Acknowledgements

Executive Summary

This report was undertaken as part of a larger research project initiated by the BC Non-Profit Housing Association (BCNPHA). The motivation behind the larger project was to provide better and more nuanced data on the rental housing market in British Columbia. The purpose of this report is to give context to this data and demonstrate how the methodology may be applicable outside of BC.

The report begins by providing a historical analysis of the factors that have influenced the state of rental housing in Canada. These include the restructuring of federal income tax policies in 1972, rent control, effects of condominiums, direct government programs, and Canada's 'dual housing policy'. This history shows that the majority of today's purpose-built residential rental stock was constructed prior to 1972 and will need significant maintenance in coming years. The current market incentivizes the provision of new rental housing delivered as smaller buildings by non-corporate landlords such as rented condos, rented houses, secondary suites and accessory dwellings such as laneway or carriage homes. For a variety of reasons, the data collected and reported on rental housing fails to document accurately this secondary rental market. The RHI research project was conceived to address the absence of information on the rental housing market.

The second section gives an explanation of the methodology and its development followed by a discussion of the results of this research. Three main trends in BC's rental housing market are identified. Firstly, unaffordable rental housing is not a problem that exists only in large urban centres. The statistical analysis undertaken through this research examined the rental housing markets in Canada, British Columbia, and nearly all BC Regional Districts and municipalities showing that communities of all sizes across BC have unaffordable rental housing

markets. Secondly, issues with rental housing affordability appear to stem primarily from a mismatch between high rents and low incomes rather than households living in overcrowded or otherwise inadequate conditions. Lastly, because the unique methodology allows examination of rental housing trends for households with different incomes, it is shown that problems of rental housing affordability are disproportionately affecting those with lower incomes.

The report concludes with recommendations as to how the results of this research may be applied in practice. The results of this project and the RHI as a tool are potentially useful to affordable housing advocates, researchers, planners and developers. Suggestions of how this work might be used by these types of practitioners are addressed in turn.

1.0   Introduction

The private market is the predominant means of providing housing in Canada. Data from the 2011 National Household Survey (NHS) illustrates this: housing for 87% of Canadians is provided through the private market. Over two thirds of Canadian households own their homes and 31% rent. Of these renter households, nearly one in seven live in some form of subsidized housing. British Columbia has similar proportions to the nation at large (Statistics Canada, 2011).

Over the past thirty years it has become apparent that the private rental market has failed to sufficiently accommodate the demand for affordable rental housing in both Canada and British Columbia. Economist Lawrence Smith identified this problem in 1983 and warned of a "growing crisis in rental housing" (Smith, 1983). In 2011, 40% of Canada's renter households paid more than 30% of their income to shelter; nearly half of these households paid more than 50% of their income. The situation in British Columbia is slightly worse: 45% of renters pay more than 30% and slightly more than half of these housholds pay more than 50% (Statistics Canada, 2011).

There are two standard measures of housing affordability: households spending 30% to 50% of their income on shelter are considered *moderately cost-burdened* and households spending more than 50% are labelled *severely cost burdened* (Luffman, 2006; Pomeroy, 2001). Depending on the paucity of their incomes, these households may be forgoing other necessities in order to pay rent.

If the private residential rental market operated efficiently and equitably under laissez faire economic conditions, there would be little rationale for any government intervention. However, the relevant housing data shows that since the mid 1970s there has been a decline in the construction of new purpose-built rental units to the point where supply is no longer able to

adequately meet demand. If provincial and particularly federal levels of government continue to devolve their responsibilities for housing to municipal authorities, a significant reversal of this trend is not foreseeable (Seto, 1985).

To adequately address the issue of affordable housing, it is important to have a clear picture of the current state of affordable rental housing. The Rental Housing Index research project provides a method for empirically assessing the state of a rental housing market in a community. In doing so, rental-housing trends, often anecdotal, are quantified. Affordable housing advocates, planners and policy-makers can use the resulting information as evidence to demonstrate the need for improved affordable housing options in a community. Around the world, communities are experiencing crises with respect to affordable housing. With some precautions this methodology may be applicable outside of the provincial context within which it was developed by providing a preliminary framework for systematically examining the state of any rental housing market.

This report consists of four parts. The first reviews government policies and other factors that have had an effect on Canada's rental housing market. The second outlines the methodology for statistically analyzing the rental housing market in a particular community. The third section applies this methodology to assess the quality of the rental housing market in British Columbia and the final section provides suggestions as to how this research may be utilized by practitioners.

2.0   Background Information

2.1   The BC Non-Profit Housing Association

This report was undertaken as part of a larger research project initiated by the BC Non-Profit Housing Association (BCNPHA). The project was conceived in November 2013 by Jill Atkey, BCNPHA Director of Research & Education, and Tony Roy, BCNPHA's Executive Director and generously supported by Vancity Credit Union.

Execution of the research including development of the methodology, statistical analysis and creation of the final online interface used to present the findings was undertaken in the summer of 2014 by a three person team comprised of myself and two other BCNPHA Research Analysts. Jill Atkey and Tony Roy supervised this work with input from an Advisory Committee made up of knowledgeable housing professionals from across BC.

BCNPHA revealed the first iteration of the Rental Housing Index project at their annual Non-Profit Housing Conference in November 2014. The project will be updated each year with additional layers of data. Future research will include additional information on the supply and quality of non-profit housing in British Columbia, qualitative research such as videos that highlight compelling narrative arcs within the data, and a more nuanced analysis of the rental housing realities for specific populations such as students, seniors, people with disabilities and aboriginals.

The overall purpose of the larger project itself was to provide better and more nuanced data on the rental housing market in British Columbia. The BCNPHA's mandate is to provide leadership and support to non-profit housing providers and advocates across BC. The intention of Rental Housing Index project was to provide a solid technical foundation for policy making and development decisions.

The purpose of this report is to give context to this data and demonstrate how the results may be applicable outside of British Columbia. The report begins by providing a historical analysis of the factors that have influenced the state of rental housing in Canada followed by an explanation of the methodology and its development. The report concludes with recommendations as to how the results of this research may be applied in practice.

2.2 Factors affecting the state of rental housing in Canada

Because the majority of Canadians obtain housing through the private market, most of the housing literature shares this focus. Much has been written on the subject of social housing in Canada (Bourne, 2007; Colderley, 1999; Vakil-Zad, 1996) and the state of social housing certainly affects the private rental market, however this consideration is beyond the scope of this analysis. This chapter is limited to providing an overview of the main factors, identified in Canadian housing policy literature, as having a significant effect on the affordability of private rental housing in Canada. These factors are:

- the federal tax system;

- rent control;

- effects of condominiums;

- direct government programs; and

- Canada's dual housing policy.

2.2.1 The federal tax system

The 1972 restructuring of the federal tax system has generally been considered to have had a significant effect on both the demand for rental accommodation and the supply of rental stock

(Crook, 1998; Smith, 1983). While these tax reforms were not specifically implemented to affect housing policy, their effect on the rental housing market has been profound. In the decade before these tax amendments Canada saw a boom in the construction of apartment buildings, due in part to the favourability of the tax system and the anticipation of sustained inflation. In fact, the *majority* of Canada's current multi-unit rental housing stock was constructed prior to 1972.

Prior to that, rental housing investors benefited substantially from a number of long standing provisions contained in the Income Tax Act. However, most of these were eliminated in the 1972 reforms. From a housing perspective, the tax revisions believed to have had the greatest effect were the introduction of a capital gains tax and the elimination of investment real estate as a tax shelter for other income (Smith, 1983).

The tax amendments introduced a capital gains tax for all realized gains from financial and real assets, with the exception of a principle residence. This revision encouraged a shift in tenure towards ownership; compared to renting, the relative desirability of ownership increased as homeownership became the only vehicle through which a non-taxable capital gain could be realized. The capital gains tax reduced the desirability of residential rental investment only slightly as all major equity investments (other than a principal residence) were treated similarly.

Prior to 1972, rental investors enjoyed the right to pool multiple rental buildings for tax purposes. Rollover provisions allowed these investors to defer the tax on recaptured depreciation upon sale of a single building as long as there were others in the pool with unallocated Capital Cost Allowances (CCAs). As well, rental investors were permitted to use paper losses in real estate as deductions against non real estate income. In combination with CCA provisions that defined allowable depreciation for the purposes of income taxation as much higher than actual economic depreciation, these two factors made residential rental buildings an attractive

investment. However, the federal tax reforms terminated these rollover provisions and the opportunity to use rental building losses as deductions against other incomes. These two changes ended the use of rental real estate investments as a form of tax sheltering.

This restructuring served to disincentivize the construction of new multi-unit rental housing by decreasing after-tax profits, reducing the liquidity of real estate investments and encouraging a market shift towards home ownership (Smith, 1998). As a result, we have seen very little new construction of purpose-built rental buildings since 1972 and the remaining rental stock built prior to the reforms is deteriorating. These buildings will eventually need to be replaced and there are serious concerns as to how to ensure enough rental units to meet projected demand into the future.

2.2.2   Rent control

Most provinces adopted landlord/tenant legislation during the early 1970s and some form of rent regulations during the mid-1970s (Hulchanski, 1988). Rent control was intended to be only a temporary response to inflation, though it has been retained on a permanent basis in several provinces including British Columbia.

The topic of rent control in Canada was a contentious issue in the 1970s through to the early 1990s and most of the academic literature on the topic was published during this period. The debate attracted much public and academic scrutiny and was particularly polarizing because it pitted landlords and developers against tenants, leaving decision makers in the middle with the option of choosing one side or the other (Lazzarin, 1990). The inability of opposite sides to agree stems from the fact that advocates and opponents have very different issues and concerns. Advocates are generally concerned with issues pertaining to social justice and opponents base

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their arguments on economic concepts of market efficiency.

Advocates who argue for rent control (Gilderbloom and Appelbaum, 1988; Hulchanski, 1988; Makuch and Weinrib, 1985; Hulchanski, 1984; Gilderbloom, 1981; Marcuse, 1978) believe that the private housing market has inherent structural problems that prevent it from fostering perfect competition. For these advocates the rental housing market simply fails to provide affordable housing for everyone who needs it and significant government intervention is required. As well, advocates generally focus on the outcomes of rent control policies such as rents paid, vacancy rates and the prevalence of homelessness. Proponents of rental control argue that the policy has the following outcomes:

- ensures security of tenure;

- maintains affordability of the current rental stock;

- prevents regressive income distribution from tenants to landlords; and

- provides a formal system of mediation to settle disputes between tenants and landlords.

Opponents of rent control (Lewis and Muller, 1992; Smith, 1991; Miron, 1990; Arnott, 1988; Smith, 1988; Fallis, 1987; Fallis and Smith, 1985; Clayton Research Associates, 1984; Arnott and Johnston, 1981; Block and Olsen, 1981; Smith and Tomlinson, 1981; Walker, 1975) argue that the private rental market has the ability to reach a state of equilibrium without state intervention and that any perceived market failures are temporary in nature, which will self correct through the market. Rent control critics argue rent control policies will result in a shortage of rental stock in general and have the following effects:

- reduction in new rental construction;

- discouraging landlords from maintaining their buildings to offset losses of rental income;

- incentivizing the conversion of rental units to ownership;

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- the eventual demolition of the rental stock;

- increasing demand for rental housing caused by rents that are below the market rate; and

- a decrease in the market value of rental buildings, which will decrease the government's tax base.

2.2.3   Effects of condominiums

The condominium was introduced to the Canadian housing market in 1966 and began to rise in popularity in the early 1970s. Prior to condominiums, renting was the only tenure option available to those who were unable, for financial or other reasons, to enter the home ownership market. There is some disagreement in the literature as to whether condominiums have had a positive or detrimental effect on the rental housing market in Canada.

When the condominium form of tenure was initially introduced it was generally agreed that the conversion of rental units to condominiums could have negative repercussions for the rental market. Although the conversion of rental apartments to condominiums is a major aspect of the housing market in other countries (Crone, 1988; Eilbott, 1985), some authors saw this to be of lesser significance in Canada because of various provincial laws that allow municipalities to implement conversion controls (Smith, 1981).

The effect of condominiums on the rental housing sector is complex and it is difficult to say if it has been positive or negative. More recently, the condominium sector has been seen as a major contributor to the financing and supply of new rental units, particularly in light of the fact that very few new apartment buildings have been constructed in the past forty years. As the market for condominiums has two streams, potential homeowners and real estate investors, a

significant portion of the condo stock in Canada is rented out and actually contributes to the supply of rental units (Miron, 1994; Steele, 1993).

Others assert the increased access to home ownership offered by condominiums allows renters who formerly did not have an income sufficient to gain entry into home ownership. The condominium enhanced access to home ownership and many of the early condominium projects were marketed specifically as a low cost alternative to renting (Miron, 1994). This leaves the rental sector as the most likely option for lower-income households, those least able to afford housing appropriate to their needs (Roistacher, 1980). The limited rent-paying capacity of these tenants, rising operating costs, the 1972 restructuring of the federal tax system and the implementation of rent control legislation put landlords in a rent-cost squeeze. The majority of the largest development corporations have left the residential rental sector altogether in favour of more profitable commercial and industrial development.

Condo development in inner city neighbourhoods, often seen as an important part of neighbourhood gentrification, certainly has an effect on the affordability of rental housing. In order to get a complete understanding of the factors affecting the affordability of rental housing this topic must be considered. However the body of literature exploring the theories and effects of gentrification is vast and to delve in would go beyond the scope of this project.

2.2.4   Direct government programs

Although direct government support for private rental housing historically has been rare in Canada, since the passage of the of the National Housing Act in 1944 there have been a limited number of incentive programs to stimulate the construction of rental buildings. There is debate as to whether these programs were initiated due to concerns about supply and demand of

rental housing or because of the impact such programs would have on the creation of jobs in construction (Sewell, 1994). It was likely a hybrid of both motives.

In addition to the federal tax restructuring, it is generally understood that there have been four main federal government programs directly targeted to private rental housing supply:

- Limited Dividend program (LD);
- Assisted Rental Programme (ARP) and the Multiple Unit Rent Building scheme (MURB); and
- Canada Rental Supply Programme (CRSP).

The **LD program** (1946 to 1974) was used by the federal government to stimulate new rental constructions by the private sector for low and moderate-income households. The program offered private landlords favourable loans in return for limiting their profits by charging below market rents and limiting tenants to those in specific income groups. In effect LD used private landlords to provide social housing, similar to the Rental Assistance Program (RAP) and Shelter Aid for Elderly Renters (SAFER) program in British Columbia (Crook, 1998).

By the mid-1970s, federal tax reforms had decreased the profitability of building and operating rental housing. In addition, rent controls, the condominium tenure option and other homeownership incentives conspired to reduce rents below the minimum rate necessary for viable returns on rental housing. These factors prompted the federal government to introduce the **ARP programme** (1975 to 1978) and the **MURB scheme** (1976 to 1979 and again for one year in 1981) (Crook, 1998).

ARP placed restrictions on landlords to keep rents at a level that tenants could afford in return for tax-free grants or later, interest free-loans with repayments related to rent increases and levels of return on equity (Lithwick, 1977).

MURB returned many of the tax advantages of investing in private rental housing that were lost in the 1972 reforms and essentially restored the tax shelter for investments in rental housing. The result was a substantial increase in construction starts of residential rental buildings, only moderate increases in rents and significant increases in vacancies. Because of this improvement in market conditions, both ARP and MURB were eventually eliminated (Crook, 1998).

The federal government enacted the **CRSP** (1982) to both increase construction jobs during the early 1980s recession and respond to a drop in private rental construction. Similar to the ARP, the program offered interest free loans in return for reserving a portion of the units for disabled and low-income tenants (Crook, 1998).

Increasingly, the responsibility for housing is being devolved from the federal and provincial governments to local governments. There are disagreements as to whether this is the most optimal order of government to assume this responsibility.

Some claim local governments may be better equipped to deal with housing problems as solutions must be context specific and municipalities are better able to respond to the unique local needs of their housing markets. Metropolitan centers such as Toronto, Vancouver, Winnipeg and Montreal have the ability to define their needs and the property tax base to implement their programs (Carroll, 1989).

Others take a more politically pragmatic approach, recognizing that while housing should not solely be a municipal responsibility, in light of senior governments abdicating their responsibility, cities should take action where possible. The City of Vancouver has implemented a number of policies intended to increase the number of market rental units throughout the city (although the affordability of the units created through these programs is debatable) including the

Rental 100 program, the Short Term Incentives for Rental Housing (STIR) program, rate of change regulations, laneway housing, and legalizing secondary suites (City of Vancouver, 2014).

Others note how local governments, particularly smaller centers, have neither the financial nor political capabilities to undertake major social programs such as housing. Municipal governments are least able to resist private pressures from developers, afford the costs of subsidizing housing, and withstand local resistance to the building of social housing in particular locations (NIMBY-ism). Proponents of federal and provincial investments claim that if reasonable compromises between short-term demands and longer-term societal benefits can be achieved, it is more likely to happen through federal and provincial governments, which have longer political mandates and a broader range of policy instruments to choose from (Carroll, 1989).

2.2.5 Canada's dual housing policy

In addition to Income Tax Act changes and the introduction of the condominium tenure option, commencing in the 1960s a litany of federal and provincial government programs were introduced to encourage home ownership among lower income households. These programs have been discussed at length in the literature (Bourne, 2007; Smith, 1983; Smith, 1981; Smith and Tomlinson, 1981) and include: the 1970 Assisted Home-Ownership Program (AHOP); the 1974-85 Registered Home-Ownership Saving Plan (RHOSP); the 1982 Canada Home Ownership Stimulation Plan (CHOSP); the 1982 Canada Mortgage Renewal Plan; and the 1984 Mortgage Rate Protection Plan (MRPP). This list of programs begins to give an indication as to the scope of government subsidies available to the home ownership sector.

Prominent Canadian housing policy scholar David Hulchanski asserts that there are two separate parts to Canada's housing system, a primary and a secondary one, each with its own distinct and unequal range of government activities and subsidies. These two mirror the dualism in Canada's welfare state, which consists of the primary social security welfare state and the secondary social assistance welfare state. The primary part of the housing system represents the majority of Canadian households including most owners and those tenants who live in the higher end of the private rental market. The secondary part consists tenants in the lower portion of the rental market and rural and impoverished owners. The separation is based largely on tenure (owning versus renting). Hulchanski defines Canada's *dual housing policy* as one where all three levels of government assist owners and neglect renters. Canada has never had a policy of tenure neutrality, ie: assisting homeowners and renters equally, and as a result housing policy has subsidized home ownership, by design and incidentally, for the past 45 years (Hulchanski, 2007).

2.3 Available data on Canada's rental market

Today homeowners in Canada have, on average, about double the income of renter households. Not only does it seem counter-intuitive for the majority of government support to flow to wealthier homeowners rather than poorer tenants, but the figures that illustrate this imbalance are rarely released by the government (Hulchanski, 2007). Often both government and the media publish housing market information that includes statistics on ownership only or combines owners and renters together, obscuring important differences.

Statistics Canada collects data on the rental housing market through the census, however this information is difficult to access and does not include data on vacancy rates or supply, both important aspects when assessing rental affordability. The information can be separated by

tenure, however the organization of publicly available census data extremely limits the ways in which this can be applied. 'Custom data requests' are available only for a fee.

Rental housing data available through the Canada Mortgage and Housing Corporation (CMHC) does include vacancy rates but it only collects information on purpose-built rental structures with three or more units. This fails to document other forms of rental housing such as smaller purpose-built rental structures, rented houses, rented condominiums, secondary suites or accessory dwellings.

Another outcome of this lack of tenure neutrality can be seen in the type of data collected on the housing market by the private sector. Comprehensive information on the affordability of home ownership has been compiled by the private sector (RBC's Housing Affordability Report, UDI/Fortis BC's Housing Affordability Index). However, because of the smaller potential profit there is less incentive for the private market to develop accurate measures of the supply and demand of renters and the affordability of rental housing, particularly outside of a few major urban centers.

This dearth of available information on the rental housing market in Canada is symbolic of historic and current neglect by governments and, as a result the private sector, of the rental housing sector.

2.4   Purpose of the Rental Housing Index

Together these are the main factors that have resulted in a Canadian rental housing market that is severely limited in its ability to meet the demand for affordable rental housing. This demonstrates the acute need for data on the rental housing market if we are to advocate for or make decisions that will have an effect on the rental housing sector.

The current market is more favourable to rental housing that is delivered as smaller buildings offered by non-corporate landlords such as rented condos, rented houses, secondary suites and accessory dwellings. This shows the increasing insufficiency of the data on renter households collected by the CMHC, the federal government's main housing agency.

There is a critical gap in easily accessible rental housing information and if we are to successfully take action to alleviate Canada's rental housing crisis, we need better and more nuanced data on the rental housing sector. This is the problem this the Rental Housing Index project attempts to address. A similar project has recently been undertaken and published through Harvard's Joint Centre for Housing Studies (Joint Center for Housing Studies of Harvard University, 2013), demonstrating the increasing awareness of this issue in other North American contexts. However, a comprehensive overview of the state of rental housing for a Canadian jurisdiction of any significant size has yet to be done.

3.0   Methodology

The Rental Housing Index (RHI) is a tool for examining the state of the rental housing market in a community. The index was developed by utilizing data from the National Household Survey (NHS) of the 2011 Census. While this project uses an index to examine the health of the rental housing market in British Columbia, the methodology can be applied to other jurisdictions for which comparable data is available. The index will be most useful in assessing the quality of the rental housing market for communities within Canada, as the data would be in the same format as in BC. It may be possible to apply the same methodology to communities outside of Canada as long as equivalent data can be found. However, due to differences in the nature of rental housing in different international contexts some caution is advised in doing so.

The primary goal of the RHI is to develop an index to measure the health of the rental housing market in a community. This overall index (referred to as the *Community Index Score*) is calculated using the following five sub-measures (referred to as *Indicators*):

- Affordability;

- Overspending;

- Income Gap;

- Overcrowding; and

- Bedroom Shortfall.

The Indicators examine different aspects of household income, family size, gross rent (rent plus the cost of utilities) and housing quality. In combination these five Indicators are used to calculate the overall Community Index Score, a single value that can be used to assess the state of rental housing in a community and compare it with other communities. The Indicator measures that make up the Community Index Score can provide more nuanced information on

the individual factors affecting rental housing affordability that are of concern in a particular community.

This section of the report outlines the methodology for calculation of the Indicator and Community Index Scores. However, it is important to note that the dataset behind these calculations is extremely significant. Obtained from Statistics Canada through a custom data request, it contains previously unreported information on rents paid and income quartiles of renter households in every BC community with a population greater than 5000 people, more than 500 renter households and a GNR of less than 50%. The reasons for choosing this minimum population are discussed later. The dataset itself and the wealth of information revealed through each step of the calculation of the Indicator and Community Index Scores are informative resources that can be used by affordable housing advocates, academics, researchers, planners and policy-makers to demonstrate existing problems in the rental housing market.

3.1   Data sources

The Rental Housing Index was developed using data from the voluntary 2011 NHS (formerly the mandatory long-form census) obtained from Statistics Canada custom data request. Although the quality of the NHS is questionable, it has the most comprehensive information on rents paid and household incomes earned for jurisdictions throughout the country.

Quantitative information on Canadian renter households is available through two main sources, Statistics Canada and CMHC, though the data from both fails to completely capture Canada's rental universe.

Due to the door-to-door method of the survey, Statistics Canada's census does not include information on rental unit vacancies, a key aspect of the rental housing market. Another

major concern with using data from the NHS is the difficulty in comparing the voluntary 2011 census to data from earlier censuses. There are significant differences in methodology between the former mandatory long-form census and the revised optional NHS. As well, the response rate in 2011 was significantly lower than in previous years. Together these two factors make it difficult and potentially inaccurate to draw comparisons over time. The significant differences in methodology between the former mandatory long-form census and the revised optional NHS and the significantly lower response rate in 2011 undermines the utility of the most recent and previous censuses by making it difficult to draw comparisons over time. A voluntary census also has the potential to mask economic and social inequalities, as there is reason to suspect that certain groups such as visible minorities, low-income households and first nations tend to be less likely to respond to voluntary surveys (Statistics Canada, 2013). Although academics, researchers and policy-makers are currently lobbying the federal government to restore the mandatory long form census in 2016, this devastating change to our source of consistent nation-wide data will have lasting effects.

In contrast, data on renter households available through CMHC includes vacancy rates but only collects information on purpose-built rental structures with three or more units. This fails to document other forms of rental housing such as smaller purpose-built rental structures, rented houses, rented condominiums, secondary suites or accessory dwellings which, for reasons discussed earlier, comprise an increasingly significant portion of the rental universe.

The NHS is the most comprehensive source of data on Canadian renter households that is currently available and was therefore used as the basis for this project. However it is important to note these large gaps in available information on renter households. The fact that appropriate

Statistics Canada data was only available through an expensive and lengthy custom data request speaks further to the tendency of Canadian housing policy to neglect the rental market.

3.2   Indicator development

This section provides a detailed description of each Indicator, its development, and the methods used to calculate it. The Community Index Score is comprised of three income Indicators (displayed in the diagram below as red) and two supply Indicators (lime green). The Community Index Score (dark green) is thus weighted slightly more by Indicators that measure income.

Figure 1: Components of the overall Community Index Score
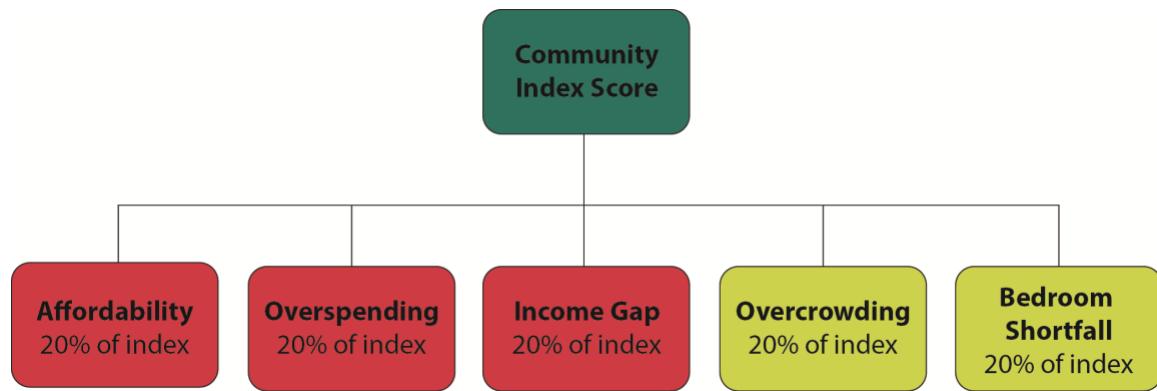
The RHI is unique in that it breaks down data on renter households by unit size and income quartile. Most data on rents is reported as a single number: the average rent for a community. The situation is actually much more nuanced. In order to assess rental housing affordability it critical to know how average rents differ for different sized dwellings and for households with varying incomes. This begins to highlight more subtle trends such as

affordability issues that disproportionately affect specific income groups. As such, trends that

often go undetected are documented and incorporated into the overall Community Index Score.

Income quartiles are determined by measuring average incomes of renter households in a

community, ranking them from poorest to wealthiest, and grouping them into 4 income quartiles

(1 being poorest and 4 being wealthiest). Each quartile represents approximately 25% of a

community's renter households. For Victoria, BC, shown below, there are 25,415 renter

households and each income quartile represents approximately 6,350. Household incomes for the

poorest (1st) income quartile are between $0 and $18,146 with an average household income of

$10,284.

Table 1: Number of renter households by income quartile, Victoria, BC

Income Quartile	Number of Households
1st Income Quartile $0 to $18,146 Average: $10,284	6,320
2nd Income Quartile $18,147 to $35,647 Average: $26,855	6,385
3rd Income Quartile $35,648 to $57,771 Average: $45,260	6,350
4th Income Quartile $57,772 + Average: $88,945	6,370
All Quartiles	25,415

Income quartiles were an important part of the Statistics Canada custom dataset as it

highlighted trends that affect some income groups more than others.

Each Indicator is first calculated as a raw score that is then converted into a range

between zero and 10. Zero represents perfect rental health and 10 is the community that ranks

poorest on that particular Indicator. The Community Index Score is simply a sum of all

converted Indicator scores, leading to an overall score between zero and 50.

The Affordability Indicator measures the percent of household income spent on rent plus the cost of utilities (known as gross rent in Statistics Canada terminology). Affordability is calculated by dividing the average gross annual rent by the average household annual income for each income quartile and unit size. The example below is taken from the municipality of Victoria, using the bolded numbers from the tables.

Table 2: Average income by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	$10,460	$10,078	$10,513	$11,256	$14,316	$10,284
2nd Income Quartile $18,147 to $35,647 Average: $26,855	$25,254	$26,711	$27,353	$27,706	$29,617	**$26,855**
3rd Income Quartile $35,648 to $57,771 Average: $45,260	$43,578	$45,048	$45,891	$45,394	$46,934	$45,260
4th Income Quartile $57,772 + Average: $88,945	$84,477	$82,255	$92,339	$93,863	$104,419	$88,945
All Quartiles	$25,927	$37,067	$52,893	$57,427	$67,682	$42,884

Table 3: Average gross rents per month by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	$631	$700	$986	$1,172	$810	$756
2nd Income Quartile $18,147 to $35,647 Average: $26,855	$756	$788	$993	$928	$738	**$847**
3rd Income Quartile $35,648 to $57,771 Average: $45,260	$793	$884	$1,076	$1,099	$1,432	$967
4th Income Quartile $57,772 + Average: $88,945	$899	$977	$1,216	$1,342	$1,795	$1,147
All Quartiles	$711	$823	$1,094	$1,160	$1,437	$930

Calculation:

$$Yearly\ Rent\ = \$847 \times 12 = \$10{,}164$$

$$Affordability = \frac{\$10{,}164}{\$26{,}855} = 38\%$$

Thus, on average in Victoria, renter households in the second income quartile spend 38% of their income on rent plus utilities.

This calculation is applied to every income quartile for every unit size. The following table shows the results for the entire community.

Table 4: Average percent of gross income spent on gross rent ('Affordability'), by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	72%	83%	113%	125%	68%	88%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	36%	35%	44%	40%	30%	38%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	22%	24%	28%	29%	37%	26%
4th Income Quartile $57,772 + Average: $88,945	13%	14%	16%	17%	21%	15%
All Quartiles	33%	27%	25%	24%	25%	26%

3.2.2   Overspending

The Overspending Indicator details the share of renter households spending more than 50% of their before-tax household income on rent plus utilities. Households spending more than half of income on shelter are referred to as *severely cost burdened*. This measure is commonly recognized as a critical level of unaffordability that puts households at risk of significant hardships such as forgoing other necessities (for example, food) or homelessness. Overspending is calculated by dividing the number of renter households spending more than 50% of their

income on rent plus utilities by the total number of renter households. The example below is taken from the municipality of Victoria, using the bolded numbers from the tables.

Table 5: Total number of renter households by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	920	3,930	1,235	145	50	6,320
2nd Income Quartile $18,147 to $35,647 Average: $26,855	430	3,895	1,605	405	30	6,385
3rd Income Quartile $35,648 to $57,771 Average: $45,260	295	3,510	1,975	455	80	6,350
4th Income Quartile $57,772 + Average: $88,945	155	2,620	2,720	665	150	6,370
All Quartiles	1,805	14,005	7,545	1,670	315	**25,415**

Table 6: Number of renter households spending more than 50% of gross income on rent plus utilities by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	685	3,060	1,035	110	45	4,945
2nd Income Quartile $18,147 to $35,647 Average: $26,855	35	405	555	90	0	1,085
3rd Income Quartile $35,648 to $57,771 Average: $45,260	0	30	45	75	20	200
4th Income Quartile $57,772 + Average: $88,945	0	0	0	0	0	0
All Quartiles	720	3,500	1,640	270	75	**6,250**

Calculation:

$$Overspending = \frac{6,250}{25,415} = 25\%$$

Thus, 25% of all renter households in Victoria spend more than 50% of their before-tax household income on rent plus utilities.

This calculation is applied to every income quartile for every unit size. The following table shows the results for the entire community.

Table 7: Average percent of before-tax income spent on rent plus utilities by income quartile and unit size ('Overspending'), Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	74%	78%	84%	76%	90%	78%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	8%	10%	35%	22%	0%	17%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	0%	1%	2%	16%	25%	3%
4th Income Quartile $57,772 + Average: $88,945	0%	0%	0%	0%	0%	0%
All Quartiles	40%	25%	22%	16%	24%	25%

3.2.3   *Income Gap*

The Income Gap Indicator looks at the average additional annual household income required by renter households to make current rents affordable (i.e.: 30% of before-tax income). A family paying more than 30% of before tax income for housing, referred to as a *cost burdened* household, is a commonly accepted definition of unaffordable rent. The Income Gap is calculated in two steps. First dividing the average current annual rent by 0.3 to determine the income required to make average current annual rent affordable. Second, subtracting the average household income from that required income to find the Income Gap. If the difference is zero or a negative number (i.e.: there is no gap) it is recorded as $0. This is because households with rents that are less than 30% of income are deemed affordable and not factored into the RHI. The example below is taken from the municipality of Victoria, using the bolded numbers from the tables.

Table 8: Average income by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	$10,460	$10,078	$10,513	$11,256	$14,316	**$10,284**
2nd Income Quartile $18,147 to $35,647 Average: $26,855	$25,254	$26,711	$27,353	$27,706	$29,617	$26,855
3rd Income Quartile $35,648 to $57,771 Average: $45,260	$43,578	$45,048	$45,891	$45,394	$46,934	$45,260
4th Income Quartile $57,772 + Average: $88,945	$84,477	$82,255	$92,339	$93,863	$104,419	$88,945
All Quartiles	$25,927	$37,067	$52,893	$57,427	$67,682	$42,884

Table 9: Average monthly gross rent, by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	$631	$700	$986	$1,172	$810	**$756**
2nd Income Quartile $18,147 to $35,647 Average: $26,855	$756	$788	$993	$928	$738	$847
3rd Income Quartile $35,648 to $57,771 Average: $45,260	$793	$884	$1,076	$1,099	$1,432	$967
4th Income Quartile $57,772 + Average: $88,945	$899	$977	$1,216	$1,342	$1,795	$1,147
All Quartiles	$711	$823	$1,094	$1,160	$1,437	$930

Calculation:

$$Yearly\ Rent = \$756 \times 12 = \$9,072$$

$$Income\ Gap = (\$9,072 \div 0.3) - \$10,284 = \$19,956$$

Thus, an average renter household in Victoria's first quartile requires at least an additional

$19,956 to afford their current rent of $756 per month.

This calculation is applied to every income quartile for every unit size. The following table

shows the results for the entire community.

Table 10: Average income gap by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	**1bdrm**	**2bdrm**	**3bdrm**	**4bdrm**	**All Units**
1st Income Quartile $0 to $18,146 Average: $10,284	$14,780	$17,922	$28,927	$35,624	$18,084	$19,956
2nd Income Quartile $18,147 to $35,647 Average: $26,855	$4,986	$4,809	$12,367	$9,414	$0	$7,025
3rd Income Quartile $35,648 to $57,771 Average: $45,260	$0	$0	$0	$0	$10,346	$0
4th Income Quartile $57,772 + Average: $88,945	$0	$0	$0	$0	$0	$0
All Quartiles		$0	$0	$0	$0	$0

$$Income\ Gap\ as\ \%\ of\ Household\ Income = \frac{Income\ Gap}{Average\ Household\ Income} = \frac{\$19,956}{\$10,284} = 194\%$$

An average household in Quartile One in Victoria would need a minimum increase in household income of 194% to make their current rent of $756 per month affordable.

This calculation is applied to every income quartile for every unit size. The following table shows the results for the entire community.

Table 11: Income gap as a percentage of average household income, by income quartile and unit size ('Income Gap'), Victoria

Income Quartile	Unit Size					
	Studio	**1bdrm**	**2bdrm**	**3bdrm**	**4bdrm**	**All Units**
1st Income Quartile $0 to $18,146 Average: $10,284	141%	178%	275%	316%	126%	194%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	20%	18%	45%	34%	0%	26%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	0%	0%	0%	0%	22%	0%
4th Income Quartile $57,772 + Average: $88,945	0%	0%	0%	0%	0%	0%
All Quartiles	10%	0%	0%	0%	0%	0%

3.2.4   Overcrowding

The Overcrowding Indicator examines renter households residing in units that are unsuitable for their household size and composition, based on CMHC's National Occupancy Standard (NOS). The NOS determines the number of bedrooms a household requires given its household size and composition. However, it should be noted that this definition of 'overcrowded' is culturally normative and what might be deemed unsuitable housing by the NOS may not be considered overcrowding to the people who live there. This is particularly true for households that choose to live intergenerationally.

Overcrowding is calculated by dividing the total number of unsuitable renter households by the total number of renter households in that income quartile. The example below is taken from the municipality of Victoria, using the bolded numbers from the tables.

Table 12: Total number of renter households by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	**1bdrm**	**2bdrm**	**3bdrm**	**4bdrm**	**All Units**
1st Income Quartile $0 to $18,146 Average: $10,284	920	3,930	1,235	145	50	6,320
2nd Income Quartile $18,147 to $35,647 Average: $26,855	430	3,895	1,605	405	30	6,385
3rd Income Quartile $35,648 to $57,771 Average: $45,260	295	3,510	1,975	455	80	6,350
4th Income Quartile $57,772 + Average: $88,945	155	2,620	2,720	665	150	6,370
All Quartiles	1,805	13,950	7,535	1,670	315	**25,415**

Table 13: Total Number of Households living in overcrowded conditions, by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	**1bdrm**	**2bdrm**	**3bdrm**	**4bdrm**	**All Units**
1st Income Quartile $0 to $18,146 Average: $10,284	95	210	0	0	0	335
2nd Income Quartile $18,147 to $35,647 Average: $26,855	75	315	45	0	0	450
3rd Income Quartile $35,648 to $57,771 Average: $45,260	55	425	90	0	0	585
4th Income Quartile $57,772 + Average: $88,945	95	435	260	0	0	795
All Quartiles	2,170	315	1,385	430	40	**2,170**

Calculation:

$$Overcrowding = \frac{2,170}{25,415} = 8.5\%$$

Thus, 8.5 % of all renter households in Victoria live in overcrowded (unsuitable) conditions.

This calculation is applied to every income quartile for every unit size. The following table

shows the results for the entire community.

Table 14: Percent of renter households living in overcrowded conditions by income quartile and unit size ('Overcrowding'), Victoria

Income Quartiles	Unit Size					
	Studio	**1bdrm**	**2bdrm**	**3bdrm**	**4bdrm**	**All Units**
1st Income Quartile $0 to $18,146 Average: $10,284	10%	5%	0%	0%	0%	5%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	17%	8%	3%	0%	0%	7%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	19%	12%	5%	0%	0%	9%
4th Income Quartile $57,772 + Average: $88,945	61%	17%	10%	0%	0%	12%
All Quartiles	120%	2%	18%	26%	13%	9%

3.2.5 Bedroom Shortfall

The lack of data on rental unit vacancies in the 2011 Census data was addressed through the development of the Bedroom Shortfall Indicator, which gives an indication of the supply of rental stock in a community. However, the fact remains that it is practically impossible to find an accurate measure of rental vacancy in a community.

The Bedroom Shortfall Indicator measures the minimum number of additional bedrooms a community needs to house all renters suitably, based on the National Occupancy Standard. Bedroom Shortfall is calculated by dividing the number of additional bedrooms needed by the total number of bedrooms in a community. Note that Bedroom Shortfall is only calculated for income quartiles (and not unit sizes) because the data is more reliable at this level for this particular Indicator. The example below is taken from the municipality of Victoria, using the bolded numbers from the tables.

Table 15: Total number of bedrooms by income quartile, Victoria

Income Quartiles	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	7,955
2nd Income Quartile $18,147 to $35,647 Average: $26,855	8,870
3rd Income Quartile $35,648 to $57,771 Average: $45,260	9,440
4th Income Quartile $57,772 + Average: $88,945	10,810
All Quartiles	**37,795**

Table 16: Bedroom shortfall by income quartile, ('Bedroom Shortfall'), Victoria

Income Quartiles	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	375
2nd Income Quartile $18,147 to $35,647 Average: $26,855	520
3rd Income Quartile $35,648 to $57,771 Average: $45,260	640
4th Income Quartile $57,772 + Average: $88,945	985
All Quartiles	**2,540**

Calculation:

$$Bedroom\ Shortfall = \frac{\begin{array}{l}1x\ (\#households\ unsuitable\ by\ 1\ bedroom)\\ +2\ x\ (\#households\ unsuitable\ by\ 2\ bedroom)\\ +\ 3\ x\ (\#households\ unsuitable\ by\ 3\ bedroom)\end{array}}{Total\ Number\ of\ Renter\ Bedrooms}$$

$$Bedroom\ Shortfall = \frac{2,540}{37,795} = 6.7\%$$

Thus, Victoria needs a 6.7% increase in its total number of rental bedrooms in order to house all rental households suitably.

This calculation is applied to every income quartile for every unit size. The following table shows the results for the entire community.

Table 17: Bedroom Shortfall as a percentage of all bedrooms by income quartile, Victoria

Income Quartiles	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	4.7%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	5.9%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	6.8%
4th Income Quartile $57,772 + Average: $88,945	9.1%
All Quartiles	6.7%

3.3 Index calculation

Once all of the percentages are calculated for each *income* Indicator (Affordability, Income Gap and Overspending) these raw percentages are converted into an overall Indicator score by dividing the overall quartile percentages by ten and then summing them. Income Indicator scores are summed by quartiles (as opposed to taking the community's overall average) to capture the problems that exist within each of the quartiles. This allows issues that disproportionately affect certain income groups to factor into the Index as a whole. Averaging the quartile values would have diluted the impact of these issues within the overall Community Index Score.

Here is an example for Overspending:

Table 18: Average percent of before-tax income spent on rent plus utilities by income quartile and unit size ('Overspending'), Victoria

Income Quartiles	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	74%	78%	84%	76%	90%	78%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	8%	10%	35%	22%	0%	17%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	0%	1%	2%	16%	25%	3%
4th Income Quartile $57,772 + Average: $88,945	0%	0%	0%	0%	0%	0%
All Quartiles	40%	25%	22%	16%	24%	25%

Table 19: Overspending Indicator score calculation, Victoria

Income Quartile	All Units	Calculation ÷ 10
1st Income Quartile $0 to $18,146 Average: $10,284	78%	7.8
2nd Income Quartile $18,147 to $35,647 Average: $26,855	17%	1.7
3rd Income Quartile $35,648 to $57,771 Average: $45,260	3%	0.3
4th Income Quartile $57,772 + Average: $88,945	0%	0
	Sum	9.8

Therefore the overall Overspending Indicator score for the City of Victoria is 9.8.

For *supply* Indicators (Overcrowding and Bedroom Shortfall) we divide the community's overall percentage by ten rather than summing by quartiles. If approximately 30% of all households in any community are renters (as opposed to owners), this automatically decreases the sample size significantly for any study looking at only renter households. Although breaking down data on renter households by income quartile and unit size is theoretically useful, it also

brings up practical issues of data suppression as these sub-categories represent even fewer

households. This becomes a particular concern for smaller communities. To protect the privacy

of respondents, Statistics Canada does not release information for populations below a certain

size. When breaking down data on renter households by income quartile and unit size, at a

certain point the number of households becomes too small and the data is unavailable. The

rationale for using the community percentages as opposed to quartile percentages for supply

Indicators is that there are fewer data suppression issues at the community (as opposed to

quartile) level for these particular Indicators.

Here is an example for Overcrowding:

Table 20: Percent of renter households living in overcrowded conditions by income quartile and unit size ('Overcrowding'), Victoria

Income Quartiles	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	10%	5%	0%	0%	0%	5%
2nd Income Quartile $18,147 to $35,647 Average: $26,855	17%	8%	3%	0%	0%	7%
3rd Income Quartile $35,648 to $57,771 Average: $45,260	19%	12%	5%	0%	0%	9%
4th Income Quartile $57,772 + Average: $88,945	61%	17%	10%	0%	0%	12%
All Quartiles	120%	2%	18%	26%	13%	9%

Table 21: Overcrowding Indicator score calculation, Victoria

Income Quartile	All Units	Calculation ÷ 10
All Quartiles	9%	0.9

Therefore the overall Overcrowding Indicator score for Victoria is 0.9.

After the raw scores for each of the five Indicators have been calculated for *all*

communities, another calculation is used to recalibrate each Indicator score so that it falls on a

scale between zero and 10. This process is known as *cardinal ranking*. Zero is assigned to a perfect state of rental health (e.g.: 0 households spending more than 50% of income on rent in the case of overspending). The community that ranks poorest for that Indicator is given a score of 10. The scores of all other communities are dispersed proportionately between zero and 10.

After cardinal ranking has been applied to each community, all Indicator scores have been recalibrated so that they fall somewhere between zero and 10. The overall Community Index Score is calculated by summing the recalibrated values for each of that community's five Indicator scores.

See www.rentalhousingindex.ca for a complete list of Indicator and RHI tables for all Regional Districts and Municipalities in British Columbia.

4.0   Findings

4.1 Overall State of Rental Housing in British Columbia

The discussion of findings begins by describing the rental housing trends in Canada, the province of British Columbia as a whole, and all BC Regional Districts and Municipalities.

The factors that are understood to broadly affect the Canadian rental housing market have been discussed earlier. However, variations in economy, immigration, and demographics also have an effect on the rental housing market at the community level. It is important to keep this in mind when applying the RHI methodology elsewhere. Socio-economic conditions vary widely across the province of British Columbia but the overall findings on the rental housing market in BC indicate that renter households are experiencing difficulty across the province. It is often assumed that rental housing is less affordable in urban centers (such as Vancouver) and more affordable in rural areas. Prior to the RHI there was little data on the rental housing market making it difficult to verify or refute such claims. However, these results demonstrate that there is a need for the development of more affordable housing across the entire province.

4.1.1   *Opportunity for comparison, RHI and Indicator Scores*

An important quality of the RHI methodology is the opportunity it presents for comparison and ranking between different communities by overall index score or any of the five indicators. This case study applied the methodology to Canada, British Columbia, and all qualifying BC Regional Districts and Municipalities. The three requirements a community must meet for inclusion in the RHI were a population greater than 5000 people, more than 500 renter households and a global non-response rate on the 2011 census of less than 50%. This list includes 98 communities, broken down into 27 regional districts and 71 municipalities.

The overall RHI score for British Columbia as a whole is 32.9 (out of a possible 50), which is higher than the Canadian average of 26.0 indicating that the health of the rental housing market in BC is worse than the national average. British Columbia scored higher (i.e.: was *less* affordable) than the Canadian average on each of the 5 Indicators. Both Canada and British Columbia scored high on the Affordability and Overspending Indicators and low for the Overcrowding and Bedroom Shortfall Indicators. This illustrates that in both British Columbia and Canada, the difficulties faced by renters appear to stem primarily from a mismatch between high rents and low incomes as opposed to households living in overcrowded or otherwise inadequate conditions. However, British Columbia had a significantly higher score than Canada for the Income Gap Indicator suggesting that the average amount by which a household's income must increase in order to make rent affordable is higher for British Columbians than for Canadians on average.

Table 22: Indicator Scores, Canada vs. British Columbia

Indicators	Canada	British Columbia	Difference
Affordability	5.8	7.0	+ 1.2
Overspending	6.2	7.6	+ 1.4
Income Gap	4.5	6.7	+ 2.2
Overcrowding	4.9	5.8	+ 0.9
Bedroom Shortfall	4.6	5.8	+1 .2
Community Index Score	26.0	32.9	+ 6.9

The least affordable regional districts in BC (i.e.: those with the highest overall Community Index Score) were Metro Vancouver, Squamish-Lillooet and the Capital Region. These regions are also those that contain the largest urban centers such as Vancouver and Victoria. Metro Vancouver scored significantly higher than other regional districts in BC, with a Community Index Score of 38.2, eight points higher than the 2nd highest region (Squamish Lillooet). However, the Community Index Score of Squamish-Lillooet (the 2nd least affordable

region in BC) and the Northern Rockies (the most affordable region in BC) differ by only 13.9 points. As well, all regional districts in British Columbia have an overall Community Index Score of greater than 15. This indicates that rental households in *all* regions of the province are experiencing difficulty.

The least affordable municipalities in BC (i.e.: highest Community Index Score) were Burnaby, Coquitlam, Richmond, Vancouver and New Westminster. The most affordable municipalities (i.e.: lowest overall Community Index Score) were Comox, Kimberley, Smithers, Colwood and Ladysmith.

The eight lowest scoring rental housing markets are all located within the Metro Vancouver region. However, 96% of municipalities in BC have a Community Index Score that is greater than 15 and all have a Community Index Score that is greater than 5, indicating that renters in municipalities throughout the province are faced with housing affordability issues.

It is important to note that according to the RHI methodology, a community that is experiencing a perfectly healthy rental market has a score of zero. A score of zero is achieved when every household in the community is spending 30% or less of income on rent and there is no overcrowding. Although the most unaffordable municipal rental markets are found in the lower mainland, every municipality and regional district in BC has a score that is well above zero, even the 'most affordable communities', indicating that the ability to afford rent is a problem across the entire province. *In British Columbia, rental housing affordability is not just a big city problem*.

Please see www.rentalhousingindex.ca for a full list of tables.

Table 23: Ranking of British Columbia's Regional Districts by Community Index Score

Rank	Regional District	Community Index Score
1	Metro Vancouver	38.0
2	Squamish Lillooet	30.1
3	Capital	28.6
4	Nanaimo	28.2
5	Fraser Valley	28.2
6	Kootenay Boundary	28.1
7	Central Okanagan	28.0
8	Sunshine Coast	27.1
9	Cowichan Valley	26.1
10	Alberni Clayoquot	25.8
11	North Okanagan	24.0
12	Thompson Nicola	23.6
13	Okanagan Similkameen	23.6
14	Comox Valley	23.3
15	Strathcona	23.1
16	Powell River	23.0
17	Cariboo	22.6
18	Central Kootenay	22.3
19	Kitimat Stikine	21.8
20	Fraser Fort George	21.2
21	Peace River	21.0
22	Bulkley Nechako	20.4
23	Skeena Queen Charlotte	20.1
24	East Kootenay	19.1
25	Columbia Shuswap	19.1
26	Northern Rockies	16.4
27	Mount Waddington	14.9

Table 24: Ranking of British Columbia's Municipalities by Community Index Score

Rank	Municipality	Community Index Score
1	Burnaby	44.9
2	Coquitlam	41.9
3	Richmond	40.1
4	Vancouver	39.3
5	New Westminster	38.4
6	Surrey	36.6
7	West Vancouver	36.4
8	North Vancouver (City)	36.3
9	Duncan	34.9
10	Whistler	33.1
11	Langley (City)	31.5
12	Sooke	31.3
13	Abbotsford	31.2
14	Saanich	30.3
15	Gibsons	30.3
16	Langford	29.9
17	Lake Country	29.7
18	Victoria	29.6
19	Oak Bay	29.2
20	Nanaimo	28.8
21	Dawson Creek	28.6
22	North Cowichan	28.5
23	North Vancouver (District)	28.5
24	Kelowna	27.9
25	Port Coquitlam	27.6
26	Langley (District)	27.3
27	Port Moody	27.1
28	Merritt	26.9
29	Penticton	26.8
30	Squamish	26.8
31	Vernon	26.8
32	Maple Ridge	26.6
33	Courtenay	26.2
34	White Rock	25.6
35	Trail	25.4
36	Kamloops	25.3
37	Port Alberni	25.2
38	Chilliwack	25.1
39	Central Saanich	25.1

Rank	Municipality	Community Index Score
40	Delta	25.1
41	West Kelowna	24.8
42	Creston	24.5
43	Cranbrook	24.2
44	Nelson	24.2
45	Campbell River	24.0
46	Esquimalt	23.9
47	Quesnel	23.6
48	Williams Lake	23.5
49	View Royal	23.2
50	Powell River	22.9
51	Sechelt	22.4
52	Prince George	22.1
53	Mission	21.7
54	Prince Rupert	21.3
55	Terrace	21.1
56	Hope	20.3
57	Fort St John	20.2
58	Sidney	19.3
59	Parksville	19.2
60	Revelstoke	18.7
61	Summerland	18.5
62	Kitimat	18.1
63	Castlegar	17.8
64	Salmon Arm	17.6
65	Pitt Meadows	16.2
66	Fernie	15.8
67	Comox	15.6
68	Kimberley	15.1
69	Smithers	14.8
70	Colwood	10.5
71	Ladysmith	8.0

4.1.2   Prevalence of cost burdened renter households

The average household rent in British Columbia, at $988/month, is higher than the Canadian average of $848/month. However, a notable benefit of the Rental Housing Index's methodology is that it allows a more nuanced illustration of the rental universe by breaking information down by income quartile.

In BC, average rent for the lowest income quartile is $800/month and for the highest quartile, $1,239/month. It seems intuitive that households in the lowest income quartile would pay lower rents. However, the average annual renter household income for BC's lowest income quartile is $10,676 and for the highest quartile, $110,355. BC's wealthiest renter households earn, on average, $99,679 more than the poorest but pay, on average, only $5,268 more per year in rent.

A family paying more than 30% of before tax income for housing, referred to as a *cost burdened* household, is a commonly accepted definition of unaffordable rent. However this measure should be interpreted differently for higher and lower income households. The housing affordability issues faced by lower income households are related to the fact that after paying rent, there is less money left over to purchase food and other necessities. After paying rent, British Columbia's highest income quartile has an average of $95,487/year or $7,957/month left over for non-housing related expenditures. In stark contrast, 1st income quartile households are left with an average of $1,076/year or $90/month.

Table 25: Average monthly and yearly gross rent, average annual income, average monthly and yearly income (after paying rent) by income quartile, British Columbia

Income Quartiles	Average Monthly Rent	Average Yearly Rent	Average Annual Income	Average Monthly Income (after paying rent)	Average Yearly Income (after paying rent)
1st Income Quartile $0 to $19,271	$800	$9,600	$10,676	$90	$1,076
2nd Income Quartile $19,272 to $38,665	$892	$10,704	$28,635	$1,494	$17,931
3rd Income Quartile $38,666 to $66,949	$1,018	$12,216	$51,295	$3,257	$39,079
4th Income Quartile $66,950 +	$1,239	$14,868	$110,355	$7,957	$95,487
Difference between 1st and 4th Income Quartiles	+ $439	+ $5,268	+ $99,679	+ $7,867	+ $94,411

A more coarse-grained statistical method might indicate that renter households in British Columbia spend an average of 24% of their income on rent. However, when broken down by income quartile we see that renter households in the lowest income quartile spend on average 90% of their household income on rent compared to the highest income quartile spending on average 13%.

In BC, 72% of households in the lowest income quartile and 20% in the 2nd quartile spend more than half their income on rent compared to 3% and 0% in the 3rd and 4th quartiles respectively. Households spending more than half of income on shelter are referred to as *severely cost burdened*. This measure is commonly recognized as a critical level of unaffordability that puts households at risk of significant hardships such as forgoing other necessities (for example, food) or homelessness.

Additionally, the lowest two income quartiles in BC would need annual household income raises of $21,324 and $7,045 in order to make their rents affordable. This represents 200% and 25% increases in income, respectively. The top two income quartiles in British Columbia are not experiencing an income gap which means all renters in these two quartiles pay rents that are 30% or less of their income.

It is important to notice that for All Quartiles, there is a 0% increase in income required to make rent affordable, a measure that effectively masks the true inequalities at play. When this coarse-grained statistic is broken down by income quartile we see that lower earning households are disproportionately affected by cost burdens related to housing.

Table 26: Average % of income spent on rent, % of households spending more than ½, additional income to make rent affordable, % increase in income to make rent affordable by income quartile, British Columbia

Income Quartiles	% of Income Spent on Rent	% of Households Spending > ½ of Income on Rent	Additional Income to Make Rent Affordable	% Increase in Income to Make Rent Affordable
1st Income Quartile $0 to $19,271 Average Income: $10,676	90%	72%	$21,324	200%
2nd Income Quartile $19,272 to $38,665 Average Income: $28,635	37%	20%	$7,045	25%
3rd Income Quartile $38,666 to $66,949 Average Income: $51,295	24%	3%	$0	0%
4th Income Quartile $66,950 + Average Income: $110,355	13%	0%	$0	0%
All Quartiles	24%	23%	$0	0%

4.1.3   *Rental unit supply is a less critical problem*

Measures of overcrowding in British Columbia are more hopeful. Overcrowding does not appear to be a significant problem and probably contributes less to issues of rental affordability in BC than other indicators of housing need. The number of households living in overcrowded conditions is spread relatively evenly across all income quartiles.

Table 27: % of households living in overcrowded conditions and % more bedrooms need to house all renters suitably by income quartile, British Columbia

Income Quartiles	% of Households Living in Overcrowded Conditions	% More Bedrooms Needed to House all Renters Suitably
1st Income Quartile $0 to $19,271 Average Income: $10,676	8%	7%
2nd Income Quartile $19,272 to $38,665 Average Income: $28,635	11%	8%
3rd Income Quartile $38,666 to $66,949 Average Income: $51,295	13%	9%
4th Income Quartile $66,950 + Average Income: $110,355	17%	13%
All Quartiles	12%	9%

Overall, these statistics demonstrate that problems of rental housing affordability are disproportionately affecting lower income households. The analysis also highlights the tendency of current methods of assessing a rental housing market to disguise serious social and economic inequalities.

4.2   Data Anomalies

In developing the RHI methodology and conducting this statistical analysis a number of data anomalies became apparent that are worthy of discussion.

4.2.1   *Households spending more than 100% of income on shelter*

For the Affordability Indicator, the percent of income spent on housing for certain groups sometimes exceeds 100%. This occurs particularly often in the lower earning income quartiles. How is it possible for a household to spend more than their entire income on rent? The primary reason for this is that the NHS asks households to report their *2010* income and their *2011* monthly rent. The year long time lag between the recording of these two measures explains why

we see such high rent-to-income ratios in the first income quartile. For example, a student in 2010 had a very low income but graduated at the end of that year. In 2011 she finds full-time employment and moves into a new apartment. Her reported income in 2010 would be very low but her reported rent for 2011 is high, creating a high rent-to-income ratio.

4.2.2   Inconsistent numbers in many data tables

In many data tables the number of households by income quartile and unit size do not add up to equal the total number of renter households in that community. For example, the table below shows the number of households spending more than 50% of income on rent in Victoria. When the number of households for all unit sizes are manually added for the First Quartile, the sum is 4,935 – ten households lower than the 4,945 households reported in the Statistics Canada dataset.

Table 28: Number of renter households spending more than 50% of gross income on rent plus utilities by income quartile and unit size, Victoria

Income Quartile	Unit Size					
	Studio	1bdrm	2bdrm	3bdrm	4bdrm	All Units
1st Income Quartile $0 to $18,146 Average: $10,284	685	3,060	1,035	110	45	4,945
2nd Income Quartile $18,147 to $35,647 Average: $26,855	35	405	555	90	0	1,085
3rd Income Quartile $35,648 to $57,771 Average: $45,260	0	30	45	75	20	200
4th Income Quartile $57,772 + Average: $88,945	0	0	0	0	0	0
All Quartiles	720	3,500	1,640	270	75	6,250

Similar inconsistencies in numbers, of varying magnitudes, occur throughout the Statistics Canada dataset. There are three potential reasons why the numbers do not add up:

- **Rounding:** Statistics Canada uses "random rounding" to protect the confidentiality of respondents. This means they randomly round all figures, including totals, either up or down to a multiple of five. The numbers may not always add up but they are very close.

- **Data Suppression:** Statistics Canada deletes information for communities with populations below a certain size. This means that some cells in a table might report a '--' but the suppressed numbers are still expressed in the total. Again, the numbers may not always add up but they are very close.

- **Exclusion of 5+ bedrooms:** the tables include breakdown data for studio, 1, 2, 3 and 4-bedroom units. The total column shows data for all units in a community including 5 or more bedroom units. Therefore, the total column might be slightly higher because it includes units that do not appear in the table.

On a related note, the 'total number of renter households' in official Statistics Canada documents and the numbers presented in the RHI do not match precisely. This is because roughly two thousand renter households in BC have negative incomes. According to Statistics Canada, the negative income designation "generally applies to net-self employment income, net rental income and net limited partnership income. Negative income would indicate that expenses exceeded gross income." Although this represents less than 0.5% of all renter households in the province, we factored out these households because they would artificially inflate the affordability and income gap indicators.

4.2.3   Not all BC communities could be included in this analysis

One of the primary drivers for developing the RHI project was the need for rental data in small and mid-sized communities. The original goal was to include in the analysis all

communities with a population greater than 5,000. However, the decision was made to exclude communities with less than 500 renter households and/or a Global Non-Response (GNR) rate of more than 50% due to issues of data quality.

GNR refers to the share of households in a community that received a National Household Survey and either did not return it or returned an incomplete survey. Statistics Canada uses the GNR as an indication of data quality, higher GNRs indicate poorer quality data. This decision to exclude some communities speaks to the shortcomings discussed earlier of a non-mandatory long form census.

Data quality must be kept in mind when determining the applicability of the RHI to other communities. There are trade-offs to be aware of when working with poor quality (but available) data. At a certain point data quality becomes so low that the conclusions drawn from an analysis of this type are misleading. Each situation is different and the appropriateness of these methods must be given considered carefully.

Table 29: GNR in Regional Districts, British Columbia

Rank	Regional District	GNR
1	Alberni Clayoquot	28.7%
2	Bulkley Nechako	30.4%
3	Capital	23.1%
4	Cariboo	28.1%
5	Central Kootenay	37.3%
6	Central Okanagan	27.8%
7	Columbia Shushwap	35.7%
8	Comox Valley	22.0%
9	Cowichan Valley	24.9%
10	East Kootenay	35.5%
11	Fraser Fort George	25.0%
12	Fraser Valley	28.9%
13	Greater Vancouver	24.4%
14	Kitimat Stikine	26.5%
15	Kootenay Boundary	38.0%
16	Mount Waddington	33.7%
17	Nanaimo	22.2%
18	North Okanagan	28.8%
19	Northern Rockies	36.7%
20	Okanagan Similkameen	35.6%
21	Peace River	26.3%
22	Powell River	27.9%
23	Skeena Queen Charlotte	34.7%
24	Squamish Lillooet	35.1%
25	Strathcona	23.7%
26	Sunshine Coast	36.1%
27	Thompson Nicola	30.4%

Table 30: GNR in Municipalities, British Columbia

Rank	Municipality	GNR		Rank	Municipality	GNR
1	Abbotsford	32.3%		40	Parksville	20.3%
2	Burnaby	23.6%		41	Penticton	27.7%
3	Campbell River	22.0%		42	Pitt Meadows	24.4%
4	Castlegar	24.1%		43	Port Alberni	24.6%
5	Central Saanich	18.7%		44	Port Coquitlam	21.8%
6	Chilliwack	22.2%		45	Port Moody	24.6%
7	Colwood	16.9%		46	Powell River	23.2%
8	Comox	19.5%		47	Prince George	22.0%
9	Coquitlam	22.5%		48	Prince Rupert	27.7%
10	Courtenay	20.5%		49	Quesnel	20.4%
11	Cranbrook	29.1%		50	Revelstoke	43.0%
12	Creston	32.4%		51	Richmond	20.5%
13	Langley (City)	24.1%		52	Saanich	21.4%
14	North Vanoucver (City)	25.8%		53	Salmon Arm	22.8%
15	Dawson Creek	25.9%		54	Sechelt	41.4%
16	Delta	22.2%		55	Sidney	21.4%
17	Langley (District)	25.4%		56	Smithers	26.6%
18	North Vancouver (District)	20.9%		57	Sooke	30.5%
19	Duncan	29.5%		58	Squamish	29.2%
20	Esquimalt	27.8%		59	Summerland	28.2%
21	Fernie	46.0%		60	Surrey	26.5%
22	Fort St John	16.8%		61	Terrace	20.9%
23	Gibsons	26.3%		62	Trail	28.2%
24	Hope	39.7%		63	Vancouver	24.5%
25	Kamloops	26.8%		64	Vernon	26.9%
26	Kelowna	28.1%		65	Victoria	24.6%
27	Kimberley	36.6%		66	View Royal	18.4%
28	Kitimat	17.6%		67	West Kelowna	24.7%
29	Ladysmith	26.9%		68	West Vancouver	27.9%
30	Lake Country	24.0%		69	Whistler	46.3%
31	Langford	24.0%		70	White Rock	25.0%
32	Maple Ridge	26.7%		71	Williams Lake	22.9%
33	Merritt	45.0%				
34	Mission	28.8%				
35	Nanaimo	20.5%				
36	Nelson	28.3%				
37	New Westminster	26.5%				
38	North Cowichan	22.6%				
39	Oak Bay	18.9%				

4.3   Discussion of map interface

The results of this research were presented in the form of an online map, which can be found at the following website: www.rentalhousingindex.com. The interactive map displays the overall Community Index Score and each of the five Indicator scores for Canada, British Columbia and each qualifying Regional District and municipality in BC. The map is color coded according to how serious the rental housing problems are in that area and shows the spatial patterns of rental housing affordability in the province.

Users are also able to click on any regional district or municipality in British Columbia to find more detailed data, broken down by income quartile and unit size, on that specific community.

The goal of this project was to provide an informative resource with solid, fact-based evidence on the rental housing market in BC to affordable housing researchers, planners, developers and advocates. In particular this project is useful to smaller communities who may not have the capacity to undertake this type of research on their own. This section outlines recommendations as to how these practitioners could make use of the methodology developed and analysis undertaken.

5.1   Researchers

The extensive custom Statistics Canada dataset underpinning this project will be most useful to the research and academic community. In addition to researchers studying topics related to affordable housing, this dataset could be used to study poverty, social justice, inequality, and economic trends in BC. The methodology developed and analysis undertaken as part of this project have only scratched the surface of the stories that remain to be told with this data and it is hoped that the dataset can contribute to further research related to affordable rental housing. This dataset is available through the BC Non-Profit Housing Association.

5.2   Planners and Policy-makers

The analysis undertaken through this project will begin to give an idea of which income quartiles are experiencing the most severe problems with respect to affordable rental housing. For example, knowing which income quartiles are spending higher percentages of their income on rent will make prioritization of scarce government resources better targeted to actual needs in a community. It can also provide policy-makers with a tool for evaluating housing policy leading

up to the time period covered by the RHI, which would further inform future policy.

The information on household income earned in different quartiles will give planners a better understanding of what units should be renting for in order for them to be affordable (ie: 30% of income) for particular tenants. This will help in designing incentive policies that encourage the construction of new rental housing projects.

Lastly, the RHI will help existing non-profit and co-op housing providers in determining rents. Most of these buildings determine a tenant's rent in one of three ways. For 'Rent Geared to Income' (RGI) units, tenants pay a specific portion of their income as rent each month, typically 30%. If this person's income changes for any reason, the rent is adjusted accordingly. 'Subsidized' means that the amount paid by a tenant is considerably lower than what the unit would rent for in the private market and this amount is supplemented by a government contribution. In 'Low End of Market' units the rent paid by a tenant is only marginally lower than what the unit would rent for in the private market. Many non-profit and co-op housing projects are a mix of RGI and Low End of Market units. The rents paid by Low End of Market units help to subsidize the RGI units. With the imminent expiry of governmental operating agreements held by most social housing providers, the proportions of this mix will likely need to be re-evaluated. With limited capacity to do detailed and regular market analyses, the RHI will provide critical information on typical private market rents that will assist these housing providers with setting accurate Low End of Market rents.

5.3   Developers

For similar reasons, the RHI will be useful to developers by demonstrating where supply gaps exist in a community's rental housing market. In particular, the Bedroom Shortfall Indicator

provides a rough estimate of how many more bedrooms a community needs in order to house everyone suitably. The RHI will certainly not take the place of a thorough market analysis but may provide the spark required to indicate to a development community that there is a need they may be able to fill.

It must be mentioned that, for reasons discussed earlie, there is very little incentive for developers to construct new residential rental buildings and it is even more difficult for them to develop rental units that are affordable to lower income quartiles. Policies such as the City of Vancouver's Rental 100 program attempt to encourage the construction of rental housing, however the units that are a result of policies such as these are typically affordable only to the top wage earning renter households. In order for this tool to be useful to developers in a way that results in an increase in the supply of required rental stock in a community, there must also be the development of policies and programs at all three levels of government that incentivize the construction of more rental housing that meets the local demand.

5.4   Affordable housing advocates

The RHI will provide affordable housing advocates with concrete evidence to reinforce lobbying efforts for increased governmental support for more affordable rental housing. Prior to the RHI, the majority of data available on the rental housing market was anecdotal, too broad, or available only through informal avenues such as craigslist or a local newspaper. For this reason it was difficult to quantify or prove the existence of a rental housing crisis and these problems were easily ignored or dismissed. This project supports the work of affordable housing advocates by providing them with the facts necessary for evidence based arguments demonstrating the need for increased support for the rental housing market.

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