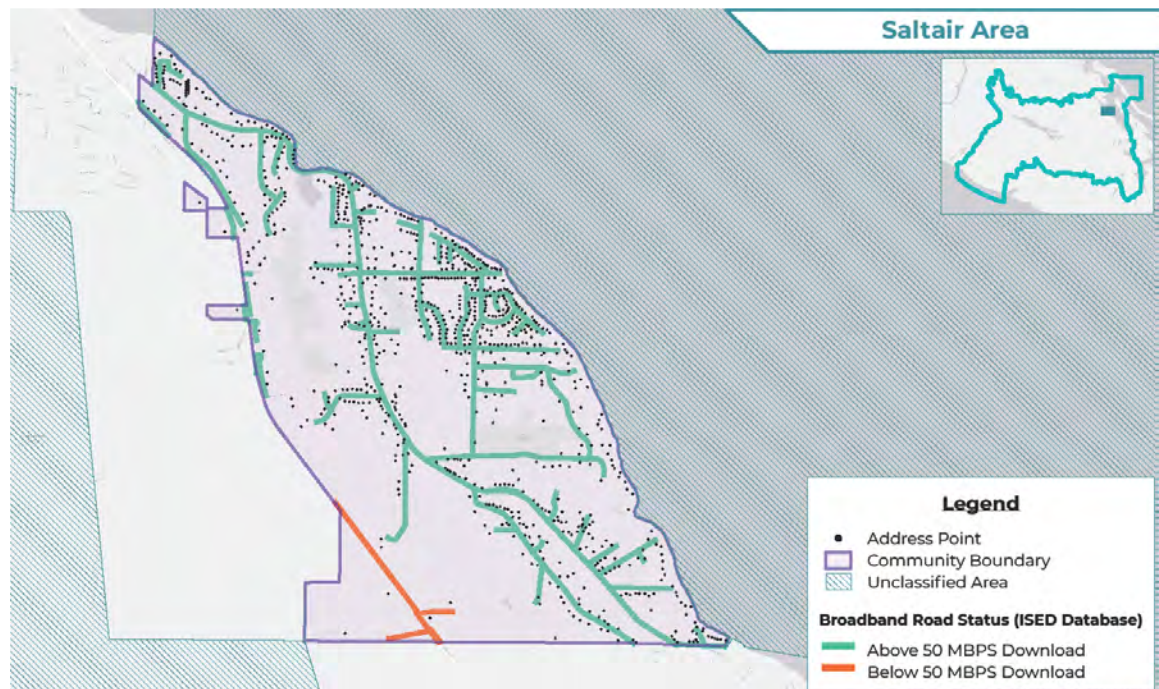


Figure 2-83: Current Understanding of Served and Underserved Areas within Saltair Area

Saltair Area Premise		
Community Total Premise Count	874	
% of CVRD Total Premise Count	2.5%	
Served	868	99.3%
Underserved	6	0.7%

Saltair Area Roads		
Total Road Length	27,903	
% of CVRD Total Road Length	1.6%	
Served	26,204	93.9%
Underserved	1,699	6.1%

Table 2-83 Saltair Area Current State

ISPs Serving Saltair Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√						
Telus		√	√	√	√	√	
Xplornet							√

Table 2-84 ISPs in Saltair Area

Saltair Area is located on the eastern coast, south of Ladysmith and north of Chemainus areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Only Telus reports having high-capacity transport in the area. Towers located at the south end of the Town of Ladysmith area provide coverage of Saltair.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Saltair Area	Challenged	High

2.3.9.39 Penelakut Tribe

No Survey Data Included for this Community

Figure 2-84: Current Assessment of Survey Data within Penelakut Tribe

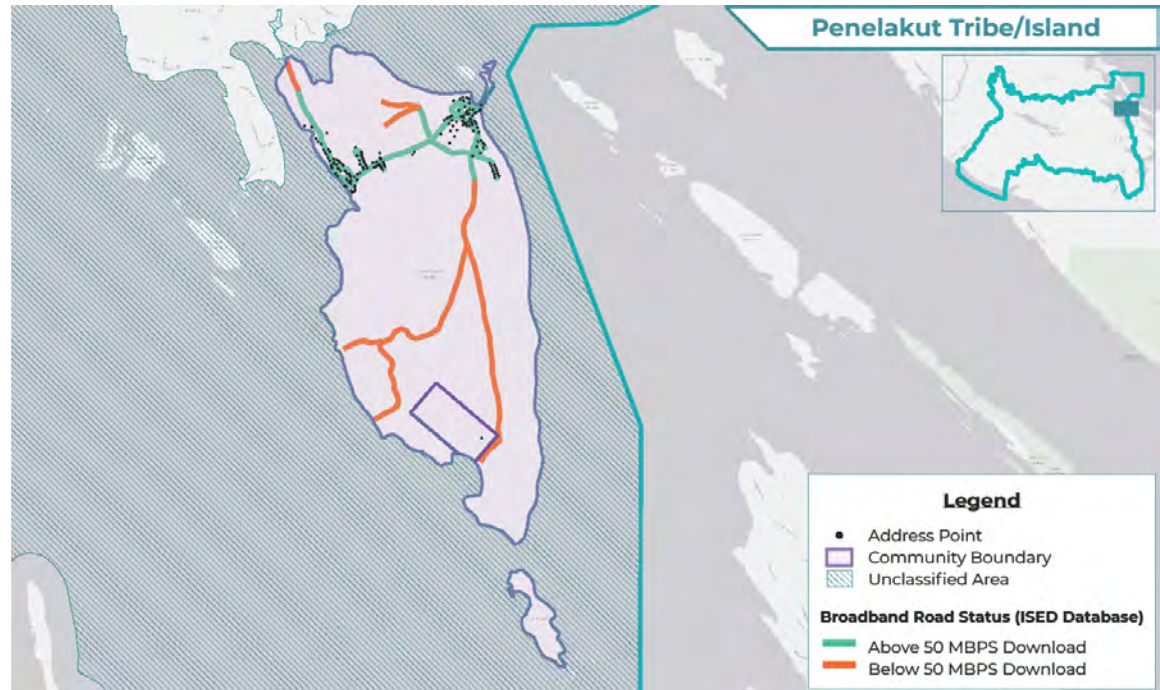


Figure 2-85: Current Understanding of Served and Unserved Areas within Penelakut Tribe

Penelakut Tribe Premise		
Community Total Premise Count	156	
% of CVRD Total Premise Count	0.4%	
Served	155	99.4%
Underserved	1	0.6%

Penelakut Tribe Roads		
Total Road Length	15,779	
% of CVRD Total Road Length	0.9%	
Served	8,100	51.3%
Underserved	7,679	48.7%

Table 2-85 Penelakut Tribe Current State

ISPs Serving Penelakut Tribe	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Beacon				√			
Bell						√	
Freedom Mobile						√	
Rogers						√	
Shaw	√						
Telus		√	√	√	√	√	
Xplornet							√

Table 2-86 ISPs in Penelakut Tribe Area

Penelakut Tribe is located on Penelakut Island. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Only Telus reports having high-capacity transport in the area. Towers on Thetus Island and in the Chemainus and Ladysmith areas provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Penelakut Tribe	No Survey Data	Low

2.3.9.40 Ditidaht First Nation

No Survey Data Included for this Community

Figure 2-86: Current Assessment of Survey Data within Ditidaht First Nation

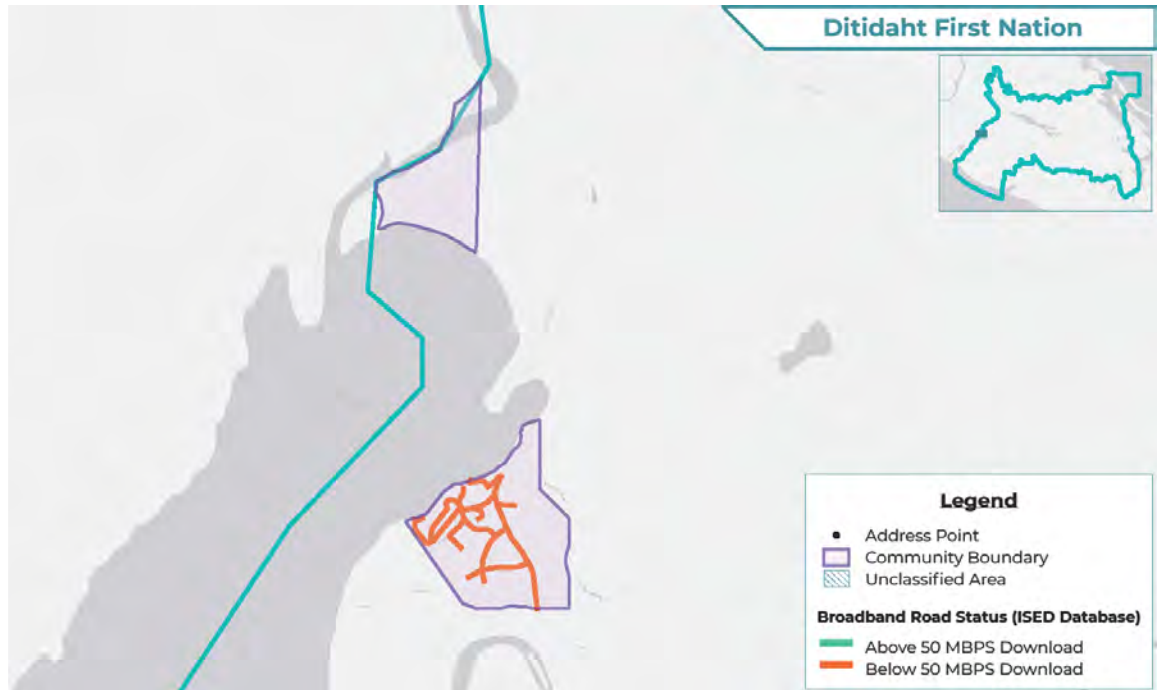


Figure 2-87: Current Understanding of Served and Underserved Areas within Ditidaht First Nation

Ditidaht First Nation Premise		
Community Total Premise Count	0	
% of CVRD Total Premise Count	0.0%	
Served	0	Insufficient Data
Underserved	0	Insufficient Data!

Ditidaht First Nation Roads		
Total Road Length	3,487	
% of CVRD Total Road Length	0.2%	
Served	0	0.0%
Underserved	3,487	100.0%

Table 2-87 Ditidaht First Nation Current State

ISPs Serving Ditidaht First Nation	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Telus			√				
Xplornet							√

Table 2-88 ISPs in Ditidaht First Nation Area

Ditidaht First Nation is located in several distinct areas along the west coast and south shore of Nitinaht Lake. ISED reports no physical facilities-based service, however, ICIS shows Telus infrastructure, but no indication of technology type. Reports from Connected Coast, indicate that the Telus infrastructure is comprised of fibre to the home. Residents report that fibre infrastructure is served by radio link, which severely limits bandwidth.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Ditidaht First Nation	No Survey Data	No Survey Data

2.3.9.41 Cherry Point Area

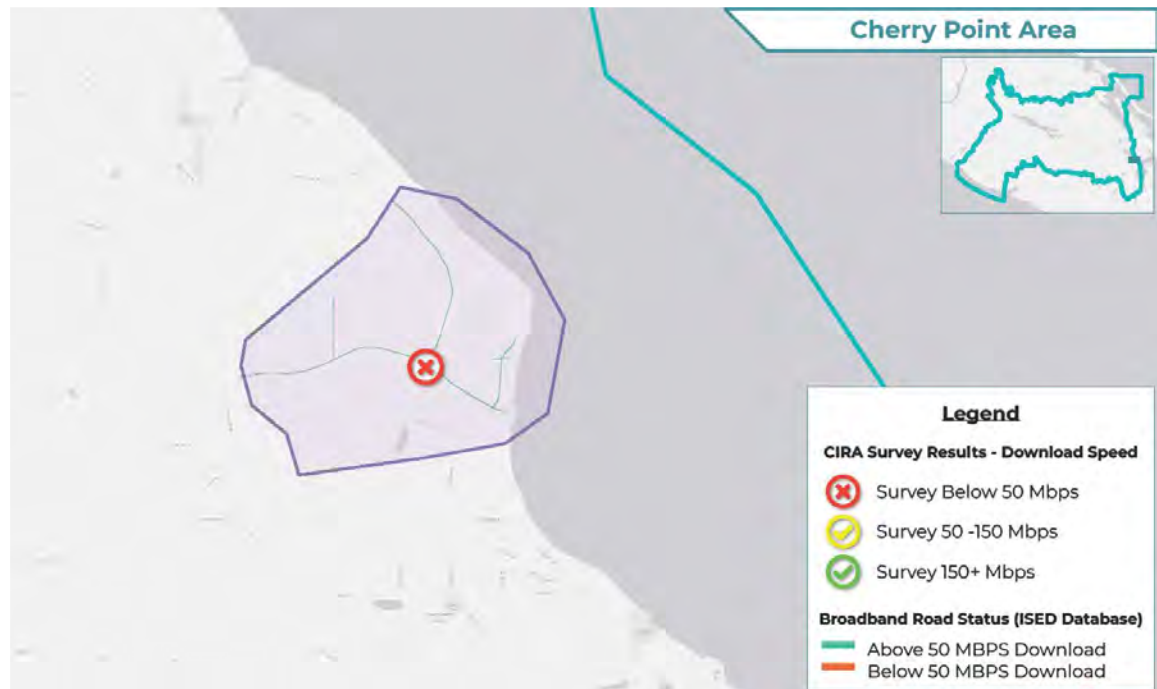


Figure 2-88: Current Assessment of Survey Data within Cherry Point Area

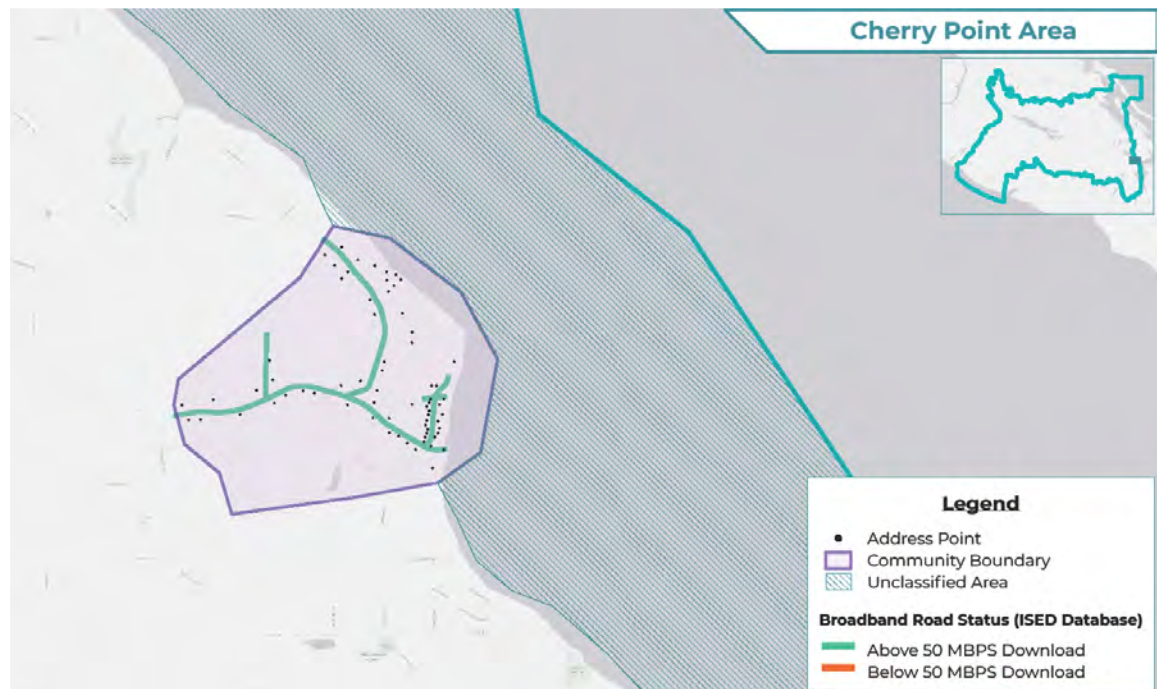


Figure 2-89: Current Understanding of Served and Underserved Areas within Cherry Point Area

Cherry Point Area Premise		
Community Total Premise Count	68	
% of CVRD Total Premise Count	0.2%	
Served	68	100.0%
Underserved	0	0.0%

Cherry Point Area Roads		
Total Road Length	3,527	
% of CVRD Total Road Length	0.2%	
Served	3,527	100.0%
Underserved	0	0.0%

Table 2-89 Cherry Point Area Current State

ISPs Serving Cherry Point Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-90 ISPs in Cherry Point Area

Cherry Point Area is located on the eastern coast, south of Cowichan Bay and north of Cobble Hill areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Both Shaw and Telus report having high-capacity transport in the area. Towers located in Cobble Hill provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Cherry Point Area	Challenged	Low

2.3.9.42 Honeymoon Bay Area

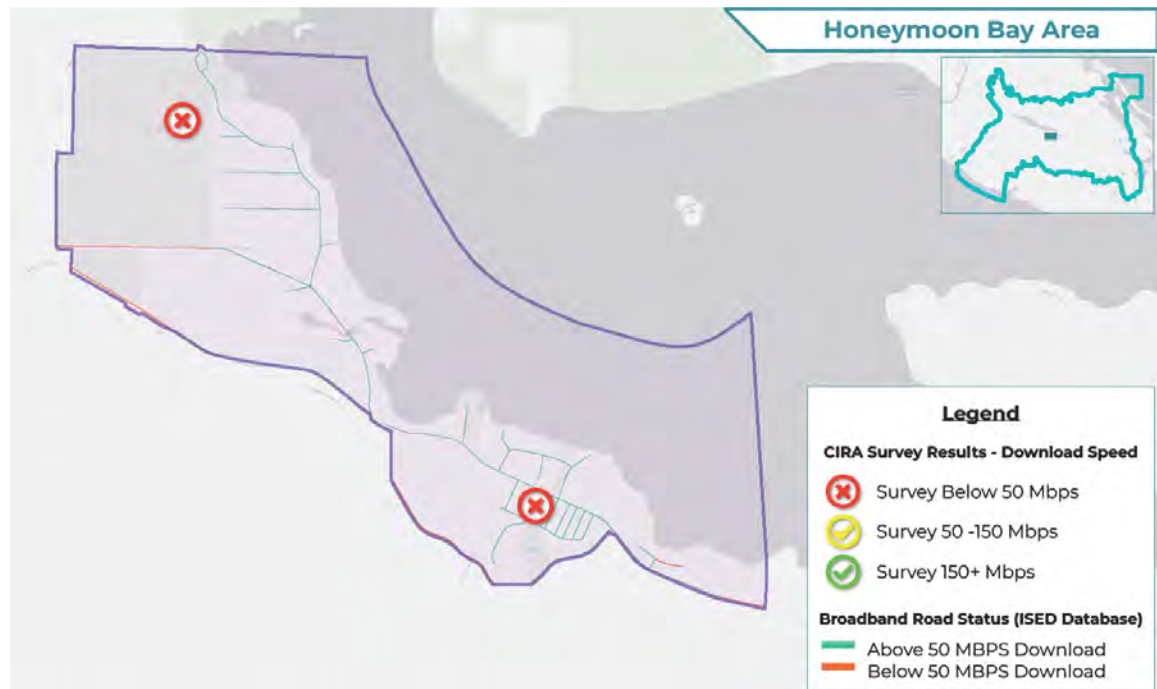


Figure 2-90: Current State of Broadband Infrastructure within Honeymoon Bay Area

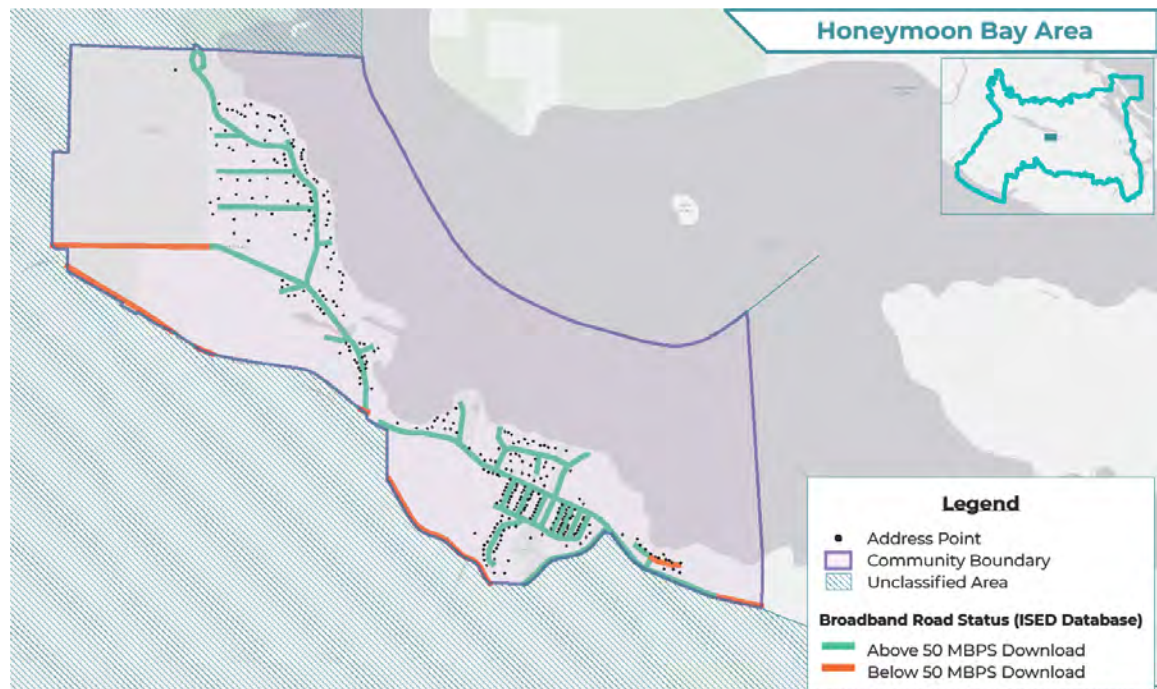


Figure 2-91: Current Assessment of Survey Data within Honeymoon Bay Area

Honeymoon Bay Area Premise		
Community Total Premise Count	303	
% of CVRD Total Premise Count	0.9%	
Served	291	96.0%
Underserved	12	4.0%

Honeymoon Bay Area Roads		
Total Road Length	13,926	
% of CVRD Total Road Length	0.8%	
Served	11,037	79.3%
Underserved	2,889	20.7%

Table 2-91 Honeymoon Bay Area Current State

ISPs Serving Honeymoon Bay Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓		✓	
Xplornet							✓

Table 2-92 ISPs in Honeymoon Bay Area

Honeymoon Bay Area is located on the southeastern shore of Lake Cowichan, adjacent to the Mesachie Lake and Youbou areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Only Shaw reports having high-capacity transport in the area. Towers across the lake, near Lake Cowichan area may provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Honeymoon Bay Area	Challenged	Low

2.3.9.43 Cowichan Station Area

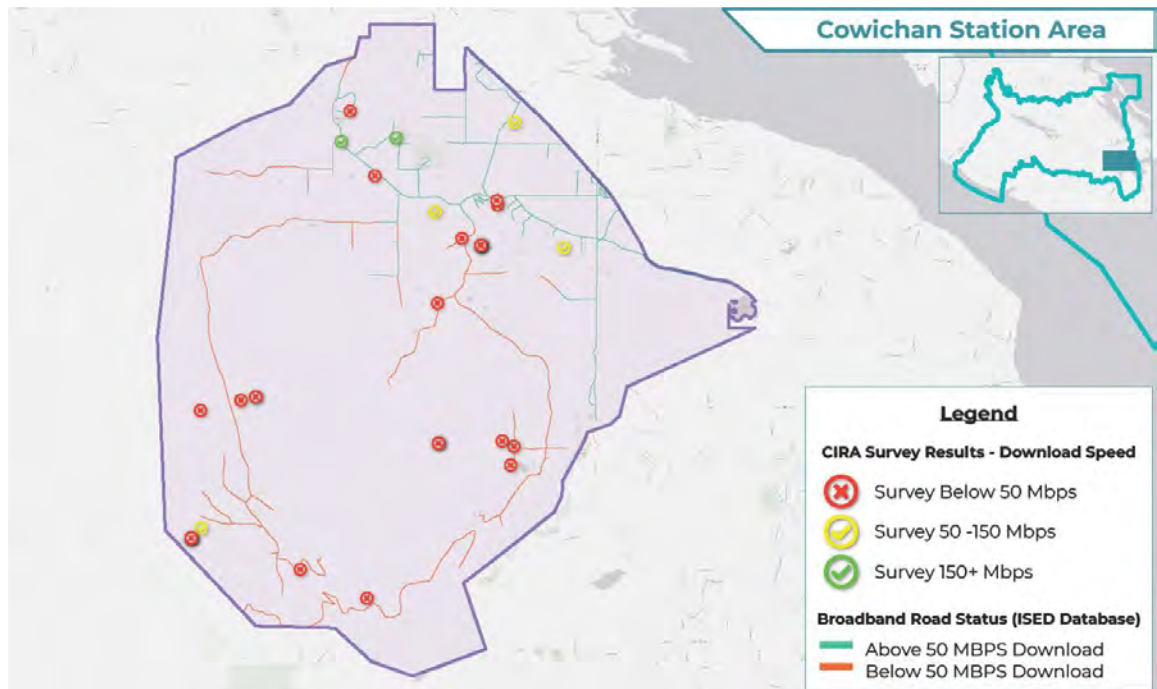


Figure 2-92: Current Assessment of Survey Data within Cowichan Station Area

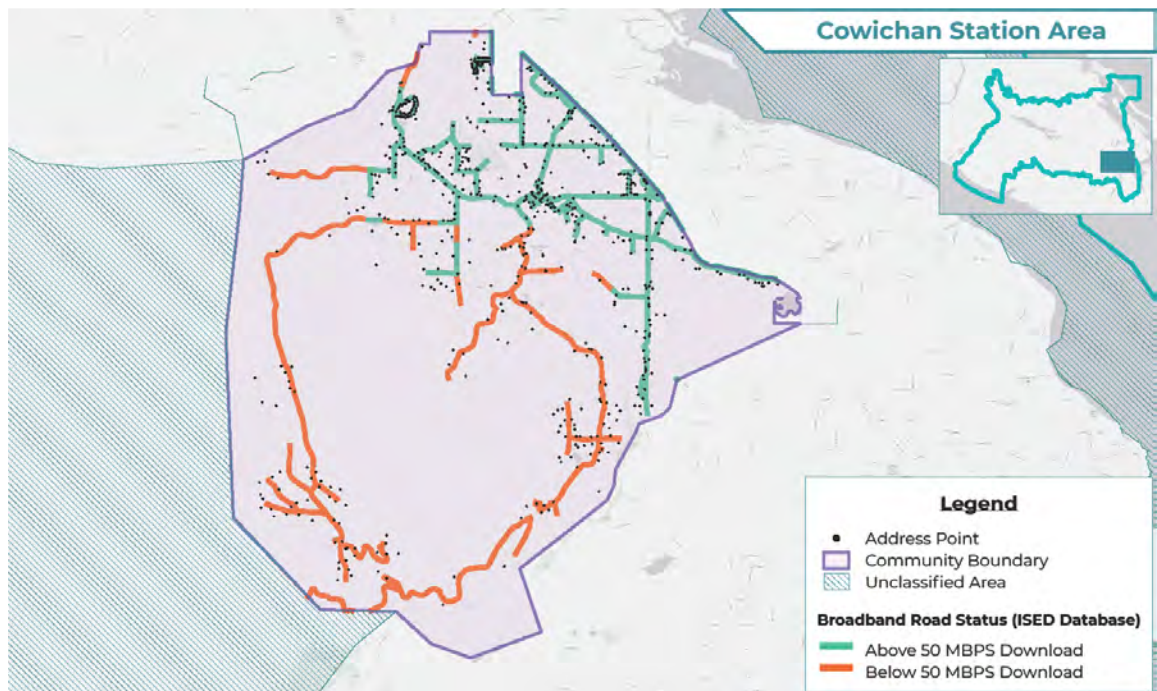


Figure 2-93: Current Understanding of Served and Underserved Areas within Cowichan Station Area

Cowichan Station Area Premise		
Community Total Premise Count	635	
% of CVRD Total Premise Count	1.8%	
Served	451	71.0%
Underserved	184	29.0%

Cowichan Station Area Roads		
Total Road Length	73,218	
% of CVRD Total Road Length	4.2%	
Served	39,810	54.4%
Underserved	33,408	45.6%

Table 2-93 Cowichan Station Area Current State

ISPs Serving Cowichan Station Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					√	√	
Freedom Mobile						√	
Rogers						√	
Shaw	√				√		
Telus		√	√	√	√	√	
Xplornet							√

Table 2-94 ISPs in Cowichan Station Area

Cowichan Station Area is a large area, bordered by Eagle Heights, Cowichan Bay, Cobble Hill, Shawnigan Lake, and Glenora areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Bell, Shaw and Telus report having high-capacity transport in the area. Several towers in Cowichan Station and neighbouring areas provide partial coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Cowichan Station Area	Proven	High

2.3.9.44 Quamichan Lake Area

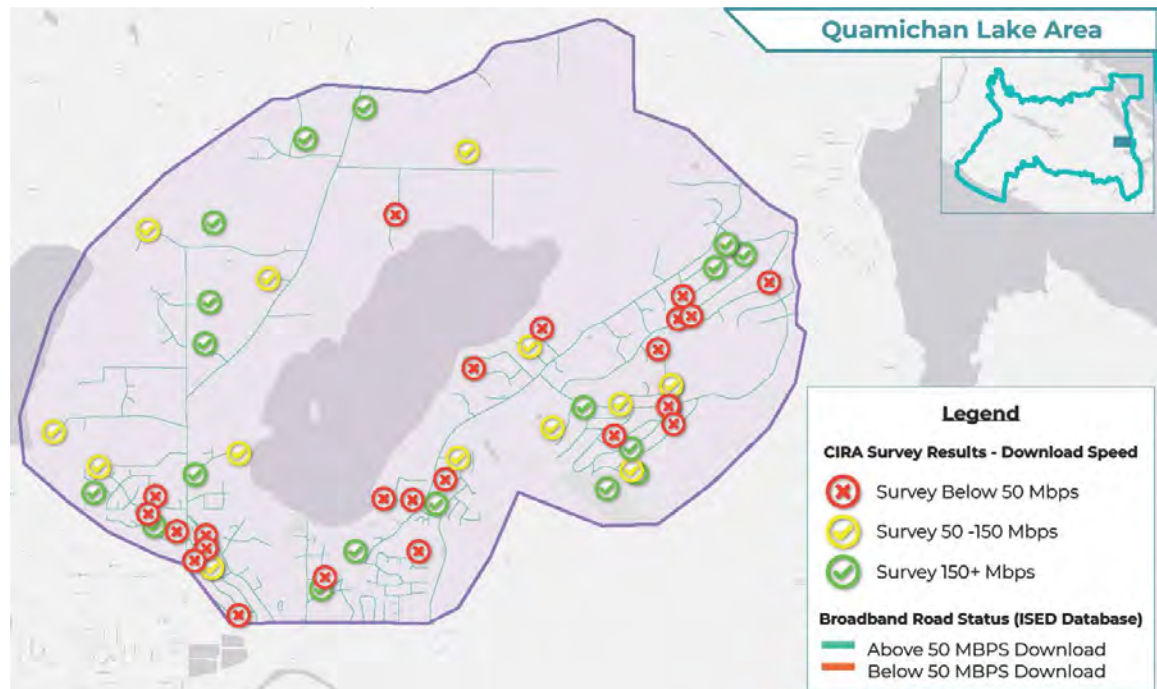


Figure 2-94: Current Assessment of Survey Data within Quamichan Lake Area

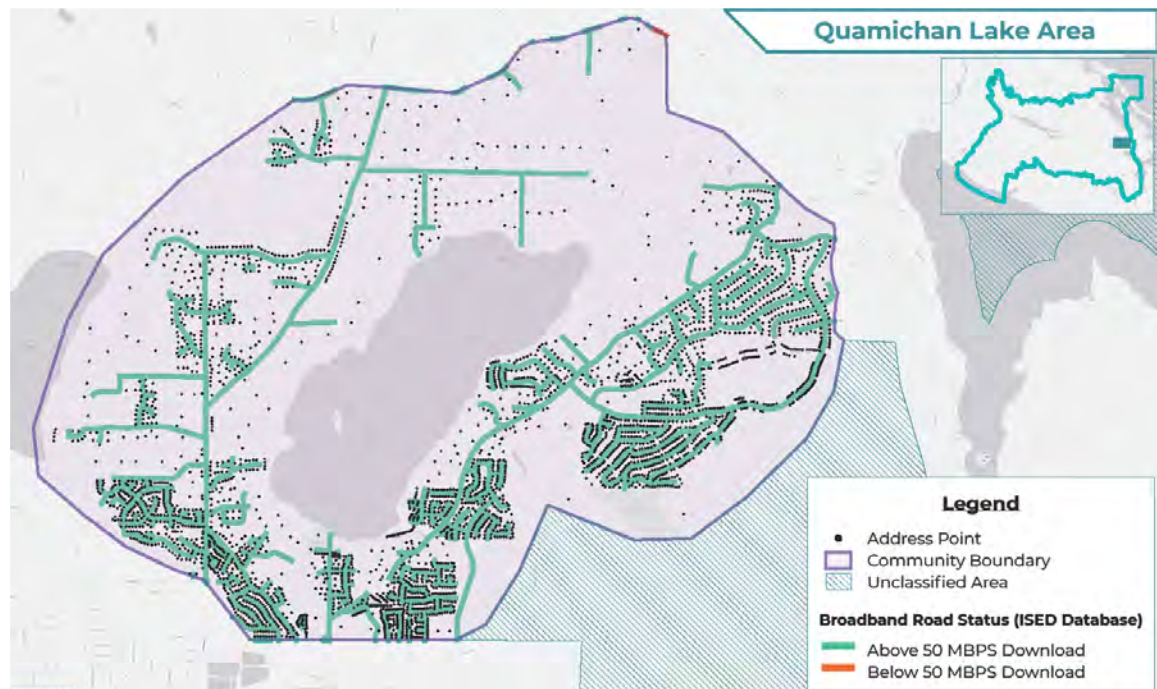


Figure 2-95: Current Understanding of Served and Underserved Areas within Quamichan Lake Area

Quamichan Lake Area Premise		
Community Total Premise Count	3,265	
% of CVRD Total Premise Count	9.3%	
Served	3,265	100.0%
Underserved	0	0.0%

Quamichan Lake Area Roads		
Total Road Length	69,453	
% of CVRD Total Road Length	4.0%	
Served	69,364	99.9%
Underserved	89	0.1%

Table 2-95 Quamichan Lake Area Current State

ISPs Serving Cowichan Station Area	Cable	DSL	Fibre to the Home	Fixed Wireless	Hi-Cap Transport	Mobile Wireless	Satellite
Bell					✓	✓	
Freedom Mobile						✓	
Rogers						✓	
Shaw	✓				✓		
Telus		✓	✓	✓	✓	✓	
Xplornet							✓

Table 2-96 ISPs in Quamichan Lake Area

Quamichan Lake Area is bordered by Maple Bay, Somenos, Duncan, Cowichan Tribes, and Maple Mountain areas. The area is served by fibre optic cables, DSL and cable services, as well as fixed, mobile wireless and satellite services. Bell, Shaw and Telus report having high-capacity transport in the area. Several towers in Duncan and Somenos, as well as Maple Bay areas provide coverage.

Correlating ISED and Internet speed test data, ISED data was deemed to be Proven if greater than 60% of speedtest download results matched ISED nearest road classification. Confidence in the speedtest data was assessed at High, Medium or Low, based on having more than 5 results per community, and representing more than 2% of premises.

Community	ISED Data Validation	Survey Speedtest Representation
Quamichan Lake Area	Challenged	Medium

3 Next Steps

The following are planned next steps:

- Finalize data gathering and current state assessment through surveys and community outreach;
- Follow up with targeted reach out to local ISP's to confirm areas that require further investigation;
- Confirm CVRD needs
- Formulate options and cost estimates to address the broadband gaps, including the development of criteria to align recommended options to the Regional District's interests;
- Develop Regional District connectivity strategy
- Detailed plans for four communities
- Final written report.

Appendix A – Community Map of Cowichan Valley Regional District

Community Map

- Community
- Islands Trust
- First Nation
- Municipal

ID	NAME	ID	NAME
1	Diamond, Ladysmith Area	26	Mill Bay Area
2	Chemainus Area	27	South Shawnigan Area
3	Mesachie Lake Area	28	Malahat Drive Area
4	Youbou Area	29	Cherry Point Area
5	Honeymoon Bay Area	30	Cobble Hill Area
6	Caycuse Area	31	Cowichan Station Area
7	Cowichan Tribes	32	Shawnigan Lake Area
8	Town of Ladysmith	33	Glenora Area
9	Koksilah Area	34	Eagle Heights Area
10	Saltair Area	35	Genoa Bay Area
11	Penelakut Tribe	36	Cowichan Bay Area
12	Lyackson First Nation	37	Duncan Area
13	Pauquachin First Nation	38	Lake Cowichan Area
14	Halalt First Nation	39	Mayo Rd Area
15	Pacheedaht First Nation	40	Sahtlam, Paldi, Riverbottom Area
16	Ditidaht First Nation	41	Maple Mountain Area
17	Malahat First Nation	42	Maple Bay Area
18	Ts'uubaa-asatx Nation	43	Quamichan Lake Area
19	Thetis Island	44	Stoney Hill Area
20	Penelakut Island	45	Mt Sicker Area
21	Valdes Island	46	Westholme Area
22	Stz'uminus First Nation	47	Crofton Area
23	Ruxton Island	48	Somenos Area
24	Reid Island	49	Arbutus Ridge Area
25	Pylades Island	50	Yellow Point, Cedar Area