Population and Economic Change in Remote British Columbian Resource Communities

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<u>Executive Summary</u>

British Columbia has a long history with natural resource-based industries, from forestry to mining. For much of their history, workers in these industries needed live in communities near the extraction or processing site. Some of these *resource communities* evolved out of traditional company towns, while others were purpose-built politically independent towns near the resource operations. This report examines five resource communities in British Columbia: Northern Rockies RM, Valemount, Kitimat, Port Alice, and Mackenzie. Each of these communities has gone through a period of economic and population decline and is trying to stabilize. This report examines the strategies the communities have employed to strengthen their economies, increase their populations, and maintain their community services. This examination shows that the communities seek to distance themselves from their historic primary industry. Ways they seek to diversify their economies include tourism, geothermal energy, and strengthening their resource bases. They also share some common challenges, such as aging populations and a shortage of housing choices, that they are attempting to address. Strategies that the communities can explore or continue to explore to aid in their goals include investigating satellite internet, promoting and maintaining their affordability, and improving the suitability of the community for senior residents. Three out of five communities have recently stabilized their populations (Kitimat, Port Alice, and Valemount), while two have yet to succeed (Mackenzie and Northern Rockies RM).

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1.0 Introduction

Historically much of British Columbia's economy was built on natural resources and their associated industries. The province is rich in many resources and, as such, has supported many economic activities including logging and mining. People are needed to extract and process these resources. Resource communities were erected near extraction sites in often remote locations to house the workers and their families and provide social services such as healthcare and education. An attractive resource community that provided a good range of services would make a company more appealing to workers.

Resource communities come from multiple different origins. Some were initially created as company towns that gradually transitioned to politically independent communities (Morisset, 2017). Others were built to be independent from the outset accommodating a workforce without being a liability to the company (Government of British Columbia, n.d.). As time has passed and resource industries have changed, the viability of resource communities has been threatened. Over the last century, dozens of small communities in British Columbia were abandoned when their primary resource became economically non-viable as markets changed, or as the resources were depleted (Turnbull, 2001). Others have not disappeared, but they have experienced significant population losses.

This project will examine five communities in different parts of British Columbia rooted in resource or resource-associated industries. It will begin by providing context to each of the five communities: where they are located, how they came to be, their current state, and their challenges. Through the use of three different research methods, census analysis, document analysis, and interviews, this report will address four research questions:

1. What growth strategies have these communities attempted?
2. How does each community define success? Are they trying grow or maintain population?
3. Were they successful? Why or why not?
4. Are there any commonalities between the strategies or their associated outcomes that these communities have attempted?

This report will seek to explain the specific goals of each community concerning economic and population growth. It will then establish how the communities are attempting to reach those goals and whether they have succeeded. The results will then be compared to see if there are any similarities or differences between the communities' strategies and if the outcomes of the strategies were successful across the communities. Lastly, it will make recommendations based on the information gleaned from the findings and analysis about what may be helpful strategies for the communities to pursue moving forward.

This research is relevant and needed because, while resource industries have a long history in the British Columbia, the sustainability of many communities is currently threatened. Resource industries have been a primary economic driver in the province; moreover, they have also left abandoned communities in their wake. For example, Kitsault, a resource town based around a molybdenum mine built in 1980, was briefly inhabited and abandoned just three years later (Paul, 2021). Where possible many of the buildings from the town, such as modular houses and the school, were removed and sent to other communities (Paul, 2021). If a community continues to decline, it could have negative ecological impacts due to abandoned buildings and industrial sites. In addition, there is a human cost as many people have their entire lives savings tied up in their homes, as mentioned by multiple interviewees from the study communities. in cases where a community continues to depopulate and its property values go down, people could lose considerable amounts of money in their homes and have issues moving elsewhere due to the depreciated value of their property. If people lose their jobs and cannot find new ones in the community, they may also lose their homes to foreclosure. There is, therefore, human and economic value in the continued resiliency of resource towns in British Columbia.

2.0 Literature Review

Modern-day resource communities are often the remains of an original company town or "instant community." Many are currently experiencing a period of economic and political transition that will affect them for decades to come. This period of transition comes because of a shift from a Keynesian public policy framework wherein the provincial governments played an active role in maintaining the viability of resource communities through policy and promotion. This has been replaced by a neoliberal public policy framework where the provincial government has taken a step back and reduced protections for resource communities while favouring the agendas of

private enterprise. This public policy restructuring occurred primarily during the 1980s due to the global recession. The provincial government reacted with fiscal austerity, cutting spending on social programs to reduce provincially held debt (Hayter & Barnes, 1990). As resource communities have a long history and continue to exist in British Columbia, a large body of scholarly literature can inform this capstone project.

Much of the early available information about resource communities as "Instant Communities" under which two study communities were incorporated comes from John Bradbury (Government of British Columbia n.d.). Currently, the Community Development Institute headed by Greg Halseth at the University of Northern British Columbia is conducting research about resource communities in Northern British Columbia, providing a substantial base of scholarship. Other that inform this literature review include Laura Ryser of the University of British Columbia and Sean Markey of Simon Fraser University. The research of these three scholars covers many pertinent topics within the geographic context of remote British Columbian resource towns including economic and political restructuring and renewal, population aging, and employment migrations.

This literature review will provide an overview of the relevant scholarly literature on the topic of economic development and population growth/decline in remote resource communities in British Columbia. Three key themes emerged by examining the available literature, historical perspectives, economic and political restructuring, and population aging. This review will also discuss the current dissenting opinions regarding resource communities. It will conclude by addressing how this report will aid in filling the gaps in the literature and how it will complement existing research.

2.1 Key Themes

Historical Perspectives

The first identified theme in the literature is the history of resource communities in British Columbia, most often focusing on the post-1950s period. This theme is split between contemporary resources from the last 20 years looking back at resource communities critically, and writings that originated during the development period of many of the "instant communities" -- they now offer a historical perspective. John Bradbury wrote extensively on "instant

communities" (1977, 1979) during the 1970s. Many of the social issues he identified, such as feelings of isolation and uneven development, persist in these communities today. Literature from that time shows that scholars have been aware of the volatility and instability of resource communities for at least the last half a century (Porteous, 1970). The creation of politically independent resource communities attempted to rectify the problems caused in company towns and ensure more stability for the future (Bradbury, 1977). In the case of the five study communities, this was not wholly successful, and their populations and futures remain uncertain.

The communities of Valemount and Fort Nelson in Northern Rockies Regional Municipality (RM) developed slowly and organically over more than a century. Kitimat, Mackenzie, and Port Alice have very different origins. Kitimat represented a turning point in resource community planning; prior to this community, resource communities in British Columbia came about out of necessity and were often hastily constructed with few amenities. The developers of Kitimat sought input from Clarence Stein, a preeminent town planner, as they wished to build a different kind of resource community (Cross, 2016). Kitimat was not Stein's first foray into pseudo-company town planning. Likely the most famous example of Stein's work was in Radburn, New Jersey. Radburn was influenced by Ebenezer Howard's Victorian concept of the Garden City (Larsen, 2016) although he redesigned this concept for the automobile age (Larsen, 2016). Key to the design of Radburn was its unique neighbourhood design wherein housing was clustered densely around a common greenspace (Birch, 1980). While only a fraction of the intended residents moved to Radburn, its influences on community planning persisted (Birch, 1980). Stein expanded upon what he had learned while planning Radburn and applied it to the development of Kitimat. Early Kitimat neighborhoods designed by Stein followed the Radburn format with housing facing greenspace and having roadways along the backsides of the buildings; however, to Stein's lament many residents building houses in the community would reorient their homes to more tradition front facing the street (Cross, 2016). The future instant communities in the province would emulate Kitimat and its planning except for its non-traditional neighbourhood plans.

Economic Restructuring & Political Restructuring
With widespread mill closures, reductions in logging and mining, and the transition to camp work, resource communities are going through a period of economic restructuring that began

gradually in the 1980s (Markey et al, 2008). Due to these shifts in resource industries, some resource communities have lost significant proportions of their populations (Markey, et al 2008). A large body of research explores the impacts of shifts in the resource industry on resource communities, and how communities are going through economic restructuring to cope with these changes. Community lifecycles, globalization, community participation, megaprojects, and placemaking feature heavily within the literature on economic restructuring. During periods of decline in a community where there is a temporary reduction in available work, it has become common for people to return to education during their period of unemployment (Halseth, 1999). Sources agree that education/reskilling can provide more opportunities for workers within a resource community; however, these opportunities may still be limited, which causes out-migration.

While resource communities are restructuring economically, they are also in a period of transition politically. In this theme, the need for communities to present a distinct place identity and one of permanence is vital to resource communities retaining their relevance in an increasingly globalized economy (Bowles & Wilson, 2015; Markey et al., 2012). Previous provincial governments took a prominent role in governing and establishing resource communities. However, current provincial governments currently have a laissez-faire attitude towards resource communities, causing the need for a more involved local government (Ryser, Halseth, & Markey, 2018). Local planning occurs in resource communities to help achieve a sense of place and community identity, often through official community plans that attempt to guide the community toward identified goals (Hayter & Nieweler, 2018).

When looking at the framework of economic development activity proposed by Bruce et al. (2005), all the study communities are either currently in or have experienced the 'Decline' stage of the framework (Bruce et al., 2005). This Decline stage is described as

> characterized by a decline in the resource industry or economic activity which fueled the initial growth and sustained the Plateau period. It might include depletion of the resource, the closure or withdrawal of public services or institutions, or the closure of major employers and small retail or supply businesses. Net population decline from out-migration is a key characteristic
> (pg. x).

The 'Decline' stage is the fourth stage in the five-stage framework, it follows 'Startup', 'Growth', and 'Plateau', while preceding the final 'Alternative Futures' stage (Bruce et al., 2005). When faced with the 'Alternative Futures' stage of a resource community's lifecycle, local governments need to be proactive and place emphasis on town planning to strengthen their community and stay resilient during economic restructuring (Hayter & Nieweler, 2018).

One strategy employed by some resource communities to help pull it out of the decline stage is mega-projects. A mega-project is a large-scale development that is typically either business or infrastructure related such as a dam, a new mine, a processing plant, or a pipeline (Flyvbjerg, 2014). They typically cost billions of dollars and have substantial effects on communities and their residents (Flyvbjerg, 2014). Some communities see mega-projects as a way to 'save' their community and that the project will bring increased investment while attracting new residents. Most resource communities are based around a mega-project whether that be a sawmill, mine or something else and many have suffered from boom-and-bust cycles attributable to the mega-projects. There is no guarantee that mega-project will ensure long term prosperity for a community and that it will not fall victim to the boom-and-bust cycles that plague resource communities (Wade, 2018).

Population Aging

Many remote resource communities have an above-average median age. Until the 1980s, these communities had relatively young populations due to high levels of migration into the community brought on by the availability of high-paying industrial jobs (Hanlon & Halseth, 2005). This trend has reversed in present times. With the current lack of high-paying jobs, young people are migrating out of resource communities, leaving an aging population behind (Morris & Halseth, 2019). Aging in resource communities can be complex, and complications are often associated with the community's ability to provide suitable housing and appropriate levels of health care delivery (Morris & Halseth, 2019). There is the potential to capitalize on this gap in the market. Building a retirement industry could be one way to cope with economic restructuring. One article notes that there are hurdles to introducing a retirement industry where the infrastructure is not already in place. However, it can provide some economic diversity while supporting its citizens' ability to age in place (Ryser & Halseth, 2013).

2.2 Consensuses from the Literature

There is little doubt in the literature that resource communities are in a period of transition. As shown through the theme of historical perspectives, some of the problems that resource communities face are due to boom/bust cycles. The primary economic reliance on a single industry was identified in the 1970s (Bradbury, 1970). There are predictable lifecycles to resource towns, and the five study communities within this capstone can fit within the frameworks proposed in the above literature. The literature agrees that resource communities are going through a period of economic restructuring, and how they approach that restructuring will, in part, determine their continued viability as a community. One of the less effective approaches discussed was the use of mega projects. Multiple sources state that while they can increase population and investment in the short term, they are not without challenges and do not ensure long-term economic viability. The issue of an aging population ties communities' economic troubles with economic opportunity. Young people will continue to leave resource communities to find work leaving an ageing population behind. The literature shows that while there are challenges to economic restructuring, there are multiple alternative futures for resource communities. With strong local governance and planning, communities can begin to grow and stay resilient through the process.

2.3 Dissenting Opinions

Few authors wholly disagree with the consensuses derived from the literature review. However, an emerging body discusses the functional redundancy of resource communities due to an increasingly mobile workforce. Tumbler Ridge 1981 was the last resource town to be purpose-built in British Columbia (Storey & Hall, 2018). Tumbler Ridge being the last resource town does not mean new resource extraction and manufacturing projects are not being constructed. It means that the way that these operations are staffed has fundamentally changed. The cost of travel, monetarily and timewise, has been significantly reduced, giving rise to fly-in/fly-out camp styles of accommodating workers at worksites (Ryser et al., 2016). It is shown to be true even when a new project is under construction near existing communities (Storey, 2018). Not only can fly-in/fly-out type worksites harm migration into resource communities, they can also increase net migration out of resource communities as workers move to southern population centres that offer more services, amenities, and opportunities while commuting back to remote sites for camp

work (McDonagh, 2010). Because of this shift in the mobility of workforces, there is no guarantee that industrial investment in resource communities will attract new residents, which emphasizes the need for communities to diversify their economies or face functional redundancy.

2.4 Gaps in the Literature

Resource communities in British Columbia and their history and present are well studied, and a broad range of literature is available to inform this report. However, the distribution of literature on different areas within the topic varies. Aspects of resource communities, such as their history, challenges, conditions, and potential solutions, are well documented. The outcomes of attempted strategies to stabilize or reverse decline, what has worked and what has not, are less thoroughly researched, and this report could aid in addressing this gap. It will provide an update on the current economic and social situation of five resource communities in the province. It will attempt to address how the communities have attempted to grow their populations and economies, and it will attempt to evaluate the successes of these actions.

3.0 Methods

This research aims to identify and evaluate strategies in which remote resource communities in British Columbia are trying to grow or stabilize their populations. This research uses three research methods: census analysis, document analysis, and interviews. Using the three research methods, the five remote communities, Kitimat, Port Alice, Valemount, Mackenzie, and Northern Rockies Regional Municipality, will be evaluated to determine how successful they have been in meeting their goals. The communities were chosen as they have some important commonalities. Historically significant proportions of these communities' economies have come from resource extraction and processing. Each community could be in the "decline" stage of the lifecycle framework for resource communities proposed by Bruce et al. Another commonality is that the communities are located in relatively remote areas multiple hours away from British Columbia's major population centres. The similarities between these communities make comparisons between them possible.

Figure 1. Map of Study Communities and Major Population Centres

3.1 Census Analysis

This report will utilize data from the 1996, 2006, 2016, and 2021 Censuses. These years are included in the report because the 1996 Census provides a baseline of data from before many of the study communities began to lose population rapidly, the subsequent two censuses provide 10-year updates, and the most recent census data shows the current conditions of a community. Census data is a valuable source because it provides an unbiased empirical set of data that allows for evidence-based analysis and recommendations (Walton-Roberts et al., 2014). This report's analysis will use the census data in multiple ways. The data will answer the third research question of whether or not the communities were successful in their attempts to stabilize or grow their populations. Census data can also help to establish trends between the different communities which will aid in answering the fourth research question of if there were commonalities between the outcomes of the strategies implemented by the different communities.

The primary metrics taken from the census data will include population, population percentage change, median age, industry-sectors, and unemployment rate. Population and population percentage change are vital metrics that can evaluate if the community's strategies and plans are working to stabilize or increase the community's population. Alternatively, census

data may show a decrease in population, alluding to out-migration from the community. Median age is critical to note because it can say a lot about the population health of a community. A high median age shows there are few young people in a community; this can be due to a low birth rate and an out-migration of young people. However, it also shows that older people are choosing to stay in their communities or do not have the choice to leave.

Industry-sectors is a section of the census showing the number of people employed in various sectors in a community. Industry-sectors divides possible occupations into 20 unique categories (Statistics Canada, 2022). These metrics can be used to show if the way people are employed has changed over the last two decades. It is essential to show if the communities' efforts to diversify economically have been successful. The unemployment rate can show the overall health of the community's economy. A low unemployment rate often indicates a high instance of jobs, whereas a high unemployment rate could indicate that people may need to leave a community for opportunities elsewhere.

3.2 Document Analysis

Table 1. Availability of Different Types of Reports and Publications

Community	Type of Document				
	Official Community Plan	Annual Reports	Economic Development Strategy	Tourism Strategy	Aging in the Community Strategy
Kitimat	X	X	---	---	X
Port Alice	X	X	X	---	---
Valemount	X	X	---	---	---
Northern Rockies RM	X	X	X	X	---
Mackenzie	X	X	X	X	X

The document analysis will constitute the bulk of the research done for this report. Not all communities have the same types of reports and publications available. According to the Government of British Columbia, communities are not required to develop an official community plan; however, they are required if the community wishes to develop an Economic Development Plan (Government of BC, 2023). Each study community, however, has chosen to adopt an official community plan. Because all the communities have produced the same type of

- Are a statement of objectives and policies that guide planning and land use management

- Impact a community's sustainability and resilience

- Outline long-term development plans for a community

- Outline how a local government plans to exercise its powers

(Government of British Columbia, 2023)

Official community plans are used in this report to inform the answers to research questions one, two, and four. The official community plans typically outline what the goals for the community are and how they intend to achieve them. A coding framework for analyzing the official community plans was developed to create comparisons and establish trends between the communities. The purpose of coding in qualitative research is to take data, such as a paragraph or an idea from a document and to assign it a short phrase (code) that describes it. In doing this, a document is broken into a series or more easily analyzable pieces (Skjott Linneberg & Korsgaard, 2019). The benefits of coding include a deeper understanding of the data and increased accessibility of the data (Skjott Linneberg & Korsgaard, 2019). After coding multiple documents, the codes are analyzed to find information such as the frequency of specific codes appearing, and the number of codes generated. The type of coding used in this report is inductive coding, meaning that the codes are taken from ideas and information found in the data rather than codes found in the scholarly field of study imposed on the subject data (Skjott Linneberg & Korsgaard, 2019).

Figure 2. Official Community Plan Coding Framework

A) Community Vision Statement
A) strategies

A) Strategies:
    B) 'Increase population the population'
        C) Increase population - retention strategies
            D) Develop seniors/assisted living facilities
            D) Increase the supply of special needs housing
            D) Ensure sufficient land is available for development
                E) Encourage a range of housing types and densities
        C) Increase population - recruitment strategies
            D) Promote affordable housing in the community
            D) Encourage industrial workers and their families to settle in the

Community
D) Promote/encourage people to retire in the community
D) Ensure sufficient land is available for development
E) Encourage a range of housing types and densities

A) Strategies:
B) Maintain/increase community Investment
C) Establishing/maintaining community recreation areas
D) Emphasize and promote outdoor recreation areas
E) Encourage winter park and trail use for various activities
E) Establish community marina
E) Increase amount of Parkland
E) Establish a community garden
E) Establish a community forest
E) Establish a community ski hill
E) Establish a manmade lake
C) Offer a comprehensive range of community services
D) Offer continuing education opportunities
D) Improve internet connect to highspeed
D) Maintain a public library
D) Establish senior/assisted living facilities
D) Maintain and improve local transit
D) Increase youth programming
D) Establish a teen centre
D) Improve airport services
D) Maintain viability of local schools
D) Improve and maintain access to healthcare

A) Strategies:
B) Stimulating economic growth
C) Economic policies
D) Local economic development policies
E) Establish a local economic development strategy
E) Buy Local Campaign
E) Encourage further establishment of local commercial enterprises
E) Establish/maintain a business directory
D) Regional economic development policies
E) Participating in a regional economic development strategy
C) Reduce dependence on a single industry
D) Encourage economic Diversity
E) Encourage the establishment of aquaculture/mariculture and associated processing
E) Establish an artisan cooperative
E) Broaden local forestry and wood processing industry
E) Encourage local agriculture development

E) Establish a fish processing facility
E) Establish a ski resort
E) Have strong industrial and resource bases
E) Increase Tourism
E) Support development of live/work housing
E) Support quarrying and mining activities
E) Establish opportunities for value-added businesses for the resource sector
E) Encourage the establishment of home-based businesses
D) Establish a tourism Strategy
E) Better Advertising for tourist accommodations
E) Increase development of tourism commercial sites
E) Increase the accessibility of the community to be reached by tourists
E) Improve the visitor info centre
E) Implement signage strategy

This report will establish the primary goals of each study community using the above coding framework, allowing one to see the economic and population goals of a particular community. Similarities and differences will become visible in this process. To further analyze data obtained using the coding framework, the program Dedoose is used to conduct quantitative analysis. This program can find the frequency in which different strategies are mentioned in different plans to determine the most and least popular strategies.

Four additional types of reports and publications inform this report: annual reports, economic development strategies, tourism strategies, and aging in the community strategies. These documents can aid in answering research questions one, three, and four. The four different types of documents will aid in answering question one by providing more depth to the strategies described in the official community plans. They may also document successes or failures that have occurred. Primarily, annual reports will answer question three, which is partly possible because annual reports often describe the year's successes and can be used to evaluate what from the official community plan was accomplished or where progress has happened. This analysis was conducted using the last five years of annual reports from a community where available. However, as the *Valemount Official Community Plan* was written in 2021, only the annual report from 2021 will be used as it is the only annual report that pertains to the most recent official community plan.

3.3 Interviews

Interviews are an essential potential data source as they can provide insight into the communities that are unavailable via reports and publications. The type of interviews that took place were semi-structured key informant interviews. A semi-structured format means that while there were specific pre-set interview questions, there is an opportunity for further discussion based on the flow of conversation. Semi-structured interviews are commonly used in qualitative research because they are versatile and offer a chance at reciprocity between the interviewer and the interviewee (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). The process for developing the semi-structured interviews for this report was conducted similarly to the guidelines presented by Kallio et al., which follows five phases of semi-structured interview guide development; the five phases are "Identifying the prerequisites to use a semi-structured interview, retrieving and utilizing the previous knowledge, formulating of the preliminary interview guide, pilot testing, and presenting the complete interview guide" (Kallio et al., 2016). The purpose of using a key informant is to gather qualitative data through interviews with one person who is highly experienced and knowledgeable about a subject; thus, they can provide expert commentary (De Chesnay, 2015).

The key informants approached for interviews were Chief Administrative Officers, Economic Development Officers, and Planners from all the study communities. There was an initial focus on planners because they are municipal employees that often are heavily involved in the planning of their communities, including drafting and holding consultations for documents such as a community's official community plan. CAOs were included because some study communities are not large enough to support a dedicated planner. Many of the strategies the communities choose refer to economic development, which is why Economic Development Officers are included. The information obtained through the interviews was valuable as it directly relates to the first three research questions. All interviewees were located in a different province the interviews were conducted virtually through Zoom. The interview questions were as follows:

- What is your professional role in this community?
- How has this community changed in the time that you have worked here?
- Has the local government established any goals for the future of the community such as whether or not the community wishes to grow or stabilize its population?

- What are some the strategies that the community has implemented to achieve these goals? (IE development plans, growth plans, economic development plans)
  - Were they successful? Why or why not?
  - How did the community settle on this strategy?
  - Are there future plans for strategy implementation? If so can you please describe them?
  - Looking at documents such as the community's economic development plan, the official community plan, and the council strategic plan, has the community met the timelines laid out in these reports?
    - Are the goals attainable in the timeframe prescribed by the reports?
    - Have any of the goals already been attained?

Each interview lasted between 30-60 minutes. One interviewee was unavailable to meet for a virtual interview; however, they were kind enough to type out their answers to the interview questions and send them.

3.4 Limitations

There are some limitations to the above-noted research methods. As previously stated in the Document Analysis section of this chapter, all communities produce different kinds of reports and publications, making creating a coding framework for each type of document difficult. While every community has chosen to adopt an official community plan, some of the communities' official community plans are dated, with some having been adopted over 20 years ago while others are incredibly recent. Some of the study communities are currently in various stages of creating new official community plans; however, they will not be ready in time for the publication of this report.

Census data is a source of empirical data that can be used to evaluate the successes and failures of the strategies outlined in the official community plans. One limitation of census data is that it is only available online from 1996 onwards. Prior to 1996, census data is only available in print. Due to this, it is hard to determine the highest population of a community, as often this occurred around 40-50 years ago. It is also impossible to attribute the data to a specific strategy outlined in the official community plan; therefore, it is unknown if a particular strategy is the cause of the changes in census data or not.

The most significant limitations in the research methods hail from the semi-structured interviews. There were difficulties in arranging interviews with the different communities. The difficulties caused the list of potential study communities to be expanded to nine in the hopes of

being able to conduct five interviews. Thankfully there were five responses, and the interviews were conducted.

4.0 Context

4.1 British Columbia as a Resource Province

Indigenous peoples have lived in British Columbia for thousands of years. The land's history as a part of Canada is far more recent. Until the railroad's completion, settlers' journey to British Columbia was arduous. The main influxes of people into the region came in because of a gold rush that began in 1858 (Clark, 1968). To this day, gold mining still occurs within British Columbia (Vancouver Mineral Development Office, 2015). Before the gold rush, non-indigenous settlements were sparse and primarily served the fur trade (Barman, 2007). During the gold rush, other resource industries began to emerge in British Columbia (Barman, 2007). Resource communities often took the form of company towns which began popping up in Canada as early as 1855. Some of the early operations included a coal mine in Nanaimo, sawmills on the Burrard Inlet, and Port Alberni on Vancouver Island (Morisset, 2017; Barman, 2007). The completion of the Canadian Pacific Railway in 1885 opened new markets for the province's resource industries causing production to be significantly increased (Canadian Pacific, 2023).

4.2 Northern Rockies Regional Municipality

The Regional Municipality of Northern Rockies is in the upper-east corner of the province on the Alaskan Highway. It encompasses an area of 85,148.87 square kilometres or approximately 10% of the province's landmass, making Northern Rockies RM a slightly larger landmass than that of the country of Austria to give perspective (Northern Rockies RM, 2023; Nations Online, 2018). The primary settlement at the heart of the RM is Fort Nelson. In 2009, Fort Nelson merged with the Northern Rockies Regional District to form Northern Rockies RM, the first regional municipality in British Columbia (Northern Rockies RM, 2011). Fort Nelson is incredibly remote. The closest population centre to it, with a population of over 70,000, is Prince George which is roughly nine hours south by car (Google, 2023). To reach Edmonton, it would take nearly 11 hours by car and to Vancouver, it would take 18.5 hours (Google, 2023).

Fort Nelson is the oldest of the five study communities, having been established as a fur trading post in 1805 (Fort Nelson Heritage Museum, n.d.). It remained a small, isolated settlement for more than 100 years until the mid-1930s, when charter flights and mail service to the community began (Northern Rockies RM, 2011). During World War II, the Allies were worried about a possible invasion by the Japanese into Alaska. Thus, the Alaskan Highway was built in 1942 to connect the state to the rest of the mainland United States (Northern Rockies RM, 2011). This highway consequently ran straight through Fort Nelson, connecting the community by road to the Yukon and the rest of British Columbia. However, the highway was not open to public use until 1948 (Northern Rockies RM, 2011).

Since its inception, Fort Nelson and the greater RM have relied upon resource industries, first the fur trade, then forestry, and later oil and gas. A rail line was constructed in 1971, connecting Fort Nelson to markets and enabling its industries to expand rapidly (Artibise & Favrholdt, 2022). At its height in 2005, Northern Rockies RM had almost 6,000 inhabitants (Government of British Columbia, 2010). Unfortunately, the community's population has long since been unstable due to the boom-and-bust nature of resource industries. Troubles began for the community in 2005 with the closure of the Tackama sawmill, and the situation became exponentially worse during the 2008 economic crisis when Canfor closed its mills, causing the loss of an additional 435 jobs and suspending forestry processing in the region indefinitely (Forest Economic Advisors, 2022; Parfitt, 2020). The collapse of the local forestry industry was mitigated initially by an oil-and-gas boom in 2010 dedicated to fracking, which did not last long (Parfitt, 2020). Currently, the community remains in what amounts to be a continuing 15-year recession and has lost population due to out-migration (Forest Economic Advisors, 2022).

4.3 Valemount

The Village of Valemount is a small community nestled between mountain ranges near the southeastern border of British Columbia (Columbia Basin Institute, n.d.). While not the most remote of the study communities, Valemount is still a journey to get to by car at just over a seven-hour drive to Vancouver, a five-hour drive to Edmonton, and a nearly six-hour drive to Calgary (Google, 2023).

Settlement in the area was sparse until the arrival of the railway in 1914 through Yellowhead Pass (Valemount Museum, 2023). Before the arrival of the railway, settlers had to

make the difficult journey either by trail or by river, beginning in Golden and travelling up the Columbia River, then transferring to go up the Canoe River (Columbia Basin Institute, n.d.). The village's population continued to increase when in 1962, at a population of 600, the village was incorporated (Village of Valemount, 2021). The later settlement was brought about by major infrastructure projects in the region, such as the construction of the Yellowhead Highway and the Mica Dam (Village of Valemount, 2021). The village reached the height of its population in 1996 at 1,303 people (Village of Valemount, 2021).

The primary industry since the beginning of the railway in Valemount was forestry. Both logging and its associated processing were needed to construct the railroad (McCracken, 2015). At one-point, multiple smaller mills were competing against each then gradually, consolidations and competition whittled this number down to a singular mill that the village depended on economically (McCracken, 2015). In 2006 the mill saw its permanent closure, and the population dropped 22% from 10 years prior (Village of Valemount, 2021).

4.4 Kitimat

Kitimat is a city that is located along the northwest coast of British Columbia, less than 300 km from the Alaskan border (Google, 2023). Situated along the Kitimat River and at the northern tip of the Douglas Channel, it has access to a valuable deep water port allowing products to flow in and out of the city from many markets (City of Kitimat, 2023; Mussett, n.d.). Reaching the city by car takes approximately seven hours from Prince George and 16 hours from Vancouver (Google, 2023).

Europeans first settled the area around what would be Kitimat in the first decade of the 20th century (Thorne, 2018). While small, this first wave of settlement occurred due to speculation at the location of a new railroad when an alternative site was picked near Prince George settlement halted (Thorne, 2018). Nearly half a century later, the area underwent a rapid and drastic change when it was decided that the site would become home to Alcan's newest project, an aluminum plant. However, it was not only a plant that needed building. The area was sparsely populated aside from a handful of people and a small First Nations Reserve. A power source for the plant was needed, which involved the construction of a dam, tunnel, powerhouse, and transmission line (Kitimat Museum and Archives, n.d.). Then came the question of where the workers would live. The solution was to construct an entirely planned city that could expand

as needed to reach a population of around 50,000 (Thorne, 2018). Building the city occurred in an incredible five-year timeframe (Kitimat Museum and Archives, n.d.). The plan for Kitimat was to be a town like no other. Despite its remote location, it was envisioned to be a model community with modern amenities (Musset, n.d.). The intention for Kitimat was to be a departure from the traditional company town concept they had followed in a previous operation in Quebec. They did not wish to be large landlords for their workers and be responsible for completely running the city (Cross, 2016). The result for the city was an extensive series of moderately sized single-family dwellings geared towards families available for individual purchase and some company-owned apartment complexes (Cross, 2016). The city was to be governed by a democratically elected city council; however, the company would retain some influence by having seats on the council (Cross, 2016).

Kitimat would never reach its intended population of 50,000 people. Its highest population to date occurred in 1981 at 12,814 people (City of Kitimat, 2008). Like the other study communities, it has been susceptible to booms and busts. The busts saw the closures of a sawmill, two pulp and paper mills, and an Ocelot Methanol plant (Thorne, 2018). While the original smelter is still in operation, albeit under different ownership, it too contributed to job losses as when it was rebuilt for modernization, approximately 500 jobs were lost (Link, 2022). The booms for the community have not been able to keep pace with the busts, and the population has declined significantly since its height.

4.5 Port Alice

Port Alice is a small village on the northwest coast of Vancouver Island. It is accessible by land via the highway and by sea via Neroutsos Inlet through Quatsino Sound (Village of Port Alice, 2010). To reach the provincial capital of Victoria, it is almost six hours by car, and to reach Vancouver, it is just over six and a half hours, including a nearly two-hour ferry ride but does not include the wait times for the ferry (Google, 2023).

Port Alice was originally a company town erected in 1913, centred around a pulp and paper mill that continued to opereate for about 50 years (Bradbury, 1977). Changes were made regarding the future of company towns during the mid-20th century, possibly due to the precedent of Kitimat. A new policy was introduced in 1965 to support the creation of "instant towns" (Government of British Columbia, n.d.). An instant town had three characteristics: it was

a planned community, it was awarded full municipal status as soon as its establishment, and it was politically independent of a company. It was intended that residential and commercial properties would be owned locally rather than by the sponsoring corporation (Government of British Columbia, n.d.). Port Alice became the first official 'instant community' after a decision was made to abandon the original company town and a town was built nearby (Bradbury, 1977). Port Alice was incorporated in 1965 upon its completion (Government of British Columbia, n.d.).

Port Alice was a vibrant community at the height of its population of approximately 1,700 people in 1981 (Village of Port Alice, 2010). It boasted numerous clubs, community groups, and an ice rink (Bradbury, 1977). The primary employer in the community was the pulp and paper mill, on which many people were economically dependent. The village's population slowly declined as the mill underwent periodic ownership changes, restructuring, and downsizing over more than 20 years (Kennedy, 2004). The permanent end to the mill was in sight in 2015 when it ceased operations, and it was officially closed forever in 2019 when all remaining employees were laid off (Chan, 2023). In January 2023, the demolition process for the mill began (Chan, 2023).

4.6 Mackenzie

Like the other previous study communities, Mackenzie, British Columbia is a small remote community. Mackenzie is nestled between two lakes, Morfee and Williston and two mountain ranges, the Rockies and Omineca (District of Mackenzie, 2023a; Google, 2023). It is located in Central British Columbia, about two hours from Prince George, 11 hours from Vancouver, and nine hours from Edmonton (Google, 2023).

The early history of Mackenzie is similar to that of the other study communities. Some people were brought to the area after the Caribou Gold Rush in 1870; however, generally following this, the area experienced sparse and sporadic settlement by white settlers (District of Mackenzie, 2023b). The area began to change rapidly with the construction of the W.A.C. Bennet Dam during the early 1960s (District of Mackenzie, 2023b). Following the dam's construction, the area was chosen as a good candidate for a "forestry complex" (Mackenzie and District Museum, 2021). Following Port Alice's footsteps, Mackenzie would also be developed

as an "instant community" in 1966 based around a pulp mill and two sawmills (District of Mackenzie, 2023b).

Mackenzie was a thriving community in the 70s, 80s, and early 90s when most of its infrastructure was built (District of Mackenzie, 2014). It reached its peak population in 1996 of 6,249 people (District of Mackenzie, 2014). The population of Mackenzie had been on a steady decline since 1996 until, like Northern Rockies RM, the 2008 economic downturn had devastating effects on Mackenzie (District of Mackenzie, 2014). In 2009 the community suffered four mill closures caused partly by the 2008 economic crisis leading to an exodus of part of the population (District of Mackenzie, 2014).

4.7 The Modern British Columbian Resource Industry

Economic recessions have impacted the health of the British Columbian resource industry. The recession of the 1980s played a prominent role in reducing the province's forest industry leading to mill closures and subsequent job losses (Edenhoffer & Hayter, 2013). The impacts were compounded in the next decade by phenomena such as pine beetle infestations and rising fuel costs (Edenhoffer & Hayter, 2013). While the smelting and mining industries may not have had to deal with pine beetles, they were not immune to the forces of automation and economic restructuring, which also caused job losses (O'Grady, 2014). As noted in the profiles of each study community, the 2008 Recession also caused great hardship for those depending on resource industries.

The nature of how resource extraction and processing has occurred in British Columbia has fundamentally changed in the past five decades. No longer does it make financial sense to construct a town around an extraction site or processing plant. As such, the last purpose-built resource community Tumbler Ridge was incorporated in 1981 (McDonagh, 2010). Beginning in the 60s but accelerating in the 80s was the use of fly-in/fly-out worksites (Markey, Storey, & Heisler, 2011). There are some advantages to fly-in/fly-out worksites, they are cheaper than purpose-built towns, workers prefer them, and there is less risk involved as if the industry fails, a work camp can be dismantled, whereas a town cannot be easily (Markey, Storey, & Heisler, 2011). This strategy for worker accommodations provides multiple challenges for the survival of resource communities. The ability for a company to create a camp creates competition for investment for a community as they are not required for the industry. Suppose an industry

decides to open up a worksite near a resource community. In that case, they will often still construct workers' barracks, meaning that while people come into town for work, they are not settling down and establishing roots in the community.

5.0 Findings

This section outlines the results from the three research methods that will be used in the analysis section. It is organized by research method; census findings are first, followed by document findings, then interview findings. Each research method is divided into sections by community, beginning with Northern Rockies RM, followed by Valemount, Kitimat, Port Alice, and Mackenzie, respectively.

5.1 Census Findings

This section outlines the population of each community as of the 2021 census in addition to the historic highest population of the community. These statistics show the proportion of the community's population lost to out-migration; this is an important statistic as it directly relates to the community's health. A declining population is indicative of an unhealthy economy and a community in decline. In this section, the results from nine different census categories are presented: population, median age, unemployment rate, % of Working Population Engaged in Agriculture, Forestry, Fishing and Hunting, % of Working Population Engaged in Mining, Quarrying, and Oil and Gas Extraction, % of Working Population Engaged in Manufacturing, % of Working Population Engaged in Transportation and Warehousing, % of Working Population in Agriculture and other resource-based industries, and % of Total Working Population in the Above Categories. The results from these categories show different trends in the communities regarding population and workforce. The information from these findings portray a glimpse into a community's current state and past helping to inform the further analysis of the findings.

Northern Rockies RM

Between 1996 to 2021, census data shows that the population of Northern Rockies RM has fluctuated. Since the height of its population in 2005, the municipality has lost 34% of its population in just 16 years (Government of British Columbia, 2010; Statistics Canada, 2023a).

The most considerable single-year loss occurred between 2016 and 2017, when the municipality lost 5% of its population (Government of British Columbia, 2022). While the population of the community has decreased since 1996, the median age has increased; this indicates an out-migration of young people from the community, leaving older residents behind (Statistics Canada, 2019a; Statistics Canada, 2023a)

Historic High Population: 5,957 in 2005
(Government of British Columbia, 2010)
Population as of 2021: 3,947
(Statistics Canada, 2023a)
Percent Change: -34%

Table 2. Select Northern Rockies RM Census Data

	1996 Census*	2006 Census*	2016 Census	2021 Census
Population	4,400	4,514	4,831	3,947
Median Age	N/A	30.5	35.6	39.6
Unemployment rate	7.3%	5.9%	13.2%	9.3%
% of Working Population Engaged in Agriculture, Forestry, Fishing and Hunting	5%	N/A	1.5%	2%
% of Working Population Engaged in Mining, Quarrying, and Oil and Gas Extraction	1%	N/A	12%	7.5%
% of Working Population Engaged in Manufacturing	28%	13%	3.5%	1%
% of Working Population Engaged in Transportation and Warehousing	7.5%	N/A	9%	10%
% of Working Population in Agriculture and other resource-based industries	N/A	14%	N/A	N/A
% of Total Working Population in the Above Categories	41.5%	27%	26%	20.5%

(Statistics Canada, 2019a; Statistics Canada, 2007a; Statistics Canada, 2017a; Statistics Canada, 2023a)

*Data may not reflect exact statistics as only data from the former municipality of Fort Nelson is available prior to the 2016 Census as Northern Rockies RM was established in 2009.

Valemount

As of 2021, Valemount has lost 19% of its highest population, going from 1,303 people in 1996 to 1,052 (Statistics Canada, 2023b, Village of Valemount, 2021a). Despite a large decrease in population between 1996 and 2006, the population remained relatively stable between 2006-2021, even increasing slightly (Statistics Canada, 2007b; Statistics Canada, 2017b; Statistics Canada, 2019b; Statistics Canada, 2023b). Like Northern Rockies RM, the median age of Valemount has been increasing. However, unlike Northern Rockies RM, the population has stabilized. This could indicate that people are choosing to stay and age in the community, while it may additionally indicate a low birthrate.

Historic High Population: 1,303 in 1996
(Village of Valemount, 2021a)
Population as of 2021: 1,052
(Statistics Canada, 2023b)
Percent Change: -19%

Table 3. Select Valemount Census Data

	1996 Census	2006 Census	2016 Census	2021 Census
Population	1,305	1,018	1,021	1,052
Median Age	N/A	42.3	45.3	44.8
Unemployment rate	15.3%	8.6%	11.2%	4.7%
% of Working Population Engaged in Agriculture, Forestry, Fishing and Hunting	13%	N/A	14.5%	7%
% of Working Population Engaged in Mining, Quarrying, and Oil and Gas Extraction	0%	N/A	3%	0%
% of Working Population Engaged in Manufacturing	15%	8.5%	2%	4%
% of Working Population Engaged in Transportation and Warehousing	6.5%	N/A	9.5%	8%
% of Working Population in Agriculture and other resource-based industries	N/A	9%	N/A	N/A
% of Total Working Population in the Above Categories	34.5%	17.5%	29%	19%

(Statistics Canada, 2019b; Statistics Canada, 2007b; Statistics Canada, 2017b; Statistics Canada, 2023b)

Kitimat

Kitimat had a population of almost 13,000 in 1981 (City of Kitimat, 2008). As of the most recent census it has a population of 8,236, this is a reduction of 36% (Statistics Canada, 2023c). Aside from 2016, the city has experienced a mostly stable unemployment and median age (Statistics Canada, 2017c). There was a considerable reduction in population between the 1996 and 2006 censuses, however, it appears that between 2016 and 2021, the population of the city has stabilized and even showed some growth (Statistics Canada, 2007c; Statistics Canada, 2017c; Statistics Canada, 2019c; Statistics Canada, 2023c).

Historic High Population: 12,814 in 1981
(City of Kitimat, 2008)
Population as of 2021: 8,236
(Statistics Canada, 2023c)
Percent Change: -36%

Table 4. Select Kitimat Census Data

	1996 Census	2006 Census	2016 Census	2021 Census
Population	11,110	8,987	8,131	8,236
Median Age	N/A	41.4	43	42.4
Unemployment rate	9.3%	9.5%	12.5%	9.4%
% of Working Population Engaged in Agriculture, Forestry, Fishing and Hunting	2%	N/A	0.5%	1%
% of Working Population Engaged in Mining, Quarrying, and Oil and Gas Extraction	0%	N/A	3%	2.5%
% of Working Population Engaged in Manufacturing	46%	40%	20%	19%
% of Working Population Engaged in Transportation and Warehousing	2%	N/A	3.5%	3.5%
% of Working Population in Agriculture and other resource-based industries	0%	2%	N/A	N/A
% of Total Working Population in the Above Categories	50%	42%	27%	26%

(Statistics Canada, 2019c; Statistics Canada, 2007c; Statistics Canada, 2017c; Statistics Canada, 2023c)

Port Alice

1,668 people called the Village of Port Alice home in 1981, now it is home to 739 residents
(Statistics Canada, 2023d; Village of Port Alice, 2010). This is a 56% reduction in population.
The village has a high median age and unemployment rate compared to the other communities
and the national average (Statistics Canada, 2023d; Statistics Canada, 2023e). It could be
problematic in the coming years, as the workforce ages into retirement residents may be forced
to leave the community if there are no services to care for them. The population of the village
has nearly halved since the 1996 census, however, there does appear to be growth in recent years
(Statistics Canada, 2019d; Statistics Canada, 2023d).

Historic High Population: 1,668 in 1981
(Village of Port Alice, 2010)
Population as of 2021: 739
(Statistics Canada, 2023d)
Percent Change: -56%

Table 5. Select Port Alice Census Data

	1996 Census	**2006 Census**	**2016 Census**	**2021 Census**
Population	1,330	821	664	739
Median Age	N/A	46.6	54.8	58.8
Unemployment rate	9%	10%	30%	14.5%
% of Working Population Engaged in Agriculture, Forestry, Fishing and Hunting	10%	N/A	24%	8%
% of Working Population Engaged in Mining, Quarrying, and Oil and Gas Extraction	0%	N/A	0%	3%
% of Working Population Engaged in Manufacturing	57.5%	36%	29%	16%
% of Working Population Engaged in Transportation and Warehousing	0%	N/A	7%	0%
% of Working Population in Agriculture and other resource-based industries	N/A	11%	N/A	N/A

% of Total Working Population in the Above Categories	67.5%	47%	60%	27%

(Statistics Canada, 2019d; Statistics Canada, 2007d; Statistics Canada, 2017d; Statistics Canada, 2023d)

Mackenzie

Mackenzie lost close to half its population between the 1996 and the 2021 censuses (District of Mackenzie, 2014; Statistics Canada, 2023e). The population decreased from 6,249 to 3,281 over the course of 25 years (District of Mackenzie, 2014; Statistics Canada, 2023e). Unlike some of the other study communities, Mackenzie's population does not currently show signs of stabilization, it has been on a continual decline since 1996 (Statistics Canada, 2007e; Statistics Canada, 2017e; Statistics Canada, 2019e; Statistics Canada, 2023e). The unemployment rate and median age in the community have increased since 1996 (Statistics Canada, 2019e; Statistics Canada, 2007e; Statistics Canada, 2017e; Statistics Canada, 2023e). The high unemployment rate could continue to drive young people out of the community, causing the median age to continue to rise.

Historic High Population: 6,249 in 1996
(District of Mackenzie, 2014)
Population as of 2021: 3,281
(Statistics Canada, 2023e)
Percent Change: -47.5%

Table 6. Select Mackenzie Census Data

	1996 Census	2006 Census	2016 Census	2021 Census
Population	5,990	4,539	3,714	3,281
Median Age	N/A	36.3	39.5	43.6
Unemployment rate	9.5%	10.7%	8.0%	12.3%
% of Working Population Engaged in Agriculture, Forestry, Fishing and Hunting	6.5%	N/A	12%	13%
% of Working Population Engaged in Mining, Quarrying, and Oil and Gas Extraction	0%	N/A	4%	4.5%
% of Working Population Engaged in Manufacturing	44%	43%	31.5%	20%

% of Working Population Engaged in Transportation and Warehousing	5.5%	N/A	3%	4.5%
% of Working Population in Agriculture and other resource-based industries	N/A	11%	N/A	N/A
% of Total Working Population in the Above Categories	56%	54%	50.5	42%

(Statistics Canada, 2019e; Statistics Canada, 2007e; Statistics Canada, 2017e; Statistics Canada, 2023e)

5.2 Document Findings

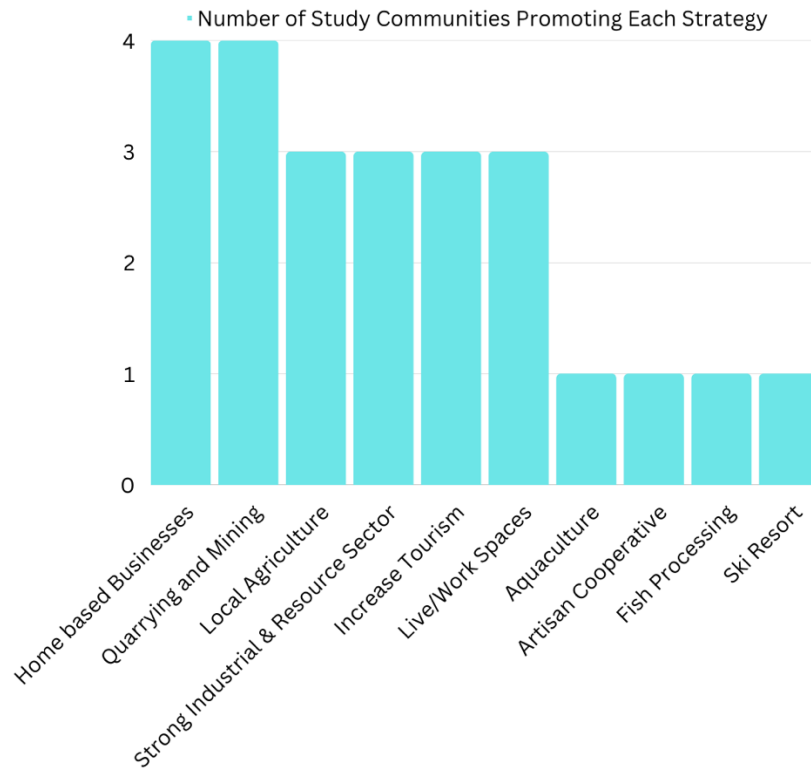### *Official Community Plan Findings*

All five study communities possess an official community plan. Each of the community plans was written at a different time. Some plans are much older than others allowing for more of the strategies to have been implemented than in other communities. Kitimat's plan is the oldest, written in 2008, followed by Port Alice in 2010, Northern Rockies RM in 2011, Mackenzie in 2014, and Valemount in 2021. The Village of Port Alice is currently in the process of updating its official community plan (Village of Port Alice, 2023).

By using the coding framework outlined in the Methods section, the official community plans from the five study communities were coded to enable evaluation and comparisons between plans. Through this process, 64 codes were generated, which were applied 160 times uniquely in the five official community plans. The coding framework evolved throughout the coding process, and codes were added as they appeared in the plans. Some codes were applied only in one plan, whereas others were applicable in all five. Three main goals were identified in most of the plans: increase the population, maintain/increase community investment, and stimulate economic growth. Through these three goals, objectives and strategies were detected. The goal of increasing the population was divided into recruitment and retention. Maintaining/increasing community investment was divided into establishing/maintaining community recreation areas and offering a comprehensive range of community services. Stimulating economic growth was divided into economic policies and reducing community dependence on a single industry.

Four out of five communities identified a vision statement to help guide their official community plans and, thus, the future of their communities. Kitimat was the single community

that lacked a vision statement. Each community identified community investment and economic growth as goals. Only some communities specifically identified increasing the population as a goal. Some strategies for approaching goals and objectives were more popular than others. In the case of an increasing population, each community prioritized supporting a range of housing types and densities. The most popular strategies identified in community investment were, establishing a community garden, increasing parkland, offering continuing education opportunities, improving access to health care, and maintaining local schools' viability. The most common strategies for economic growth were, encouraging the establishment of home-based businesses, having strong industrial and resource bases, and supporting quarrying and mining activities.

Figure 3. Strategies for Economic Diversification Identified in Official Community Plans

Northern Rockies RM

Official Community Plan

Vision Statement:

> In Fort Nelson we stand at the gateway of the Northern Rockies, located in the hearty of a prosperous and diverse economic region that strives to preserve the integrity of the natural environment. We are a welcoming, self-reliant and healthy community. We proudly embrace life in our unique northern community and we work to create innovative solutions that enhance our quality of life. Our Community is beautiful, well-planned and safe. Our unique environment provides us with diverse choices and ample opportunities for employment, education, recreation, housing and health and wellness. As residents of British Columbia's first Regional Municipality, we are responsive to the needs of our residents, we encourage active public involvement and we proactively support inclusive and family-oriented decision making that balances cultural, social, environmental and economic needs in a collaborative and transparent manner.
> (Northern Rockies RM, 2011)

Northern Rockies RM identified stimulating economic growth and maintaining/increasing community investment as goals. It did not explicitly state increasing population as a goal; however, it did identify some strategies that would help to recruit and retain the population, such as promoting affordable housing, ensuring sufficient land is available for development, having a range of types of housing and densities, increasing the supply of special needs housing, and establishing seniors/assisted living facilities. The community is proud of its status as a northern community and promotes its outdoor recreation opportunities. The possibility of establishing an artificial lake and a community ski hill was explored in the plan. The community seeks to maintain and improve its current level of services, including its schools, the airport, healthcare availability, and internet services. Its location on the Alaskan Highway as a tourist destination was highlighted in the plan, as well as the further development of resource industries such as natural gas and agriculture.

Annual Reports 2017-2021 Highlights

The last five years of annual reports showed that some steps towards the goals from the official community plan were being taken. With the goal of increased community investment, a community health plan was created, there was a pilot project for a teen centre, and grants were given to community gardens (Northern Rockies RM, 2018, Northern Rockies RM, 2020, Northern Rockies RM, 2021). For the goal of stimulating economic growth, summer work programs funded by WorkBC took place, the tourism website was redeveloped, a regional tourism strategy was completed as was a regional economic strategy, and they were working on

improving their signage in the community (Northern Rockies RM, 2017, Northern Rockies RM, 2019a). Unfortunately, due to the Covid 19 Pandemic, 2020 and 2021 were focused on offering and rebuilding community services to their pre-Covid 19 levels.

Economic Development Strategy

The Economic Development Strategy focuses on "what is needed to create and strengthen compelling reasons to invest in and create economic activity locally" (Northern Rockies RM, 2019b, pg. 1). The strategy outlined the present state of the community's health using three key metrics, the assessed value of the RM, the number of airport passengers, and the school population. All three metrics were negative. The assessed value of the RM has been declining since 2015, the number of passengers using the airport has been declining since 2011, and so has the school population (Northern Rockies RM, 2019b). This report is eight years newer than the official community plan. Since the plan's creation, the community has recognized the need to grow its population, this strategy explicitly states population growth as a goal. Many different objectives were outlined in this strategy, including:

- Improve the website through use of data and graphics guidelines
- Attract more skilled workers to the community
- Set up a business accelerator program
- Attracting and nurturing entrepreneurs
- Lobby for better rail service
- Institute a co-op approach to health care
- Attract and maintain businesses
- Encourage agriculture
- Become an events centre
- Make and maintain a model community forest
- Process timber in the community
- Prep for natural gas rebound

(Northern Rockies RM, 2019b).

This plan aims to help the community diversify economically to stay more resilient during the boom-and-bust cycles of the resource industry while also attracting new residents to the community.

2022-2025 Tourism Strategy and Action Plan

This document outlines a five-year strategy to build a foundation for tourism through tourism-related efforts and initiatives. The strategy emphasizes specific actions the community can take to improve tourism. It identifies six priorities for tourism in the community 1. Resource allocation 2. Stakeholder engagement 3. Resident buy-in and support 4. Sustainable destination development 5. Tourism workforce 6. Branding & marketing (Tourism Northern Rockies, 2022). The Community hopes to build a stable and resilient industry that benefits residents. The plan wishes to create an attractive community through improved building facades and signage, commissioning local artists for murals and art installations, creating a public bench system, and creating a central gathering place for residents and tourists that could be used for festivals (Tourism Northern Rockies, 2022).

The action plan divides actions and initiatives into three categories: must-have, should-have, and could-have (Tourism Northern Rockies, 2022). Must haves are things that need to be done for the improved health of the tourism industry. Should-haves are also a high priority and would likely have a considerable positive impact. Could-haves would be nice to have and would help improve tourism but are detrimental to the plan. Each of the five years has a distinct theme and includes vital items and objectives for the year ranked by priority.

Year 1: Laying the Groundwork
- o Key items include: stake holder engagement, create an action committee, hiring a full time tourism coordinator, develop and action a marketing plan

Year 2: Reset and Reinvent
- o Key items include: create a visitor pledge, execute a marketing campaign, host a Winter Destination Discovery Festival, hold a tourism summit, upgrades to downtown and tourism infrastructure, submit a global geo park application for Muskwa-Kechika management area

Year 3: Maintain Momentum
- o Key items include: hold a Summer Destination Discovery Festival, launch a tourism workforce awareness campaign, maintain initiatives from previous years

Year. 4: Future Planning
- o Key items include: develop and host a winter sports event, hold a Winter Destination Discovery Festival, maintain initiatives from other years, promote natural recourses sector-based tourism (geothermal, forestry)

Year 5: Regenerate
- o Key items include: establish next steps to achieve Destination Stewardship Organization status, hold a summer destination discovery festival, maintain initiatives from other years,

Valemount

Official Community Plan

Vision Statement:

> We…the people…are enterprising imagineers amidst the bigger peaks and wilder spaces
> to be free in. Opportunity abounds in Valemount. Creators. Digital and tourism workers.
> Active outdoor adventurers. Pioneers. Here because we unleashed the power of
> entrepreneurial spirit in flexible work-live housing, added entrepreneurial guiding to our
> tourism offering, incentivized downtown investment, and leveraged fibre opportunity
> from our community forest. Enabled by advanced broadband. Inspired by a new cottage
> community that reflects the spirit of who we are and want to be.
> (Village of Valemount, 2021a)

Valemount is actively trying to grow its population and diversify economically. It aims to
add 100 new residents by 2026 and have an average population growth rate of 2% by 2031
(Village of Valemount, 2021a). They aim to do this by retaining the current population and
attracting new residents. The village needs a stable population if it wishes to maintain its current
level of services; for example, the plan identified that for the school to remain viable, it requires
a population of at least 1,000 residents (Village of Valemount, 2021a). To make Valemount
attractive to residents, it seeks to promote its affordability and ensure that various housing types
and densities are available to suit every resident (Village of Valemount, 2021a). It also draws
upon its picturesque mountain setting to attract tourists. However, it is important to the
community that tourism does not negatively impact residents' ability to find housing; thus, short-
term rentals are discouraged and limited in some areas (Village of Valemount, 2021a). The
village wants to attract entrepreneurs to reside there, and it hopes to encourage this by creating
live/work housing and upgrading the internet services in the area (Village of Valemount, 2021a).

2021 Annual Report

The *2021 Annual Report* is the only available annual report from the Village of Valemount since
its most recent official community plan, which was also released in 2021. This report details how
Valemount is British Columbia's northernmost Resort Community (Village of Valemount,
2021b). It shows that the community has made progress in separating itself from its roots as a

forestry and mill-based community. In 2021, the community showed progress in some of the objectives and strategies in the official community plan. Construction began on three multi-person housing projects that will increase the community's housing stock by 8.5% for its vulnerable residents (Village of Valemount, 2021b). Ground was broken on a 72-space childcare facility (Village of Valemount, 2021b). The Village gained eight new standard businesses from the year before, and a new modern Village website was created (Village of Valemount, 2021b). The Village also received 1.5 million dollars in grants for a geothermal district heating system (Village of Valemount, 2021b).

Kitimat

Official Community Plan

Unlike the other study communities, Kitimat does not have a guiding vision statement in its official community plan. Like the other plans, their plan highlights their desire to grow in population while reducing dependence on their primary industry. They identify tourism and quarrying as potential ways to diversify their economy. Post-secondary education is a sector that the city would like to encourage, especially related to job training and growth for the industries already in the area (City of Kitimat, 2008). To attract new residents, the city plans to promote itself as a desirable place to live due to its safety, proximity to nature, and high level of services (City of Kitimat, 2008). Due to these factors, it plans to promote itself specifically to potential retirees (City of Kitimat, 2008). As the city prides itself on its availability of services, community investment is a vital portion of its official community plan. Improving healthcare, schools, and recreation are all noted in the plan.

Annual Reports 2017-2021

The past five years for Kitimat have been busy with potential economic development. A new hotel opened in 2017 (City of Kitimat, 2017). Liquified natural gas (LNG) is an up-and-coming industry in the city with two current export facilities in development. Ground was broken on LNG Canada; this project will add approximately 250-400 permanent positions in the city in

addition to the thousands of jobs created during the construction phase of the export facility (City of Kitimat, 2019). It will be Canada's largest private sector investment at 40 billion dollars (City of Kitimat, 2020). Another LNG project called Cedar LNG, proposed by the Haisla Nation has been granted an export license; 70-100 permanent jobs will be created due to this project (City of Kitimat, 2020). There is a proposed propane export facility in the works as well, that will involve a new railyard (City of Kitimat, 2021). In addition, there are two proposed pipeline projects that would run through the area (City of Kitimat, 2021). Outside of economic development around oil and gas, a new marketing and brand campaign for the city was completed. Despite the pandemic, there has been continued residential development (City of Kitimat, 2020).

Kitimat Age-Friendly Report and Action Plan

This plan began by outlining the current state of infrastructure in the city available to elderly persons. It identifies what Kitimat is doing well and where gaps need to be improved to increase the quality of life for elderly residents. From this assessment, an action plan was produced. The action plan outlines eight areas where the city can improve its age-friendliness and outlines specific actions the city can take to address the gaps. Many of the actions address increasing accessibility, ensuring appropriate housing, and improving access to information, healthcare, and social supports (District of Kitimat, 2018b). This plan aims to retain residents by allowing the residents of Kitimat to age in the community successfully and comfortably.

Port Alice

Official Community Plan

Vision Statement:

> a vibrant, inclusive, engaged community with a healthy,
> diverse economy based on a range of businesses, particularly tourism related, and
> industries and capitalizing on the village's attractive oceanfront setting.
> (Village of Port Alice, 2010).

Port Alice wishes to grow its population to 1,200 people; at that population, it will have a strong enough tax base to continue to offer and expand upon its current community services,

such as the local school and community centre (Village of Port Alice, 2010). It hopes to accomplish this through population retention and recruitment. By diversifying their economy, particularly through tourism, they hope to enable their current population to stay in the community while also attracting a new permanent workforce. Some ways they sought to increase tourism included establishing a community marina, establishing a community forest, increasing advertising of local accommodations, upgrading to modern high-speed internet, and increasing the accessibility of the community from elsewhere on the island (Village of Port Alice, 2010). While tourism is a primary focus of the plan, other potential industries are explored to help diversify the local economy away from the mill, including aquaculture and associated processing, quarrying, and mining, establishing an artisan cooperative, and promoting home-based businesses (Village of Port Alice, 2010). If temporary resource and industrial projects occur within the area near the village, the village hopes to convert some of those workers into full-time residents. It is also looking into seniors/assisted living to allow elderly residents to stay in the village (Village of Port Alice, 2010).

Annual Reports 2019-2021
Throughout the 2019-2021 years, efforts were made to help stimulate economic growth in the village. Prior to these reports, the municipal marina was created, as was the Community Forest (Village of Port Alice, 2019). Throughout 2019-2020 upgrades were made to the municipal marina to make it more attractive (Village of Port Alice, 2019). Many plans and initiatives had to be put on hold due to the Covid-19 Pandemic in 2020, like in other communities. Telus constructed a new cell tower in 2021, which has greatly improved the cell reception in the area (Village of Port Alice, 2021). To help further strengthen the village economically, an economic development officer was hired in 2021 (Village of Port Alice, 2021).

Port of Potential: Port Alice's Economic Development Strategy
Motivated by the mill shutdown in 2015, Port Alice developed an economic strategy to diversify the village's economy and reduce dependency on the mill to help stabilize the population (Village of Port Alice, 2016). The document lists six strategies to help accomplish this: 1. foundational actions, 2. accommodations and food services, 3. tourism, 4. small business

attraction, retention, and expansion, 5. resident attraction, and 6. investment attraction (Village of Port Alice, 2016). Each of the actions suggested is divided into six strategies and is provided with a rough cost estimate and a timeframe for accomplishing it. The document explains how the village intends to monitor the plan's progress through different metrics and data sources. Many of the actions suggested increase the village's tourism potential through activities such as increasing marketing, opening an outdoor equipment rental shop, and hosting a farmers' market (Village of Port Alice, 2016). A key portion of the document is dedicated to attracting new residents to the village. The document identifies three groups of people they would like to target to move to the area: young retirees, camp workers and their families, and residents from the South Island (Village of Port Alice, 2016).

Mackenzie

Official Community Plan

Vision Statement:

> From its roots as a new town for forestry workers, Mackenzie has grown into a strong and supportive community that residents are proud to call home. Supported by a healthy environment, Mackenzie's economic base is now diverse and robust, providing consistent employment for residents. Recreation is key to our high quality of life and healthy lifestyle, with exceptional natural features that draw residents outdoors. Great community services and facilities complement the outdoors with opportunities to meet and engage with neighbours, and the town takes great pride in how attractive it is for both residents and visitors.
> (District of Mackenzie, 2014).

In 2014 the District of Mackenzie's economy was improving as some of its mills were beginning to reopen following the widespread closures in 2009 (District of Mackenzie, 2014). Due to this, the district focused its plan on providing a range of housing options to accommodate both new and old residents, ensuring a stable and diverse economy, mitigating environmental concerns, and providing services and recreation opportunities. The environment's health is essential to the district as it is tied to the health of the economy and population (District of Mackenzie, 2014). While some of the mills have reopened in the district, economic diversity is needed to prevent returned dependence on the mills. The sectors that the district focuses on are

tourism, renewable energy, and agriculture while continuing to support small and home-based businesses (District of Mackenzie, 2014). Currently, there are no productive farms in the district. The district seeks to create a local food economy by establishing farms, community gardens, and a farmers' market (District of Mackenzie, 2014). To help address both the lack of housing diversity and protecting the environment, the district is promoting infill to help support the aging housing stock while limiting greenfield development to protect the surrounding environment (District of Mackenzie, 2014).

Annual Reports 2017-2021
Much of what has been accomplished in the district outside of infrastructure maintenance and upgrades was improvements to recreation facilities. Between 2017-2021 the district completed new trails, built a new community hall, built an outdoor rink and skating loop, reopened the community ski hill, hosted its first-ever WinterQuest, and gained a junior hockey team (District of Mackenzie, 2017a; District of Mackenzie, 2018; District of Mackenzie, 2020; District of Mackenzie, 2021a). Progress towards increasing tourism occurred in the district through a new marketing initiative, a municipal signage strategy, and large airport upgrades (District of Mackenzie, 2019; District of Mackenzie, 2020; District of Mackenzie, 2021a). A 'shop local' campaign took place in 2020 to help support local businesses during the Covid-19 Pandemic (District of Mackenzie, 2020). Over five years, the number of building permits granted each year steadily declined from 55 in 2017 to 30 in 2021 (District of Mackenzie, 2017a; District of Mackenzie, 2018; District of Mackenzie, 2019; District of Mackenzie, 2020; District of Mackenzie, 2021a). The number of business permits fluctuated during the five years, however, they rebounded in 2021 to the highest extent in five years (District of Mackenzie, 2017a; District of Mackenzie, 2018; District of Mackenzie, 2019; District of Mackenzie, 2020; District of Mackenzie, 2021a).

Mackenzie 2.0: Economic Development Strategy
In 2021 the District of Mackenzie developed an updated economic development strategy. This strategy has seven areas ranked by what the community deemed most to least important: 1. Industry Supports, 2. Local business and entrepreneurship, 3. Quality of life, 4. Local food economy, 5. Resident attraction and retention, 6. District revenue generation, 7. Collaboration

and partnerships (District of Mackenzie, 2021b). The document notes the district's five-year tourism plan and how it is an essential and connected piece of the economic development strategy despite being a separate document (District of Mackenzie, 2021b). The plan recognizes the district's current strengths as being its "access to nature, high quality of life, [and] its existing business community" (District of Mackenzie, 2021b, pg. 10). It also recognizes the challenges the district seeks to address through this plan as being its "reliance on unstable natural resource industries, consumer leakage to Prince George, [and] limited restaurants, retail options, events and celebrations" (District of Mackenzie, 2021b, pg. 10). Actions to address these challenges are separated into five categories: "underway, quick win, simple, complex, and foundational" (District of Mackenzie, 2021b, pg. 16). Actions in these categories range from actions that will take less than a year to complete, such as supporting more events and festivals, to long-range projects, such as diversifying the housing stock (District of Mackenzie, 2021b).

2021-2026 Tourism Plan

Like the economic development plan, the District of Mackenzie's tourism plan also begins by highlighting both the current strengths and weaknesses of the industry, in addition to potential challenges the industry may have. The hope is that by making the district more appealing to tourists through an increase in businesses and facilities, there will also be a positive impact for residents. The plan emphasizes that it is a long-term commitment and seeing results from efforts such as marketing campaigns will likely take at least 18-24 months (District of Mackenzie, 2021c). Creating a tourism district in the community is a priority. The aim is to create a vibrant place where residents and visitors can shop, eat, and drink (District of Mackenzie, 2021c). The plan is split into four phases; initiatives and actions are divided into easiest, moderate, and challenging categories depending on their cost, market, and timeframe (District of Mackenzie, 2021c). Through its three pillars, destination development, destination marketing, and communications, the district seeks to build a resilient and robust tourism industry that will benefit residents (District of Mackenzie, 2021c).

Age Friendly Housing & Health Care Action Plan

Due to limited resources in many northern resource communities, elderly residents tend to have to move once their care needs extend beyond what the community can provide (District of

Mackenzie, 2017b). As of 2017, when the plan was written, there was an accessibility issue in most homes and buildings in the district. They were not designed to accommodate those with limited mobility (District of Mackenzie, 2017b). There is also a need for more housing options for seniors once they need to leave their own homes, and their mobility options are limited once they can no longer drive (District of Mackenzie, 2017b). The district hopes to address these issues through this plan, allowing senior residents to stay in the community. Some steps the district plans to take include the development of affordable seniors/assisted living facilities, establishing a bus to allow seniors greater mobility, and increasing the accessibility of local businesses and services (District of Mackenzie, 2017b).

5.3 Interview Findings

Northern Rockies RM

The interviewee from Northern Rockies RM was Mike Gilbert, the Regional Economic Development Officer. Many things have changed in the community during his tenure at the municipality. The 2008 economic crash had an incredibly negative effect on the forestry industry and mills. In 2009 the mills in the municipality shut down; however, the effects of this were mitigated by a boom in the oil and gas industry. Unfortunately, this boom was short, and by the end of 2013, the oil and gas sector in the region crashed, leading to some devastating effects in the municipality. Many people lost their jobs, there were property foreclosures, and widespread commercial vacancies. During that boom cycle, there was a lot of community investment due to the assumption that the population would double due to the booming oil and gas industry. In contrast, that boom cycle did not continue for long. The infrastructure, however, such as the improvements to the airport that was completed during that time, did benefit the community. Northern Rockies RM is an attractive place for development as it has a high level of services for a community of its size. It has an airport, good schools, and a well-equipped and maintained recreation centre with multiple pools and ice rinks. There is significant housing available in the Fort Nelson population centre of the municipality. Due to this high availability, housing prices remain low, which is attractive to many people as prices elsewhere in the province have risen drastically in the past few years.

It was identified that maintaining services is critical to attracting and retaining residents. One issue they have seen in maintaining the level of healthcare is recruiting and keeping doctors. To help address this, the municipality bought one of the newer built townhouses in the municipality to run as a doctors' residence. Another problem identified was the current level of the internet in the municipality, as it does not compare to that found in larger centres. To address the lack of internet the municipality is attempting to find a way to increase the speed and service of the internet; however, this is prohibitively expensive as there is only one service provider in the area, and they have no competition. One possible solution to this that Mike identified is satellite internet. This solution still needs to be further investigated.

There has been some economic development occurring in the past few years. The Look North Project has shifted the marketability of products and services coming from the municipality. In the project, the idea is to look for markets in the north rather than in the south. They are the last community attached to a natural gas pipeline, and their location on the Alaska Highway means they can truck natural gas up to the Yukon, Northwest Territories, and even Alaska. This project has been successful thus far as LNG is being cooled and bottled in Fort Nelson at maximum capacity and then trucked north.

The municipality has one of the healthiest forests in the province, and it wants to capitalize on this by establishing a pellet plant. They have the available timber to make the product, and there is a market for it, but the problem lies in transportation costs. Shipping the pellets via truck down south to markets would be prohibitively expensive, and the only economically viable option is by train. There is an existing railway connection to Fort Nelson, however, the current state of the tracks does not support the amount of traffic needed for the plant. It is not feasible for the pellet plant to move forward until the rail infrastructure is upgraded and repaired. CN currently leases the railway, but the province owns it and is reluctant to invest in it.

A promising new industry being explored currently is geothermal energy. The local First Nation is investigating the use of a geothermal field located under the municipality. If this resource can be tapped, it would allow the First Nation to supply its own clean power and potentially power other areas within the municipality. Another impact this project could have is through greenhouse farming, geothermal energy could heat the greenhouses. Greenhouse farming could have economic benefits as well as aid in the food security of the region. If the

community can produce its own food for consumption and export, this would reduce the impacts of a supply chain disruption.

The Covid-19 Pandemic brought in limited new residents to the municipality. This was mainly in the form of new retirees. The draw of the community during the pandemic was its affordable housing and its vast outdoor recreation possibilities.

Valemount

Silvio Gislimberti, the village's Economic Development Officer, was interviewed for the Village of Valemount. Unfortunately, he recognizes that throughout his career, while change has occurred in the village, most of it has been negative.

The village is currently struggling to overcome multiple complex problems. The village currently has a housing shortage due to the expansion of the Trans Mountain Pipeline. The pipeline expansion has brought over a thousand temporary workers to the village, and there are not enough camp spots to house them. This has caused workers to look to the community for housing, thus driving up housing prices and reducing the available rental stock. While the economic boost the workers bring to the community is helpful, with them in the community, there is no room for new permanent residents to settle in the village. Some small towns experienced people migrating to them from larger cities due to the Pandemic, however, since there was no available housing, the village could not experience this. Decades ago, provincial legislation mandated that wood cut in an area needed to be processed within a certain distance of where it was cut. In the early 2000s, this legislation changed, making exporting logs easier. This eliminated the need for companies to process high quantities of wood in resource communities. Because of this, it is unlikely that the mills in town will reopen if it is more economical for companies to ship the logs elsewhere. The village has many plans that could provide positive results for the community. However, they cannot find a funder, so projects like the proposed ski resort have remained in limbo for over a decade. The village struggles with its internet speed. It has been upgraded slightly, but the service does not compare to what can be found in city centres.

There are some promising projects in the works. The local First Nation is investigating the development of geothermal energy, and it could potentially power the communities and possibly heat and power greenhouses. Outside of this project, success has largely been limited to

small incremental changes, such as constructing two new motels, a new mountain bike park, and upgrading trails.

Kitimat

Kitimat has been a busy city in the last couple of years, primarily due to the LNG Canada export facility currently under construction. The municipal employee interviewed noted that it seems new people are regularly moving to the city recently. This is likely due to a variety of reasons. The first and most common is the LNG Canada facility and other work opportunities, but there are also reasons outside of employment. Due to the Covid-19 Pandemic, anecdotally, some people did move to the area to work remotely outside of larger city centres. Others moved because they had young families and may have grown up in the area, and now they want to be closer to family. Another big draw for Kitimat is its relative affordability despite inflation. Moving to Kitimat allows young people and young families the ability to buy a house. One of the fears with new people moving into the city, especially to work in the construction of LNG Canada, is what happens when construction is over. How will the city convince these workers to put down permanent roots? The current goal of the community is to stabilize its population with the hopes of growing in the future. If current trends continue, the population could grow by approximately 1,000 people in the next five years.

Current projects for the community include a recently approved plan to create a district-wide strategic plan. There is a program called Kitimat Bound that has seen some success in attracting new people to move to and work in the community. There is a joint economic development initiative with the nearby Haisla First Nation aiming to create mutually beneficial economic development in the area. The city is working on a district-wide signage strategy to improve business and trail signs, among other strategies. They have been working on developing tourism in the area through marketing, branding, and a new website. There are plans to update and develop a new official community plan, which is on hold until staffing permits it.

One challenge the community faces and will continue to face for the next while is its aging infrastructure. The entire community was built rapidly, primarily in the 1950s, and thus all the infrastructure is the same age. The current aging infrastructure needs regular maintenance and upgrades to stay functional. The goal moving forward is to make Kitimat a modern city.

Port Alice

The Village of Port Alice representative was Ryan Nicholson, the Economic Development Officer. He has only been at the village for a year, however, in that year, there has been a positive uptick in both visitors and new residents coming to the village. Positively, some of the new people moving to the village have been young families, which will help maintain the viability of the local school while helping to balance the village's demographics. The village has an economic development plan they follow to help improve the local economy. They have seen some signs of success from it. However, for many of the initiatives that have been implemented, it will take time to see results. There are some challenges that the village is experiencing in working towards the goals outlined in the economic development plan. A substantial obstacle is the lack of accommodation in the village for visitors. To address this, they are encouraging the establishment of Air BnBs, and they have designated land for the development of accommodations. Another hurdle is the lack of capital which makes implementing projects difficult. To help encourage the development of new businesses, the village has kept taxes low. Improving their online presence is an ongoing project for the community. Since the current official community plan is over ten years old, the village is in the process of updating it. They are currently in the consultation phase of this project. The village has seen some growth both in population and economy and remain optimistic about this trend continuing for the next two to five years.

Mackenzie

Diane Smith, the Chief Administrative Officer at the District of Mackenzie was the final interviewee of this report. She began her career with the district in 1980, which has allowed her to witness over 40 years of change in the district in her roles as both a municipal employee and a resident. While some things have changed drastically throughout her tenure, such as the demographics and population of the district, others have stayed relatively the same such as the district's reliance on the forestry and wood product manufacturing industries. Population loss can be tied to mill closures and cuts, and the Pine Beetle Epidemic has also exacerbated some of the forestry issues. Because of the boom-and-bust cycle of this industry, the district has been focusing much of its efforts on diversifying the economy.

Mackenzie is in a picturesque location with many attractive outdoor recreation opportunities. The district hopes to capitalize on this through the tourism industry. Viable businesses that would be encouraged would be an outdoor equipment rental shop, a guiding service that would take people into the mountains and on lakes, and food service and retail shops in the Downtown Core. Agriculture is also an industry the district hopes to expand into to aid in food security. There are also families supported in the community through mining activities.

There have been some recent wins for the district. While their current internet connections are incredibly slow, there is the possibility that there could be funding available to help upgrade their service. If the district was to upgrade its internet service to be more comparable to other larger centres, it might help them gain new residents due to the possibility of working remotely. This past year was the best ever for its housing market. They saw some people moving to the district because of the Pandemic, including a decent number of young and healthy retirees. Mackenzie is attractive to retirees because they can sell their house in the city and buy something similar in the district for a fraction of the price. The affordability of the district's housing can have some adverse effects on residents because if they decide to leave for another community, they may not be able to afford a new house since the price points between housing in Mackenzie and many other places in Canada varies dramatically.

6.0 Analysis

6.1 Northern Rockies Regional Municipality

Per their vision statement, Northern Rockies RM wish to be a self-reliant, healthy community with a diverse economy (Northern Rockies RM, 2011). That vision still appears to be in place; however, much has happened since the official community plan was written, and some priorities have shifted. Diversifying the economy was a key feature of both the official community plan and the economic development strategy. Multiple attempts have been made to accomplish this and were met with mixed results. Following the 2008 economic crash and the subsequent mill closures in 2009, the municipality attempted to diversify its economy through the oil and gas industry, specifically with fracking. Fracking did not provide the long-term economic growth the municipality was looking for. There was a boom, but it ended quickly, leaving a billion-dollar abandoned gas processing plant in its wake. Some oil and gas jobs did persist, as in 2021, 7.5%

of the working population was engaged in mining, quarrying, and oil and gas extraction (Statistics Canada, 2023a). Comparing employment statistics from the 1996, 2006, 2016, and 2021 censuses there has been a reduction in the percentage of people working in resource industries, manufacturing, and transportation and warehousing by roughly 50% (Statistics Canada, 2007a; Statistics Canada, 2017a; Statistics Canada, 2019a; Statistics Canada, 2023a). However, it is difficult to attribute how much of this change occurred due to conscious efforts made by the municipality versus how much is a direct result of permanent mill closures. In 1996, 28% of the working population was employed in manufacturing, which likely came from the three mills in the municipality operating at the time. As of 2021, only 1% of the working population was engaged in manufacturing (Statistics Canada, 2019a; Statistics Canada, 2023a).

Current efforts to diversify the economy seem promising. In 2014 the essential oil company Young Living began a farm in the area to produce their Black Spruce essential oil (Young Living Essential Oils, 2020). With the municipality's Look North Project, they identified markets for liquified natural gas (LNG) that could be cooled and bottled in the municipality, then trucked to communities further north that are attempting to switch to more environmentally friendly systems for heating and power. This project appears to be successful, as the facility is running at maximum capacity. They are also taking active steps towards increasing the amount of tourism. One sizable step towards this was with their tourism strategy. The impact this strategy is having is unknown as it is only the first year of its implementation. The local First Nation is working on the potential to tap into and harness geothermal energy. Not only would this create jobs, but it would also help heat the municipality and be used to heat greenhouses. It would also aid in the municipality's vision of being self-reliant. The municipality is also taking steps to improve its health care by attempting to attract doctors. One way they are doing this is by providing a doctor's residence. There is an opportunity to establish a pellet plant that could be lucrative due to the locally available timber. This project has been derailed and put on hold due to the current lack of capacity on the present train track system and the province's reluctance to commit to repairs and upgrades.

The official community plan from 2011 does not explicitly state population growth as a goal, perhaps because, at the time, the population was relatively stable because of the oil and gas boom. The Regional Economic Strategy produced in 2019 does focus on population growth as one of its five key goals (Northern Rockies RM, 2019). Between 2011 when the official

community plan was released, and 2019 when the economic strategy was released, the municipality's population declined by almost 20% (Government of British Columbia, 2022). The population continues to be declining, though, over the last three years, the rate at which the population is declining appears to be slowing, which indicates that some of the actions the municipality is taking may be working (Government of British Columbia, 2022).

6.2 Valemount

Valemount has a specific goal of adding 100 people to its population between 2021 and 2026 (Village of Valemount, 2021a). It appears to be on track to progress towards this goal as per the Province of British Columbia Population estimates; the village experienced growth in 2020 and 2021 (Government of British Columbia, 2022). This positive growth is impressive, considering the current lack of housing stock available in the village due to temporary workers from the pipeline. This has affected both the rental stock and the real estate market. The village is also taking active steps to add to the housing stock by having broken ground on three multi-person affordable housing projects in 2021 (Village of Valemount, 2021b).

The village has been able to diversify from its forestry roots as it is now designated as a resort community (Village of Valemount, 2021b). Attractions include snowmobiling, ski touring, and hiking. What the community has identified is missing is a large anchor business, specifically a ski resort. There has been a plan to develop a ski resort in the area for the better part of two decades, but the village has been unable to secure an investor leaving the large-scale project on hold. The local ski club has recently made some progress on the site. The ski club has logged and cleared four ski runs on the site for ski touring and they plan to add a handle-tow lift when possible (Tourism Valemount, 2023a). The plan is to operate the site as a community ski hill until when or if the larger ski resort materializes. Outside of resort activities, like the First Nation in Northern Rockies RM, the local First Nation in the Valemount area is exploring geothermal energy, which is expensive to establish but could provide employment opportunities and clean energy (Village of Valemount, 2021a). Valemount is in a unique position geographically as it resides along the main highway route linking Vancouver to Edmonton. Due to this, there has been positive commercial growth as it attracts hotel and food service chains such as a Super 8 Motel, Comfort Inn and Suites, Tim Hortons, Subway, and A&W (Google, 2023). It is also a gateway community to world-renowned parks such as Jasper National Park and Mt. Robson

Provincial Park, which helps to support the village's food service and lodging industry (Tourism Valemount, 2023b).

When looking at past census data regarding unemployment rates, the village struggled with a high unemployment rate in 1996, when it was at 15.3% (Statistics Canada, 2019b). The unemployment rate has since fluctuated. In the most recent census, the unemployment rate was almost half that of the province as a whole at 4.7% (Statistics Canada, 2023b). There is the potential that this low unemployment rate could be attributed to the Trans Mountain Pipeline expansion rather than other efforts made by the village.

The representative from the village expressed that they have many plans and ideas in place, but they lack the funding to execute them, leaving the community in limbo for the time being. Smaller incremental changes, such as the development of a community ski hill rather than a large resort, occur more frequently in the village. These small changes appear to have some impact as the village has experienced population increases over the past two years.

Figure 4. 5-Mile Community Ski Hill Valemount

(Tourism Valemount, 2023a)

6.3 Kitimat

In its official community plan, the city identifies diversifying its economy, attracting new residents, and providing a high level of services as priorities. In 1996 manufacturing, primarily in aluminum smelting, employed almost 50% of the workforce; the proportion reduced to 19% in 2021 (Statistics Canada, 2019c; Statistics Canada, 2023c). The reduction can be attributed to

both cuts in the workforce at the smelter and the diversification of the local economy. Due to modernization at the smelter that was completed in 2015, which improved the efficiency of the operation in addition to reducing emissions, there were significant layoffs (Community Building Standard, 2018; Times Colonist, 2014) However, in which proportions the change in workforce employment can be attributed to necessity versus community efforts is unknown. The official community plan highlights tourism and quarrying as potential industries for economic diversification, but as this plan is almost 15 years old, priorities have changed somewhat. Tourism is being invested in to a higher degree, with a new marketing and brand campaign for the city completed in 2020 (City of Kitimat, 2020). The city's most prominent new economic drivers have come in the liquified natural gas industry thanks to the city's deep-water port. Ground has been broken on the new LNG Canada export facility, potentially creating thousands of construction jobs and up to 400 permanent jobs to operate the facility; this project represents the largest private sector investment in Canadian history (City of Kitimat, 2020). In addition, there is another smaller LNG facility called Cedar LNG in the works, and two pipelines are being proposed (City of Kitimat, 2020).

Part of what makes the city attractive to prospective residents is its high level of services. The ability to provide those services has been challenged by two factors recently. The city was built quickly and relatively all at once, so most of the infrastructure is around 60 years old. With its age, more maintenance and upgrading are consistently required to keep services and infrastructure operational. The other challenge was the Covid-19 Pandemic, where like most other cities, Kitimat struggled to keep services running, particularly its recreation services. The city appears to be making progress toward stabilizing its population. 2020 and 2021 saw slight increases in the population (Government of British Columbia, 2022). The interviewee from the city noted that they had noticed new residents seem to be frequently moving to the area. Often, they are coming because of industrial jobs, but some are moving there for its affordability and level of services. One concern is how they can convince temporary workers to settle in the city with their families and put down roots even after the construction of the LNG export facility. There is a program called Kitimat Bound that seeks to attract new residents to the city. The website connects prospective residents to local employment opportunities and other resources. Another way the city hopes to stabilize its population is through retention, specifically in the retiree demographic. The city produced an Age-Friendly Report and Action Plan intending to

upgrade infrastructure in the city to allow elderly residents to stay in the city rather than have to leave for a bigger centre to access services. Positively, annual reports show that from 2017 to 2021, there was continued residential development even during the peak years of Covid-19 (City of Kitimat, 2017; City of Kitimat, 2018a; City of Kitimat, 2019; City of Kitimat, 2020; City of Kitimat, 2021). Current trends are looking positive for the city. The interviewee noted that within five years, the city could add 1,000 people to its population.

6.4 Port Alice

The Village of Port Alice identified a target population of 1,200 people in its official community plan back in 2010 (Village of Port Alice, 2010). In this plan, they issued a vision statement that aimed to see the community as healthy with a diverse economy emphasising tourism. Since 2010 there has been one particularly major disruption to the Port Alice economy and that was the ceasing of production at the mill in 2015 and its subsequent permanent closure in 2019 (Chan, 2023). Because of this, the village was forced to diversify its economy. Amongst the four censuses examined in the census analysis, the 1996 census showed the highest proportion of the local workforce working in manufacturing at 57.5% (Statistics Canada, 2019d). This proportion of people employed in manufacturing has gradually declined to 16% (Statistics Canada, 2007d; Statistics Canada, 2017d; Statistics Canada, 2023d). To help cope with the loss of the mill the village produced an economic development strategy that aimed to strengthen the economy through tourism and small businesses which would in turn attract more residents creating a positive feedback loop. Some of the economic objectives to encourage tourism laid out in the official community plan and the economic development have occurred. A municipal marina was opened in 2013 and continues to be upgraded, a paddle-sports rental business was opened in 2022, and an economic development officer was hired in the past year (Village of Port Alice, 2016; Lynn, 2022; Village of Port Alice, 2021). Telus installed a new cell tower in the village in 2021 which will improve the connectivity of the village (Village of Port Alice, 2021). Perhaps this improvement in connectivity will help make the village a more viable place for remote work and other businesses that need a high level of internet service.

A population of 1,200 is what the village has determined is the population needed to maintain a healthy tax base to provide services to the community (Village of Port Alice, 2010). This is a similar number to that which the Village of Valemount identified as 1,000 people being

the minimum number needed to maintain the viability of a school (Village of Valemount, 2021a). The new economic development officer for the village noted that there have been new families moving to the village recently which will help maintain the viability of the school. Trends point to the village having some success in stabilizing its population. Between 2019-2021 the village saw growth for the first time in nearly two decades (Government of British Columbia, 2022).

6.5 Mackenzie

The official community plan for Mackenzie does not emphasize growing its population as most of the other study communities do. This is possible because, when it was written, Mackenzie was recovering from the 2009 mill closures, and its population was stable and growing marginally (Government of British Columbia, 2022). This slow population growth lasted from 2013 to 2018 (Government of British Columbia, 2022). Following 2018 the population has continually declined (Government of British Columbia, 2022).

When the official community plan was written, its focus was persevering the environment while supporting economic growth and community services. Since the official community plan, investment in tourism has taken place. Tourism has been featured heavily in supporting documents such as its tourism strategy and economic development plan. Recreation has seen investment, such as in the reopening of the community ski hill, a festival called Winterfest was hosted for the first time, and the number of business licenses hit a five-year high in 2021 (District of Mackenzie, 2017a; District of Mackenzie, 2018; District of Mackenzie, 2019; District of Mackenzie, 2020; District of Mackenzie, 2021a). Economic diversification has also occurred. In the 1996 Census, the proportion of manufacturing workers was 44%; in 2021, this was reduced to 20% (Statistics Canada, 2019e; Statistics Canada, 2023e). In 1996 the proportion of people working in agriculture, forestry, fishing, and hunting was 6.5%; in 2021, this increased to 13% (Statistics Canada, 2019e; Statistics Canada, 2023e). In 1996 the proportion of people working in mining, quarrying, and oil and gas extraction was 0%; in 2021, it had increased to 4.5% (Statistics Canada, 2019e; Statistics Canada, 2023e).

Population attraction and retention were identified in the economic development plan. Population estimates show that the population in the district is declining, but there is hope that it could be slowing (Government of British Columbia, 2022). The chief administrator noted that

during the last few years, people had moved to the district due to its relative affordability compared to larger centres. 2022 was the best year for the local housing market. With the age-friendly strategy, hopefully, the district will be able to make the necessary accessibility and service upgrades needed to allow the newcomers to stay for a long time.

6.6 Common Challenges

Internet Speeds

Each of the five study communities save for Kitimat identified accessing highspeed quality broadband internet as a problem either in their official community plans or through interviews. Accessing quality internet services in remote communities is complicated, as few companies often offer the service and the expansion of the service is prohibitively expensive. NorthwesTel services Fort Nelson in Northern Rockies RM, in Fort Nelson, the best internet service they offer consists of unlimited monthly data usage, download speed up to 125 Mbps, and upload speed up to 12.5 Mbps at the cost of $189.95 per month (NorthwesTel, 2023). In Winnipeg, a comparable package through Bell would cost less than $100 per month (Bell, 2023). The best package that Bell offers in Winnipeg also offers unlimited data usage. However, its download speed is 64 times faster than NorthwesTel, and its upload speed is 640 times faster at $150 per month (Bell, 2023).

Port Alice, Mackenzie, and Valemount have made headway on this challenge. Port Alice received a connection to Telus's fibre network in 2015, and it recently received a new cell tower from the company in 2021 (BC Gov News, 2015; Village of Port

Figure 5. Internet Speeds in 4/5 Study Communities

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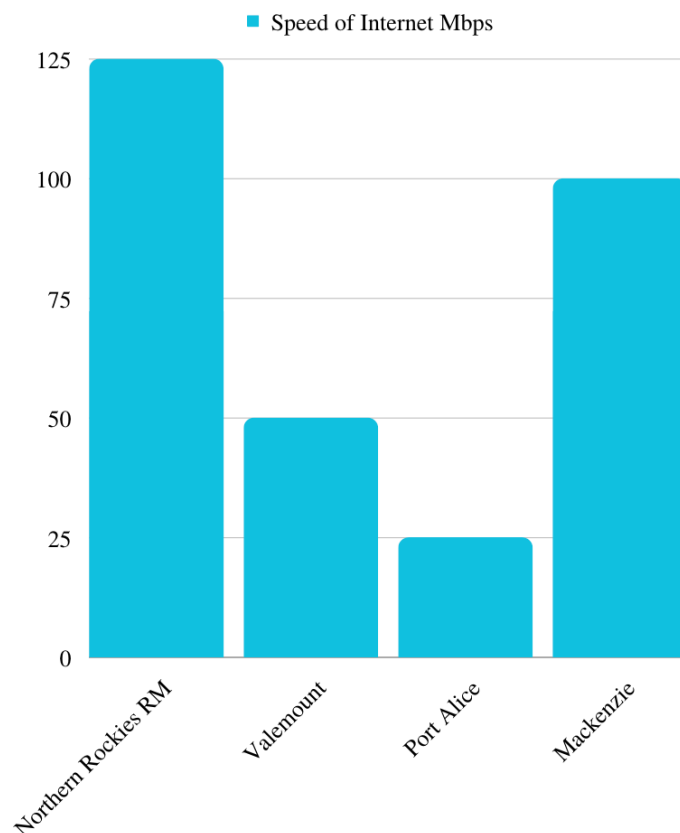
Alice, 2020). However, even with this upgrade, connection speeds are five times worse than Fort Nelson's in Northern Rockies RM (Telus, 2023). Mackenzie and Valemount, jointly with another community, developed their Regional Broadband Strategy in 2021 (TANEx Engineering Corporation, 2021). Currently, the level of the internet that is accessible in Mackenzie and Valemount falls between that of Port Alice and Fort Nelson Northern Rockies RM.

Mill Closures and Forestry Legislation

Each study community has had its workforce negatively affected in the manufacturing sector by layoffs. Mill closures have had significant adverse effects on the four historically forestry-based communities, Port Alice, Northern Rockies RM, Mackenzie, and Valemount. Valemount was the first to lose its major sawmill in 2006, and it was torn down in 2009 (Keil & McCracken, 2019). Both Rocky Mountain RM and Mackenzie were hard hit, losing their multiple mills in 2009 following the 2008 Recession; no mills in Rocky Mountain RM have since reopened (District of Mackenzie, 2014). Port Alice was the last to lose its anchor mill in 2015, and the process to dismantle it has recently begun (Chan, 2023).

One reason for the widespread mill closures was provincial legislation produced in 2006 (Keil & McCracken, 2019). This legislation allowed for more widespread exportation of raw logs rather than having them be processed in BC (Keil & McCracken, 2019). This policy change was referenced during both the Valemount and Mackenzie interviews. Some changes to help keep more logs in the province appear to be on the horizon. The legislation was amended in 2020 to allow more timber for local processing (Government of British Columbia, 2020). Legislation is not the only thing affecting the viability of mills. The availability of timber is not as abundant as it used to be due to pine beetles and wildfires (Statistics Canada, 2022).

Aging Demographics

The median age in Canada in 2021 was 41.6 (Statistics Canada, 2023f). The only study community with a median age below the national average was Northern Rockies RM at 39.6 (Statistics Canada, 2023a). The other communities had higher-than-average median ages. Port Alice had the oldest median age at 58.8, followed by Valemount at 44.8, Mackenzie at 43.6, and Kitimat at 42.4 (Statistics Canada, 2023b; Statistics Canada, 2023c; Statistics Canada, 2023d; Statistics Canada, 2023e). It was noted by multiple interviewees that when the jobs left

municipalities, so did many of the young people. Older people and retirees dug in and stayed as they were no longer working or could not afford to move, creating issues for communities' continued viability and ability to provide services. It was also noted during interviews that school populations have reduced, meaning fewer children are in the communities.

Aging housing stock and infrastructure

Two of the five communities (Port Alice and Mackenzie) were incorporated under the 'instant towns' policy (Government of British Columbia, n.d.). Kitimat predates this policy; however, it has similar origins, having been "hewn out of the unknown wilderness" in less than a decade (Cross, 2016). Because most of the communities' infrastructure was built around the same time, approximately 60 years later, the infrastructure is now aging into expiration needing more frequent maintenance and replacement (District of Kitimat, 2008; Valemount, 2021a). Aging housing stock is something that the communities are also aware of. Most housing was built during boom times. In the case of Mackenzie, this means that most of the housing stock is about 40 years old (District of Mackenzie, 2014). Aging housing stock means much of the housing in the community needs repair and renovation (District of Mackenzie, 2014). In addition to needing repair and renovation, most housing is single-family detached dwellings, creating an accessibility issue as this type of housing is not conducive to aging in the community and for those with limited mobility (District of Mackenzie, 2014).

Covid-19

Despite their remote locations, the study communities were not unaffected by the Covid-19 Pandemic. All communities faced challenges during the pandemic; their annual reports reflect that. The key sectors affected by the pandemic in each community were recreation and services. The 2020/2021 reports showcase what has been done to maintain and rebuild services following closures during the pandemic.

6.7 Differences in Strategies

Geographic Differences

The study communities identified that they wished to diversify their economies away from their historic primary resource industry. Many unique sectors were identified as possibilities for economic expansion ranging from establishing ski resorts to geothermal energy and fish processing. Not all suggested industries could successfully operate in each community, and many suggestions are contextual to geography. A fish processing plant is unlikely to be successful in Northern Rockies RM as it is located hours away from the ocean, just as fracking is unlikely to work in coastal Port Alice.

Critical infrastructure in the study communities differs greatly, impacting the industries that can operate within the community. Port Alice is the only study community not connected to a railway in any format, passenger or freight, thus limiting the quantities of exports that can be transported from the village. If a large industry were to reopen in the village, its exports would need to be shipped via truck or boat. Valemount is the only study community that currently has operational passenger rail. VIA Rail Canada operates a daily trip heading east and one heading west, connecting the village to Vancouver and Edmonton (VIA Rail Canada, 2023). Those who take this route are often tourists rather than travellers, which benefits the community due to its status as a resort community. Mackenzie, North Rockies RM, and Kitimat have some access to freight rail, although the quality varies, as noted in other sections.

Differences in Official Community Plans

Official community plans reflect the time in which they were written. Some plans were written over a decade ago, and priorities can shift in that time. For Mackenzie and Northern Rockies RM, their community plans were created when their populations were stable and increasing; between the creation of the plans and now, their populations have declined, and stabilizing the population is now a priority. The scope and priorities of the plans also differ. The Valemount and Northern Rockies RM's official community plans are extensive at over 100 pages each. They also have in common with Mackenzie that the plans focus on land use policy. Port Alice's plan is unique because it is divided into sections by goals, whereas Kitimat is centred around scenario planning with measurable objectives. Port Alice and Mackenzie have the shortest community plans at 45 and 56 pages, respectively.

6.8 Common Strategies

Diversifying the Economy

Each of the five communities identified diversifying the economy as necessary for economic and population growth. The Port Alice economic strategy discusses how an increasing population drives economic growth and vice versa (Village of Port Alice, 2016). The ways the communities have approached diversifying their economies differ in some strategies and are similar in others. The most common was through tourism, wherein all five communities expressed their intent to pursue it through their official community plans, economic development strategies, or tourism strategies. Supporting quarrying, mining, and encouraging home-based businesses had support from four out of five communities. Developing local agriculture, developing live/workspaces, and supporting industrial and resource bases were emphasized in three of five communities.

Each of the communities has had some success in diversifying its economy. This diversification can be seen through census data. Each of the five communities historically had a large proportion of their population working in manufacturing. Between 1996 and 2021, each of the communities had their proportions of the workforce employed in manufacturing drop by over 50% (Statistics Canada, 2019; Statistics Canada, 2019b; Statistics Canada, 2019c; Statistics Canada, 2019d; Statistics Canada, 2019e; Statistics Canada, 2023a; Statistics Canada, 2023b; Statistics Canada, 2023c; Statistics Canada, 2023d; Statistics Canada, 2023e). However, this is likely primarily due to mill closures in Valemount, Port Alice, Mackenzie, and Northern Rockies RM, where the mills' employed large proportions of the population. In Kitimat, this can be explained through layoffs, restructuring, and automation at the large smelter. Because of these closures and layoffs, much of the economic diversification likely occurred out of necessity to fill the voids left by manufacturing. When large layoffs and closures occurred, communities often experienced population reductions leaving those employed in other sectors to stay in the community.

Focus on Tourism

As noted above, all the study communities highlight tourism as an industry they want to expand into. Two of the communities have dedicated tourism strategies, and it also features heavily in economic development plans. All the communities believe that their natural environment and outdoor recreation opportunities make them ideal vacation spots for visitors and residents to

enjoy (City of Kitimat, 2008; Northern Rockies RM, 2011; District of Mackenzie, 2014; Village of Port Alice, 2010; Village of Valemount, 2021). Each of the communities has specific outdoor adventures to offer. Kitimat and Port Alice offer beautiful coastal vistas and different ocean-based activities, such as fishing and kayaking, and they are accessible via boat (Village of Port Alice, 2016). Mackenzie and Valemount offer skiing and other exciting winter activities, such as snowmobiling, and summer activities, like hiking and mountain biking (District of Mackenzie, 2017a; District of Mackenzie, 2014; Valemount, 2021a). Northern Rockies RM is conveniently located along the Alaskan Highway, which sees thousands of tourists annually and is a beautiful place to view the Northern Lights (Northern Rockies RM, 2011). Each community has something special to offer. However, what makes them unique? There are countless places in British Columbia that one can travel to for skiing, kayaking on the ocean, or mountain biking that are easier to access for most tourists and are cheaper to travel to. With the remoteness of some of these communities, they are expensive to travel to with limited or no flights. Once in town, one must drive to many of the desirable recreation areas. The communities must show through marketing that they are desirable, unique, and worth travelling to despite the inconvenience of reaching them.

Geothermal

Northern Rockies RM, and Valemount, both mention geothermal energy as a way to heat and power their communities either through their official community plans or during their interviews. Geothermal energy is a clean energy source that provides power by extracting heat beneath the Earth's surface (International Renewable Energy Agency, 2023). The benefit of geothermal is that it is a renewable energy source that does not emit greenhouse gases (International Renewable Energy Agency, 2023). Both Northern Rockies RM and the Village of Valemount currently have projects in the works led by their local First Nations. In Northern Rockies RM, the project is called Tu Deh-Kah Geothermal, a completely indigenous-owned company (Tu Deh-Kah, 2023). While geothermal energy already does not produce greenhouse gases, the Tu Deh-Kah project seeks to make its operation even more environmentally friendly by not emitting excess steam using a closed-loop system and locating the operation on an existing brown-site (Tu Deh-Kah, 2023). It is the first large-scale geothermal project where the ground has been broken in the province that will be used to power a community (Tu Deh-Kah, 2023). This clean energy

is important because, as Mike Gilbert from Northern Rockies RM emphasized in his interview, Fort Nelson and the Fort Nelson First Nation's in the RM are not connected to BC Hydro. Instead, they are connected to an Alberta energy grid that produces energy by burning fossil fuels. Since large quantities of excess energy could be produced, one possible use for this energy, described by Mike Gilbert, would be in large-scale greenhouse farming.

Figure 6. The Tu Deh-Kah Geothermal Site

(Tu Deh-Kah, 2023)

The geothermal project in Valemount is less far along. In 2021 it received 1.5 million dollars in grant money for research and development (Village of Valemount, 2021b). Unfortunately, after some investigative drilling and testing, it was determined that no geothermal energy could be produced at the proposed site meaning that alternative options will need to be explored if the village wishes to continue with the possibility of geothermal energy (Government of Canada, 2022).

Affordability/Diverse Housing Types and Densities

As noted above, regarding the aging housing stock in the study communities, the most available housing in the communities is aging single-family detached dwellings. There are some semi-detached and multi-family options, but they are the minority. All five communities note that they need to improve the range of housing types and densities in their communities. In most of the

communities, buying a house is relatively cheap compared to larger population centres in the province. However, much of the available housing is old and needs repair and renovation, leaving few options for those requiring modern, accessible homes due to age and/or disability. The communities note that part of their draw is their compact walkability. If the populations begin to grow again, the trend of single-family detached dwellings could lead to urban sprawl reducing this benefit. Therefore, each community promotes infill and redevelopment instead of greenfield development. Not only will this keep the community compact it will also make servicing cheaper for the community, helping to keep taxes at a reasonable level.

Aging in the Community

As noted in the section on aging demographics, the median age in four out of five of the communities is above the average for the province. Mackenzie and Kitimat have age-friendly strategies or plans, and the other communities also recognize the need to have supportive, accessible housing for their seniors to remain in the community. There is a lack of assisted living in most of these communities, and developing such would benefit the community. Allowing seniors to stay in the community even after moving to assisted living would aid in population retention as it would keep these residents in the community longer than if they needed to leave to seek higher care elsewhere. Establishing assisted living also provides local jobs, which could attract new residents to the area.

Kitimat wishes to try and attract retirees from outside the city to move to the city by promoting its assets like its affordability (City of Kitimat, 2008). During the pandemic, Diane Smith, the interviewee from Mackenzie, found that they had successfully attracted young retirees to the district. Attracting young retirees has multiple benefits. When they first move to the community, they will likely be investing in real estate, paying property taxes and spending money in the community. As retirees get older, if services allow, such as the availability of assisted living, they could stay in the community and continue to contribute to its economy. One barrier to the provision of necessary services is the lack of available healthcare specialists in remote communities; however, with the advance in telehealth due to the pandemic, some appointments could take place over the phone leading to a reduction in the need to travel for services.

6.9 Who is Succeeding in Growing or Stabilizing?

In the last two to three years, Kitimat, Valemount, and Port Alice have stabilized their populations in the short term and even grown slightly, according to population estimates from the Government of British Columbia (Government of British Columbia, 2022). Between 2018 and 2021, the City of Kitimat added approximately 207 people to its population (Government of British Columbia, 2022). Port Alice in the same timeframe, added approximately 54 people to its population (Government of British Columbia, 2022). Between 2019 to 2021, Valemount added approximately 50 people to its population (Government of British Columbia, 2022).

It is not easy to fully attribute the rise in population to one specific cause because one cannot fully account for another's personal choices and preferences, nor can one account for a multitude of other factors. Despite this, some inferences can be made. In the cases of Kitimat and Valemount, the recent population increases likely are partially caused by the major construction projects currently operating within and near the communities. In Kitimat, this project is the LNG Canada export facility; in Valemount, this is the Trans Mountain Pipeline Expansion. For Port Alice, the answer is potentially more nuanced. It does not have a large anchor project attracting more population to the village. There has been a drive by the village to attract more people and business, and with the population estimates, those campaigns could be working. Housing affordability in these communities is also likely contributing to their increases.


6.10 Who is Struggling to Stabilize?

Neither Northern Rockies RM nor Mackenzie has been able to stop the decline in their populations in recent years. Northern Rockies RM's population has consistently declined since 2013 (Government of British Columbia, 2022). Examining population estimates from 2001 to 2021, there was a decline of 235 people between 2007 and 2008, coinciding with the 2008 Recession when the mills began to close. Then the population remained relatively stable until 2013 (Government of British Columbia, 2022). The beginning of this continual decline also coincides with when Mike Gilbert noted that the bottom fell out of the local oil and gas industry. The population losses can likely be attributed to these two major industry failures and the lack of a replacement industry to maintain employment in the RM. There is hope for the future, as economic growth in the RM could increase due to recent projects. The Look North program has been successful thus far, with the LNG facility running at full capacity supplying remote

communities and work sites north of Fort Nelson with liquified natural gas sent to their communities via road in trucks. The geothermal energy project also shows progress, which could lead to offshoot industries such as greenhouse farming. If these and other upcoming projects, such as tourism, continue to expand and remain resilient, the population decline in the RM could reverse.

As per Government of British Columbia population estimates from 2001 to 2021, Mackenzie consistently lost population between 2001 to 2010 (Government of British Columbia, 2022). It then proceeded to stabilize and grow for a while from 2011 to 2018, partly due to some of the mills beginning to reopen during this time (District of Mackenzie, 2014; Government of British Columbia, 2022). Since 2018 the population has been declining again (Government of British Columbia, 2022). There is also the potential for this trend to be reversed in Mackenzie. The local government has been hard at work, and they have released three very detailed plans in 2021 regarding economic development, age-friendliness, and tourism. In addition, they had a strong year in the real estate market, which points to growth, and their number of business licenses is at a five-year peak (District of Mackenzie, 2021a).

Figure 7. Changes in Population Between 2019-2021

Number of Residents Lost or Gained
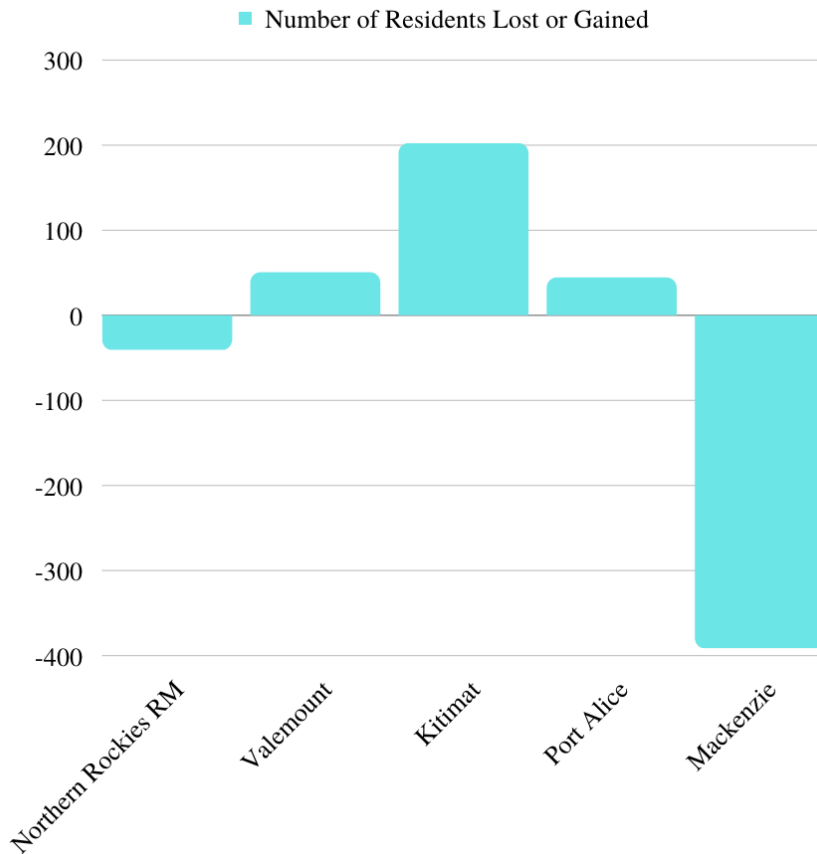
(Government of British Columbia, 2022)

7.0 Recommendations

Each study community seems to have very involved local governments who wish to see their communities thrive. Many of these recommendations will already be programs or goals in place for the communities. Here are some ways that resource communities could explore or continue to explore to maintain economic and population growth.

7.1 Satellite Internet

During the interview with Mike Gilbert, the possibility of satellite internet as the solution to their internet connectivity woes was posed. One satellite internet provider Starlink is available in the five study communities (Starlink, 2023). It could provide better or comparable service to that available in Port Alice, Mackenzie, Valemount, and Northern Rockies RM. The speed of the internet does not appear to be publicly available on its website. However, reports have stated that

speeds can be available up to 500 Mbps; the speed can vary due to many factors (Gerhardt & Tynan, 2023). As of the first quarter of 2022, Canada's average download speed was 97.40 Mbps (Fomon, 2022). Compared to the study communities, it is similar to the speeds available in Northern Rockies RM. It is almost four times faster than that in Port Alice, it is about 1.3 times faster than that in Valemount, and it is roughly 6.5 times faster than that in Mackenzie (Telus, 2023). Starlink has a high initial start-up cost of $759 per household due to hardware costs, and then it is currently $140 a month for usage (Starlink, 2023). It is cheaper than comparable service in the Fort Nelson population centre of Northern Rockies RM by $9.95 per month (NorthwesTel, 2023). It is 50$ more monthly than the available plan in Port Alice, $35 more per month than the best plan in Valemount, and 45$ a month cheaper than the available plan in Mackenzie (Telus, 2023). The start-up costs to switch to Starlink may be prohibitive for some families. Its monthly costs are higher than plans available through more traditional providers, but its speeds are desirable compared to those available in Port Alice and Mackenzie. Starlink plans to continue to launch satellites soon to improve speeds and coverage, which will continue to make it an attractive option to improve internet connectivity in remote communities (Starlink, 2023). Starlink is not the only satellite internet provider available to the communities. There are multiple Canadian satellite internet companies that could provide service such as Telesat, Xplornet, and Galaxy Broadband Communications Inc.

7.2 Seek to Maintain and Promote Relative Affordability

A critical attractive feature of the study communities is their relative affordability compared to larger population centres in British Columbia, such as Victoria, Vancouver, Kelowna, and even Prince George. What is lacking in these communities is diversity in housing. Much of the available housing is single-family detached dwellings that are for sale. The availability of rental-type housing is more limited and often more expensive per month than the cost of a mortgage (District of Mackenzie, 2017). All the communities' official community plans reference increasing the diversity of housing stock available. By increasing densities, the communities can remain affordable while increasing their suitability for a broader range of residents.

7.3 Improve Access/Maintaining Regular Flights

It is expensive and inconvenient to reach many of the study communities. In the Context Section of this report, the driving distance to popular larger centres was listed, and it would take between six to 18.5 hours to get from any one of the study communities to Vancouver by driving (Google, 2023). Flying to some of these locations is also tricky. Neither Port Alice nor Kitimat has traditional airports; due to their coastal locations, they could be accessible by seaplane or by boat. Visitors who wish to access these communities would typically have to do so by road. Only one airline flies into Fort Nelson in Northern Rockies RM. Central Mountain Air flies three times a week into Fort Nelson from Prince George, and a one-way flight costs between $300 to $465 (Central Mountain Air, 2023). Valemount has a small airport; however, its airstrip is not conducive to landing large commercial planes and, as such, no major airline operates out of it (Village of Valemount, 2023). Like Valemount, Mackenzie also has a small airport. It can land charter, corporate, and recreational flights (District of Mackenzie, 2023c). It may be worthwhile to investigate government funding or programs that would subsidize or aid in the accessibility of the communities. Affordable accessibility would be beneficial for both residents and visitors alike.

7.4 Improve Seniors' Resources

As previously stated in other sections, the demographics of resource communities are aging, and the communities are not equipped to allow many of their aging residents to stay in the community. To allow more aging residents to age in the community, investments should be made into the infrastructure and services needed for elderly residents. Currently, Mackenzie, Valemount, and Port Alice lack a dedicated assisted living facility, and there are few options in Northern Rockies RM. Investing in seniors' housing will enable more seniors to stay in the community rather than have them leave to move to a larger population centre where supportive housing is available. Advocating and lobbying for better telehealth services is also a step that communities could take to allow their residents to have better access to specialists where an in-person visit may not be required. Also, attracting more doctors to their community would be beneficial. Northern Rockies RM purchased a doctors' residence to help bring healthcare workers to the community.

7.5 Geothermal

Both Valemount and Northern Rockies RM currently have geothermal energy projects in the works at varying stages. There is potential that geothermal energy could also be beneficial to Mackenzie, Port Alice, and Kitimat. Outside electricity production, there are direct uses for the heat brought to the surface, such as green housing, direct heating systems, and resource industries (Government of British Columbia, 2023b). North of Kitimat, the Kitselas First Nation has begun work on a geothermal energy project. Research and testing have shown that it is a commercially viable enterprise, and they are potential industrial customers around the Skeena Industrial Development Park for once the project is operational (Kitselas Geothermal, 2023). Depending on the project's success, it could be explored whether or not it could be used to power Kitimat's new LNG Canada export facility. The City of Kitimat or the local Haisla First Nation could also explore developing their own facility. The below map shows the potential for geothermal energy in British Columbia based on the heat and permeability, which shows the potential energy available while also accounting for its accessibility.

Figure 8. Geothermal Potential in British Columbia
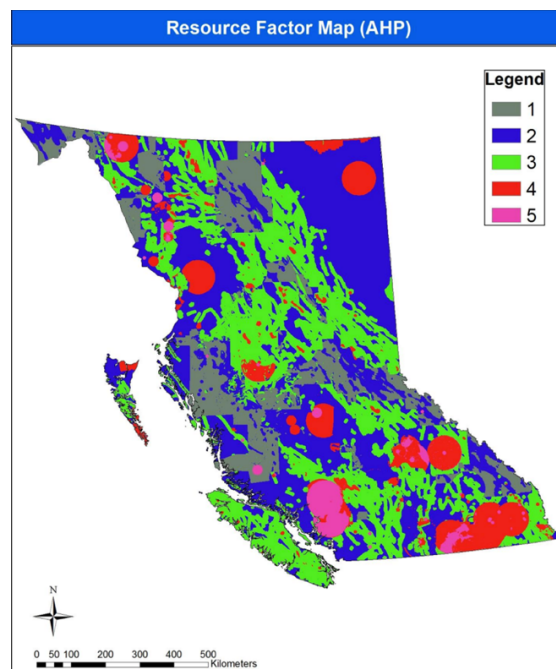
(Kimball, 2010)

Conclusion

Resource communities have a long history in British Columbia, from the first company towns in 1855 to the present (Morisset, 2017). The five study communities, Northern Rockies RM, Valemount, Kitimat, Port Alice, and Mackenzie, have histories of varying lengths. Some are as young as the 1950s/60s, while others have settler histories dating back to the fur trade. Each finds themselves in a similar present situation struggling to stabilize and grow their populations following declines and closures in their primary industries. Port Alice, Valemount, and Northern Rockies RM have lost their historic primary industries with their mills closing. Mackenzie had its mills close in 2009 due to the 2008 economic crisis. However, some have since reopened, but not at their former capacities. Kitimat has retained its smelter since its inception, but its workforce has been reduced due to automation and restructuring. With these changes in their historic primary industries, the study communities have been exploring ways to revitalize their economies and communities.

There are a few common factors between the study communities. Each community is remotely located, with at least a six-hour travel distance (ferry included for Port Alice) from the largest city in British Columbia, Vancouver. Aside from Northern Rockies RM, each of the communities has a higher-than-average median age, and they have all seen a reduction in the proportion of their workforce working in manufacturing. This is likely attributable to mill closures rather than economic diversification attempts.

Each community has an official community plan which outlines its goals as a community. Common goals among the five communities include strengthening their economy, growing their populations, and maintaining a high level of services. The strategies that they suggest to accomplish these goals vary. Diversifying their economies away from their primary industries is a priority for all the communities. The strategies they suggest to diversify their economies range from developing aquaculture to establishing a world-class ski resort. There are some strategies that most of the communities have in common such as developing tourism. Each community boasts its natural environment as one of its key attractive features, offering many outdoor recreational activities that make them an attractive place to vacation. Other common strategies include focusing on infill development while constructing diverse housing types and densities. Creating a range of housing types and densities will also aid in the hopes of creating age-friendly communities. Currently, the housing stock in most of the communities consists of aging single-family housing that is not conducive to older people and those with mobility issues. The

communities have an aging population yet lack access to appropriate housing, such as assisted living for those populations. Since many of the communities were constructed within a few years, their infrastructure is aging simultaneously, causing it to need repairs and replacements.

There are some common challenges that each community has faced. As each community is in a remote location, they face difficulties accessing the same internet services that people enjoy in larger population centres. In some cases, such as Northern Rockies RM, they pay substantially more per month for subpar service than those living in cities.

Three study communities, Kitimat, Valemount, and Port Alice, have stabilized and slightly grown their communities in recent years. The growth in Kitimat and Valemount can potentially be attributed to the current large construction projects occurring in the area. Ideally, they can turn these temporary residents into permanent residents. Port Alice is more difficult to assess because they have not had the same sudden investment in an industry bringing in a large workforce. Two communities have not succeeded in stabilizing their populations in recent years. Mackenzie and Northern Rockies RM continue to have declining populations as per the province of British Columbia Population estimates. However, they have some exciting projects and plans that could potentially slow their decline or stabilize their populations in the coming years.

Each community has detailed plans for its future, including attracting and retaining populations while strengthening its economies and maintaining services. They have invested in municipal governments that wish to strengthen their communities. Through this examination, there are a few recommendations that can be made. One suggestion to help solve the communities' connectivity issues is to look into satellite internet. Other recommendations involve continuing to promote their affordability and improving their resources for senior residents. A potential industry that they could explore is geothermal energy, of which there are currently promising projects in the works in both Northern Rockies RM and near Kitimat. Geothermal energy can help diversify economies while also providing clean energy.

Northern Rockies RM, Valemount, Kitimat, Port Alice, and Mackenzie have rich histories as resource communities, and they have the potential to be thriving communities moving into the future. Each community is taking steps to stabilize its population, and despite challenges, they continue to remain optimistic for the future.

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