

PROJECTING RENTAL HOUSING DEMAND AND CORE HOUSING  
NEED IN BRITISH COLUMBIA AND REGIONAL DISTRICTS TO 2036

by

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## Executive Summary

How much demand will there be for rental housing in British Columbia in 2036, and how many renter households will be in core housing need? These questions are crucial for accurate planning for future demand, especially at the regional level where regional districts in British Columbia must plan housing requirements 20 years into the future. However, there is a current lack of projections for rental housing in British Columbia. Projections that do exist employ different methodologies, making accurate comparisons challenging or invalid. There is also no unified province-wide projection comparing different regional districts under a common methodological approach.

This project creates projections of rental housing demand and rental households in core housing need to 2036. Rental housing demand is a measure of the number of rental households, while a household is in core housing need whose “housing does not meet one or more of the adequacy, suitability or affordability standards and would have to spend 30% or more of its before-tax income to pay the median rent of alternative local market housing that meets all three standards.” (Canada Mortgage and Housing Corporation, n.d.). Projections were created for each regional district in British Columbia, as well as an overall projection of the provincial level. This project was undertaken in partnership with the BC Non-profit Housing Association (BCNPHA). Urban Futures provided invaluable assistance, especially with acquiring data sources and creating the projection models.

Projections were created using a household maintainer method. This method projects housing demand by multiplying the projected population by the incidence of rental tenure within a given population to obtain future rental household numbers.

Two scenarios were derived to create projections of rental housing demand, by projecting the future number of rental households. The first scenario held rental maintainer rates – the propensity of households to be living in a rented dwelling – to be constant at the level they were in 2006, the most recent year for which data are available. This scenario gives a baseline projection of rental demand. It highlights the effect that changing demographics, in particular population growth and the changing age profile, have on rental demand. People of different ages rent at different rates, so a changing age composition of a population has a great effect on rental housing demand. The second scenario considers the trend of rental housing maintainer rates over the past decade, and projects the same historic trend forward to 2036. In many, although not all, regional districts, this historic trend entails a shift away from rental tenure and towards ownership.

The projections found a strong and growing demand for rental housing across the province by 2036 (Table 1). In 2011 there were 562,700<sup>1</sup> rental households. In the first scenario, which held tenure patterns constant at 2006 levels, rental households will grow to 764,000 households in 2036, an average annual increase of 8,052 households and an annual growth rate of 1.23%. The second scenario envisions that the historic trend of tenure patterns shifting from rental households to ownership households will continue, slowing growth of rental demand. This scenario projects 712,100 rental households by 2036, an average annual increase of 5,976 rental households between 2011 and 2036 and an annual growth rate of 0.95%.

When looking at rental households in core housing need, this project found that in the first scenario there will be an increase from 151,200 rental households in core housing need in 2011 to 215,700 households in 2036, an average annual increase of 2,580 households and an annual growth rate of 1.43%. In the second scenario it is projected that in 2036 there will be 199,400 rental households in core housing need, an annual increase of 1,928 households and an annual growth rate of 1.11%.

**Table 1:** Projections of Rental Housing Demand and Core Housing Need, Number of Households in British Columbia, 2011-2036

Year	Scenario A: Constant Tenure		Scenario B: Shifting Tenure	
	Rental Housing Demand	Core Housing Need	Rental Housing Demand	Core Housing Need
2011	562,700	151,200	562,700	151,200
2021	649,200	178,500	633,700	173,800
2036	764,000	215,700	712,100	199,400
Increase 2011-2036	201,300	64,500	149,400	48,200

This growth will not be evenly distributed, either geographically or across all ages. Growth will be concentrated in the key population centres of the province, largely in the Lower Mainland but also in south Vancouver Island and the central Okanagan. Moreover, much of the growth in rental housing demand will occur among senior households, significantly changing the demographics of the average rental household, which in 2036 will be significantly older.

In order for regional districts to meet their rising demand, new units will have to be constructed. In the case of households in core housing need, the availability of more affordable housing will be crucial.

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<sup>1</sup>All projections have been rounded to the nearest hundred

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## **Glossary**

### **Affordable Housing**

While different sources have different definitions of affordable housing, for the purposes of this paper, I will be defining affordable housing as housing which is financially feasible for someone living in core housing need to afford.

### **Core Housing Need**

Canada Mortgage and Housing Corporation defines a household as being in core housing need if “its housing does not meet one or more of the adequacy, suitability or affordability standards and it would have to spend 30% or more of its before-tax income to pay the median rent of alternative local market housing that meets all three standards.” (Canada Mortgage and Housing Corporation, n.d.)

### **Households**

Statistics Canada defines a household as “a person or group of persons who occupy the same dwelling and do not have a usual place of residence elsewhere in Canada or abroad.” This can be in a private or collective dwelling, and the household may be made up of a family group, two or more families sharing a dwelling, a person living alone, or a group of unrelated people sharing a dwelling. (Statistics Canada, 1998)

### **Household Maintainer Rates**

Age-specific household maintainer rates are the percent of the population within a particular age cohort that identifies as a primary household maintainer. This number is useful for calculating the number of households in the region.

Statistics Canada defines the primary household maintainer as the “first person in the household identified as the one who pays the rent or the mortgage, or the taxes, or the electricity bill, and so on, for the dwelling.” (Statistics Canada, 1998)

### **Rental Maintainer Rates**

Rental maintainer rates are the percent of a population within a particular age cohort that identifies as a primary household maintainer in a rental dwelling unit.

## **Rental Housing Demand**

Rental housing demand is a measure of the number of renter households, and can also be understood as rental housing occupancy demand. Because of potential vacancies in the rental stock and the demand for second homes, rental housing demand does not necessarily equate with demand for units.

## **Tenure**

Refers to whether the dwelling is owned or rented by a member of the household. Canada Mortgage and Housing Corporation classify a dwelling as owned “even if it is not fully paid for, that is, even if it has a mortgage or some other claim on it. The dwelling may be situated on rented or leased land or be part of a condominium (whether registered or unregistered).” They classify a dwelling as rented “even if it is provided without cash rent or at a reduced rent or if the dwelling is part of a cooperative.” (Canada Mortgage and Housing Corporation, n.d.)

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This project came out of a larger project done for the BC Non-profit Housing Association (BCNPHA) which produced projections for the province and for each individual regional district. My project provides an overview of the work, with additional analysis and interpretations. The work for BCNPHA was done collaboratively by myself and Meredith Seeton. We worked closely together in collecting data, creating the models, updating information and error checking, creating descriptive graphics, designing layouts, writing the findings, and proof reading the reports which provided the backbone for this project. Thank you Meredith for your support, and advice.

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## **Introduction**

Understanding future demand for housing in the province is critical to the continued provision of safe, secure and affordable housing. This project aims to help the future understanding by developing projections for rental housing demand. This is a key area for affordable housing, but is an area of the housing market which is frequently understudied. This project was undertaken in partnership with the British Columbia Non-profit Housing Association (BCNPHA), and aims to project rental housing demand and core housing need across all regional districts in British Columbia to the year 2036. A report was produced for BCNPHA which comprised of a provincial report and 28 regional district reports outlining the projected rental housing demand and core housing need to the year 2036 (BC Nonprofit Housing Association, 2012). This paper provides the overall rationale, methodology, and findings of the provincial report, as well as highlights of the findings for the regional districts.

## **Context**

Housing is a universal right, and a basic human need (Leckie, 1992; Sidoti, 1996; Thiele, 2002). It is also a key determinant of health (Shaw, Dorling, & Brimblecomb, 1999). People enjoy much greater health status when they experience secure and stable housing situations (Carter & Polevychok, 2004; Dunn, 2002), while homeless individuals have worse health outcomes across a wide range of indicators (Frankish, Hwang, & Quantz, 2009). These effects become more pronounced in elderly individuals (Costa-Font, 2008), a factor especially relevant for BC as it experiences an aging population. However, Canadians are increasingly facing a lack of affordable housing (Luffman, 2006), and homelessness is a pressing danger for many Canadians (Frankish et al., 2009).

Canada's federal housing policy has historically focused on owner households, and since provincial legislation allowed for condominium ownership, the economics of building rental units has not been favourable (Carter & Polevychok, 2004; Hulchanski, 2007). This has resulted in a situation where few purpose-built rental units are built. In Metro Vancouver in 2010 only 7% of housing starts were purpose-built rental units, despite the fact that 56% of residents live in rental units (Metro Vancouver, 2011). This decline in supply of rental housing comes as the economic gap between owners and renters is growing (Carter & Polevychok, 2004; Hulchanski, 2005; Metro Vancouver, 2011). In 2006, 30% of renter households were in core housing need, compared to just 8% of owner households (Statistics Canada, 2006). Furthermore, funding for social housing has declined dramatically since the 1964 amendments to the National Housing Act (Dreier & Hulchanski, 1993). Support for non-profit, co-operative, and rental housing bottomed

out in 1993 when almost no federal funding was made available for social housing (Carter & Polevychok, 2004). This has left organizations scrambling for funding for the creation of new housing units for households in core housing need.

Compounding challenges of affordability, Canada faces an aging population which adds unique challenges to the housing market (Statistics Canada, 2008). Some planners have begun to consider the implications that retiring baby boomers will have on the housing market, through the effect of mass sell-off as baby boomers reach the age of requiring assisted living (Myers & Ryu, 2008). It is also well-recorded that seniors require different approaches for their housing. These include physical design details such as wide and level entrances and adequate handholds, and also dwellings that are connected to communities, especially as seniors lose mobility (Burby & Rohe, 1990; Gibler, 2003; Hirono, 2009; Lynch, 1988; Malyan, 1986).

Affordable housing is especially important in BC, which has been recognized as having some of the most unaffordable housing markets in the world (Curran & Wake, 2008). This growing unaffordability has occurred despite Canada's recent period of economic growth (Hulchanski, 2005; Laird, 2007), and will likely worsen during the current economic downturn. The challenges of growing homelessness and lack of affordable housing have been identified as major social and economic concerns in BC by the non-profit housing sector and various levels of government, social agencies, and the business community (City of Vancouver, 2011; Laird, 2007; Streettohome, 2010).

Non-profit housing providers in BC offer approximately 55,000 units of affordable, long-term rental housing for a wide range of tenants. These units were largely developed under one or more senior government funding programs during the 1970s through to the 1990s. Programs for new affordable rental housing have terminated and BC's non-profit housing sector is experiencing considerable change in the context within which it provides affordable housing. However, the need for affordable rental housing continues to grow.

## **Purpose and Scope**

In the face of rising need and limited funds to create nonmarket housing, accurate forecasts are necessary – for municipalities, regional districts, and non-profit housing providers - to anticipate where affordable housing will be necessary over the next thirty years. Housing forecasts may be complex and dependent on external factors that are challenging to accurately predict (Hendershott & Weicher, 2002; Myers, Pitkin, & Park, 2002). These complexities include future population growth, future income levels, life cycle profiles of household formation and homeownership, household preference (for both location and dwelling type). It can also

be important to consider the role that ethnicity plays in household formation levels or among household preferences, as well as how household preferences differ among recent immigrants. Despite these multiple factors, projections that clearly outline their underlying data and assumptions are necessary in order to gauge and plan for future housing requirements (ESRI, 2007). The factors are challenging to project accurately, and addressing all these complexities is beyond the scope of this current study.

With limited government funding available, it is critical that funds that are available are well allocated to meet existing need. These funds can come from different levels of government or, increasingly, from the non-profit sector and even the business sector. In order to gauge levels of current and future need throughout the province, accurate assessments and projections are needed. The current heightened concern regarding the lack of adequate and affordable rental housing, and the subsequent calls for action, highlight the need for research that can inform decision-makers in the housing sector.

At present, there are no widely available and accessible provincial level projections of rental housing demand or core housing need, nor any projections in many smaller regions. Some regional districts in British Columbia have developed or commissioned housing projections for future demand (Regional District of North Okanagan, 2010; Urban Futures, 2007; Vannstruth Consulting Group & Landworks Consultants Inc., 2008), while others have also developed long-range estimates of rental housing demand by income level (Fraser Valley Regional District, 2009; Metro Vancouver, 2009). Some larger municipalities, both inside of BC and throughout the country, have also developed their own rental housing projections (Toronto City Planning, 2006; Urban Futures, 2006; Will Dunning Inc, 2009) and core housing need projections (Will Dunning Inc, 2009). There are also nationwide projections of core housing need available (The Co-Operative Housing Federation of Canada, 2009). At the regional level, however, there is a lack of projections. Many regional districts, the bodies responsible for housing planning in their region up to 20 years into the future, have not developed their own projections. Existing projections tend to be located in the areas of high population concentration such as the Lower Mainland and South Vancouver Island, leaving large areas of the province without up-to-date projections, especially targeting rental housing. Projections that do exist use different methodologies, making accurate comparisons challenging or invalid. There exists no unified provincial-wide projection comparing different regional districts under a common methodological approach.

This master's project aims to fill this need for regional- and provincial-level analysis, exploring future rental demand and core housing need among different age groups. This is necessary

information for regional districts to create 20-year projections of housing need. Projections were made to 2036 to provide both short-term and long-term outlooks.

This project addresses the following questions:

1. How much demand will there be for rental housing in regional districts in British Columbia from now until 2036?
2. How many rental households will be in core housing need in British Columbia and regional districts from now until 2036?
3. How will demand for rental housing and core housing need be distributed across different age groups in 2036?

# Literature Review

## Housing Demand Projections

Literature reveals a number of methods for conducting housing demand projections which use a variety of different inputs to complete their reports. Housing demand projections at the national, provincial, and regional level were studied to determine commonalities that can be drawn from these various methods for use in this project.

PriceWaterhouseCoopers, in a study done for Metro Vancouver in 2004, created a “trend forecast” of affordable housing demand, which they define as rental or owner households which pay over 30% of their gross income on their housing (PriceWaterhouseCoopers, 2004). Through a regression analysis, they identified drivers or indicators of affordable housing demand, including non-profit housing starts, changes in household types, incomes, ages, tenure, and housing prices. This regression was then forecast forward to 2021, using BC Stats’ PEOPLE model as the demographic backbone. This study created two forecasts, one which incorporated demographic shifts but held tenure choice constant and one which reflected the historic trend they saw in tenure choice, household type, and structure type.

More simply, in a study done for the City of Vancouver projecting rental housing demand and core housing need, Will Dunning Inc. applied household maintainer rates and tenure choice ratios to the BC Stats PEOPLE demographic model to create projections of rental housing demand (Will Dunning Inc, 2009). As with the PriceWaterhouseCooper projection, two scenarios were created for rental housing demand projections. In this case, one scenario held tenure patterns constant and one incorporated a trended shift in tenure patterns. In projecting core housing need, four scenarios were forecast which incorporate changes in demographic projections, changing income and shelter costs, household formation, and increased education.

Likewise, Metro Vancouver estimated housing demand for their recent Regional Growth Strategy using a household maintainer model to forecast future demand (Metro Vancouver, 2009). This projection used public data from BC Stats’ PEOPLE model and household maintainer numbers from the Census to create household maintainer rates. The projection then held these maintainer rates constant and projected them onto the projected population in 2021.

The Co-Operative Housing Federation of Canada in 2009 created a national level projection of core housing need (The Co-Operative Housing Federation of Canada, 2009). This projection used population projections and, holding current household maintainer rates constant, determined future core housing need.

A regional report in Australia also used household rates to project housing demand (Akbar, Rolfe, & Greer, 2008). This report developed two scenarios in their housing demand projection. The first scenario held household characteristics constant at 2006 levels to forecast demand, while the second scenario considered historic trends in household characteristics to project shifts in tenure patterns.

Yi, Vaupel & Zhenglian (1998) describe other more complex projection methods: micro-simulation and macro-simulation (also called transition probability models). These necessitate more complex datasets and computational procedures. Methods can be mixed, as demonstrated by McDonald's use of a mixed propensity and transition probability model, incorporating considerations about changing fertility rates, migration, coupling and uncoupling, and other issues, into the model (McDonald, 2001).

### **Household Maintainer Model**

Many of the studies mentioned above use variations of the headship-rate method which is called the household maintainer method in Canada and through this report. This method has also been called the propensity models (McDonald, 2001). This method involves taking the 'head' of each household, identified through a census or survey, and computing age-specific headship rates by looking at the ratio of the heads of households to total persons within that age group. Future household numbers are then calculated by extrapolating the headship rates forward in time onto future population projections.

Some challenges with this method are that the choice of household head is somewhat arbitrary, and it is difficult to model changes in headship rate (though a regression approach can be used). The major challenge that has been identified is that underlying demographic events and trends are not easily incorporated into this method (Zeng, Vaupel, & Zhenglian, 1998). However, if trends in propensities or transition probabilities, visible in changing headship-rates, are assumed to continue and projected forward throughout the model, these issues are indirectly incorporated into the model. Despite this, Mason and Racelis suggest that fitting a trend line remains problematic because "it is not unusual for headship rates to change rapidly, but for short periods of time, or to increase and then fall" (Mason & Racelis, 1992, 510). In short, it can be challenging to accurately predict changes in headship rates. This becomes more pronounced when considering gender-specific headship rates. This is because two-person households may alternately indicate one person as household maintainer on one census, and then indicate the other person as household maintainer on the next census.

Despite its imperfections, Mason and Racelis report that the headship rate method is the most commonly used for projecting household numbers (Mason & Racelis, 1992). This is because it offers a few key benefits. These are outlined by Mason and Recelis, who describe the method saying, “It is relatively simple to apply, requires only modest amounts of data to implement, and is an important improvement over earlier methods because it incorporates the effects of changes in the age distribution of the underlying population” (1992, 509). Another strength of the headship rate method, identified by Metro Vancouver in a housing report, is that it can rely on data which is “readily available and which can be up-dated on a regular basis” (Metro Vancouver, 2009, 1).

The literature review also reveals that most projections make use of multiple scenarios. The most common approach to this is to develop an initial scenario that holds rates constant at current levels to provide a baseline projection. Meanwhile, additional scenarios consider historic trends, or anticipated future trends, in specific factors. Most projections considered made use of some form of the household maintainer model. This is because it is relatively simple to apply, it incorporates demographic changes into the model, and it relies on data that is readily available and regularly updated.

These factors are important considerations for BCNPHA, as it is envisioned that the projections in the current study will be updated in the future, likely by different people. Overall reliability, ease of calculation, and availability of data were important factors in the decision to use the household maintainer model.

## **Methodology Description**

The projections for this project were produced through the creation of a model built using the household maintainer method. This section will outline the data sources used for the projections, and how the model was built.

### **Data Sources**

As mentioned earlier, one of the key advantages of the household maintainer model is its reliance on a relatively few publically available and regularly updated data sources. Data sources used were: population figures and projections; household maintainers, by tenure type; and households in core housing need. These are explored further below.

### **Population Projections**

Population figures, both current and projected by five-year age group, were obtained from BC Stats' PEOPLE 36 model (BC Stats, 2011), which is based on the 2006 Census. During the course of this project, total population figures for BC and the Regional Districts were released from the 2011 Census. However, a detailed age-specific breakdown or a census undercount figure was not released, making it not feasible to use the 2011 population totals unadjusted. To make use of the new Census number, 2011 population figures for each regional district in the PEOPLE model were adjusted to match the 2011 Census number.

To do this, Census undercounts were estimated using the published undercount from the 2006 Census and applied to the 2011 Census counts, to obtain a new total population figure for 2011. The age breakdown of the population was then developed by applying the same age profile as the 2011 BC Stats projection to the new population total. This created an updated population figure that was usable by the model.

These new 2011 population numbers served as base numbers for future population growth. Future additional population growth was assumed to be the same, in absolute terms, as under the PEOPLE 36 model. This same growth was then applied to the revised 2011 population. Population numbers from 2007 to 2010 were revised so that they progressed smoothly from the 2006 population total to the newly updated 2011 population total. This adjustment avoided having an abrupt change from the 2010 PEOPLE 36 population number to the 2011 revised Census population number.

It is expected that more detailed population information, including undercount estimate and age-specific breakdowns, will be released by Statistics Canada in either late 2012 or early 2013.

Unfortunately, this will be outside of the time scope of this project so cannot be incorporated into the model.

### Household Maintainers

Age-specific household maintainer rates are the percent of the population within a particular age cohort that identifies as a primary household maintainer. This number is useful for calculating the number of households in the region.

Statistics Canada defines the primary household maintainer as the “first person in the household identified as the one who pays the rent or the mortgage, or the taxes, or the electricity bill, and so on, for the dwelling” (Canada Mortgage and Housing Corporation, 1998). Household maintainer numbers, by five-year age groups, were taken from the 1996, 2001, and 2006 Censuses from Statistics Canada. Household maintainer rates were then derived by dividing the number of maintainers in a given age group by the total population in that age group; this is demonstrated in Figure 1. This was done for each regional district, to create specific maintainer rates for each region. This was then summed to create provincial maintainer rates. Household maintainer numbers were also obtained from the 1991 Census. However, this data was not available by five-year age groups, and so proved not useable for comparison to the same level of detail.

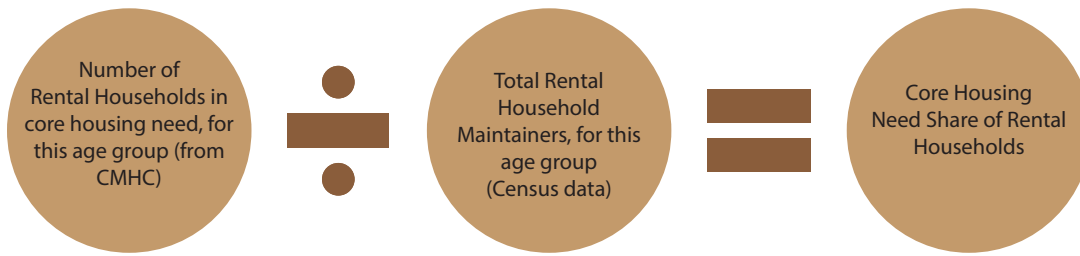
**Figure 1:** Deriving Rental Household Maintainer Rate



### Core Housing Need

The total number of households in core housing need, by specific tenure and in age groups, was obtained from the Canada Mortgage and Housing Corporation (CMHC). Core housing need numbers for household maintainers are not available in the same five year age groups as the household maintainers. Instead, data for numbers of household maintainers in core housing need are available in just four age groups, 15-29, 30-49, 50-64, and 65 and over. To obtain an incidence rate for each Census year, 1996, 2001, and 2006, the number of rental households in core housing need for each age group were divided by the total population of rental maintainers in that age group for each regional district, as seen in Figure 2.

**Figure 2:** Deriving Core Housing Need Share of Rental Households



## Regional Districts

The province of British Columbia is, for governance purposes, divided into 29 regional districts (Figure 3). These regional districts were established in 1965 by the province to provide local services for rural areas outside of municipal boundaries and to create a mechanism for adjacent municipalities to work together to provide services. Currently, regional districts have three identified functions. These are first, to provide regional governance and services for the entire region, in particular region-wide services such as water supply, sewer disposal, and solid waste management. Second, provide a framework for inter-municipal partnership, so that municipalities can jointly provide services, such as parks. Third, regional districts serve as the local government for rural areas outside of municipal boundaries (British Columbia, 2006a). Regional districts are also tasked with the creation of a Regional Growth Strategy (British Columbia, 2006b). These plans, developed by the regional districts in consultation with municipalities within their borders, are a guide to how their region will grow and develop over the next 20 years. There are five essential elements that must be included in a Regional Growth Strategy: housing, transportation, regional district services, parks and natural areas, and economic development (Section 850 (2) of the Local Government Act).

In order for a regional district to accurately plan for housing changes over 20 years, it is necessary to know what the anticipated change in demand will be, and specifically what type of housing will be needed. This is what this report aims to provide.

**Figure 3:** Regional Districts of British Columbia



## Regional Boundaries

As always when dealing with historic data going back over a decade, administrative boundary changes greatly influence data reliability. Several regional districts have experienced significant changes to their boundaries.

In 2008, the Comox-Strathcona Regional District was divided into two regional districts: Comox Valley Regional District and Strathcona Regional District. However, while BC Stats population figures were available for each regional district prior to the split, this was not the case for Census population and household maintainer numbers, which instead still reflected the combined region. It was not possible to create projections for the two current regional districts. Instead,

calculations were only made for the combined regional district, which for the purposes of this report are being treated as still comprising a single regional district.

Likewise, in 2008 the border between the Kitimat-Stikine Regional District and the Stikine Region were altered dramatically. The border was moved several hundred kilometres further north which moved almost half of the population from Stikine into Kitimat-Stikine. The numbers involved are not large in an absolute sense – around 400 people – but they had accounted for almost 40% of the total population of the Stikine Region. However, while it was possible to estimate population change, it was not possible to accurately count the exact changes that this boundary shift had incurred, so previous population figures were not adjusted retroactively.

### **Small Numbers**

In all Census data, numbers within each five-year age group are rounded to the nearest 0 or 5 for privacy purposes. In regions with small populations, this rounding can have a large impact on the calculation of rental household maintainer rates and core housing need.

In several regions, some of the age-specific household maintainer rates were calculated to be zero, because of the effects of rounding or confidentiality in combination with small populations. In order to achieve sensible results, for age groups where the maintainer rate was calculated to be zero, attempts were made to find a reasonable number to derive a maintainer rate.

In several cases, where the rounding effect was the most pronounced, the rental maintainer number was assumed to be the difference between total maintainers and the sum of owner and band housing maintainers. In other cases, where this was not feasible, the maintainer rate was taken to be the average of the immediately older and younger age groups. If the 75 years and over age group, the oldest age group, had a maintainer rate of zero, the rates from the nearest Census year with adequate data were considered, and the difference between the maintainer rates of the 75 plus age group and the 70 to 74 year age group was calculated.

In this way, maintainer rates could be calculated throughout all regions and all age-groups. However, in the regions where this was done (Stikine, Mount Waddington, and Central Coast) the numbers especially among older age groups may be less reliable.

Small numbers also proved problematic when determining rates of rental households in core housing need. As this is a sub-category of rental housing, the numbers of rental maintainers in core housing need are necessarily a fraction, usually around one-third, of all rental maintainers.

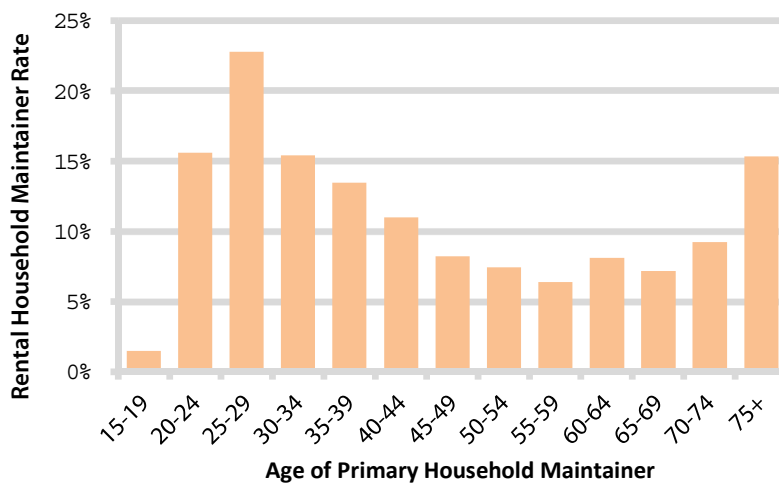
This meant that available data were not reliable for creating projections of rental households in core housing need in three regional districts – Central Coast, Stikine, and Northern Rockies. For this reason, projections in these regional districts were suppressed and not included in the provincial totals.

## Demographic Drivers

As seen previously, in the household maintainer model, a key driver of the projections is a region’s changing demographics, as they play a large role in determining housing demand. The model is influenced by total population of a region but also by the changing age profile of the region.

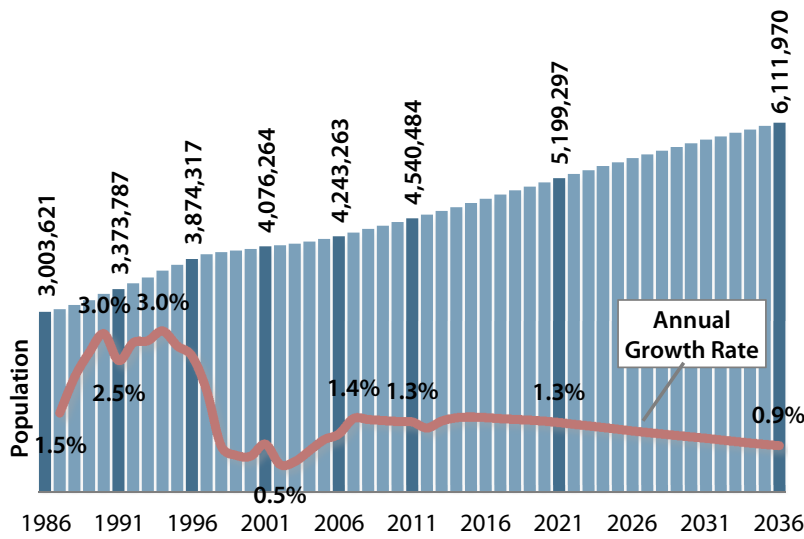
Rates of rental household maintainers vary greatly by age. As seen in Figure 4, older age groups have a significantly lower demand for rental housing than younger age groups. Demand for rental housing is highest among those aged 25-29 and then steadily declines before rising among seniors, especially those aged 70 and over. This means that the age composition of a population plays an important role in the number of rental households. A population with a large number of households maintained by those aged under thirty will rent at a higher rate than a population with households predominantly maintained by adults aged forty to fifty.

**Figure 4:** Rental Household Maintainer Rates; British Columbia, 2006, Census Canada



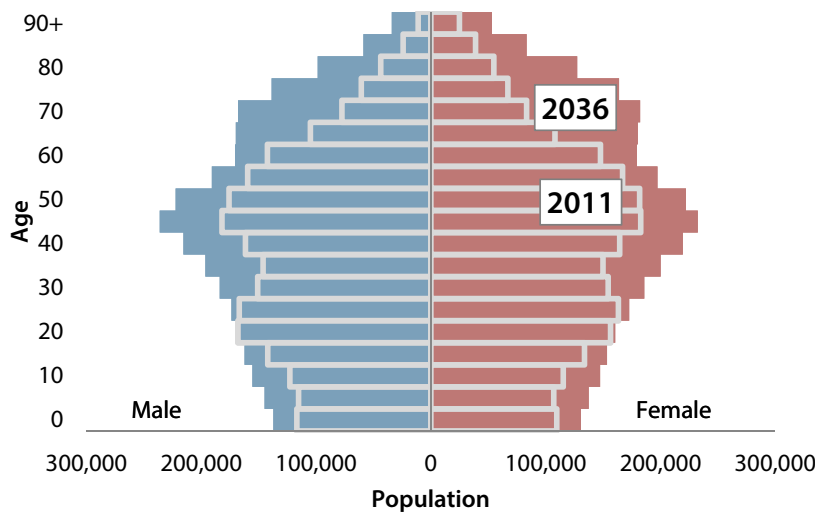
Overall, the population of British Columbia is projected to increase to 6,111,970 in 2036, an increase of over one and a half million from the 2011 population. Between 1986 and 2006, the population grew by 1,239,642 people, fluctuating between a 3.0% and a 0.5% annual increase. Recent growth has averaged around 1.4% annually and is projected to slow from 1.3% in 2011 to 0.9% in 2036 (Figure 5).

**Figure 5:** Total Population Growth, BC, 1986 to 2036, PEOPLE 36, BC Stats – modified beyond 2006



British Columbia’s population is aging. By 2036, as shown in the age profile in Figure 6, there will be significant growth in the population aged sixty-five and over and aged forty-five to fifty-five. Over the same period there will be minimal growth in people aged twenty-five to thirty-five.

**Figure 6:** Age Profile, BC, 2011 to 2036, PEOPLE 36 BC Stats



### Components of Growth in BC

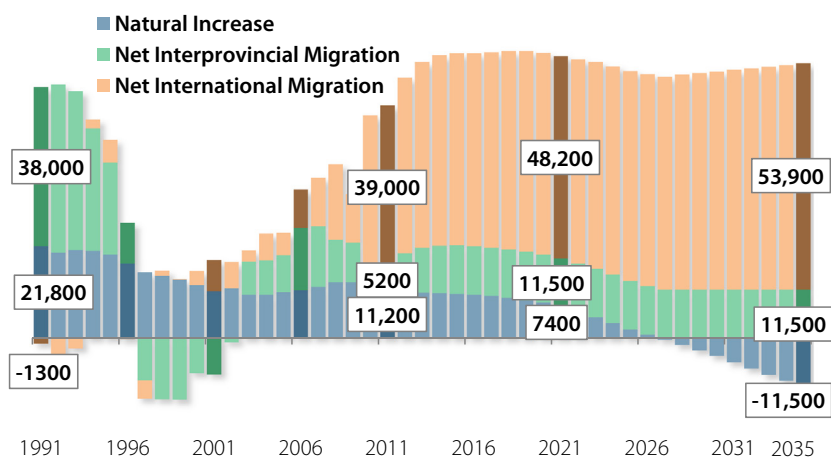
Changes in population at the provincial and regional district level are driven by a combination of natural increase and international and interprovincial migration.

Figure 7 illustrates how these drivers will influence growth in BC over the next 25 years, as projected by BC Stats in their PEOPLE 36 model. In building their projection, BC Stats considers federal immigration policy and incorporates assumptions about migration based on

“variations in resource based activity, as well as refinement of these raw resources” (BC Stats, 2011, 11) and changes to the transportation network in the province.

As shown, population growth from natural increase is expected to decline in the future. By 2026, natural increase will have an overall negative effect on the population. Population increase will instead be driven solely by net immigration, both interprovincial and, more significantly, international. Net international migration is projected to provide over eighty percent of population growth in 2036, from seventy percent in 2011. Population growth of regional districts will be determined by their ability to attract and retain new immigrants.

**Figure 7:** Components of Population Growth in BC, 1991 to 2035, PEOPLE 36, BC Stats



### Distribution of Growth

Population growth that does occur will not be evenly distributed. Instead, it is projected that almost all growth will occur in three key population centres: southern and central Vancouver Island, the south-east coast on the mainland, and central Okanagan (Table 2). In absolute terms, Greater Vancouver will account for over 60% of the projected population increase through 2036. When Fraser Valley is included, the total rises to over 70%. The regional districts will likely experience varying growth rates. Squamish-Lillooet, Fraser Valley, and Central Okanagan will experience the greatest relative growth over this period. These three regional districts, along with Greater Vancouver and Nanaimo, will be the only regional districts to grow at a rate greater than the provincial average.

Over this same period, three regional districts – Stikine, Mount Waddington, and Powell River – will experience absolute population decline.

**Table 2:** Population growth by Regional District, Modified from PEOPLE 36, BC Stats, with data from Census Canada

Region	Population				
	2011	2021	2036	Total Change (2011-2036)	Growth Rate
Squamish-Lillooet	39,690	49,935	63,174	23,484	1.88%
Fraser Valley	288,064	342,547	419,962	131,898	1.52%
Central Okanagan	185,532	220,695	267,283	81,751	1.47%
Greater Vancouver	2,403,542	2,805,515	3,381,031	977,489	1.37%
Nanaimo	149,340	175,939	209,936	60,596	1.37%
<b>British Columbia</b>	<b>4,540,484</b>	<b>5,199,297</b>	<b>6,111,970</b>	<b>1,571,486</b>	<b>1.20%</b>
Peace River	61,296	70,785	82,287	20,991	1.18%
Comox-Strathcona	108,401	123,054	143,694	35,293	1.13%
Cowichan Valley	81,941	92,531	106,435	24,494	1.05%
Northern Rockies	5,712	6,041	7,418	1,706	1.05%
North Okanagan	82,894	92,461	105,324	22,430	0.96%
Capital	371,157	413,622	465,737	94,580	0.91%
Thompson-Nicola	132,006	144,607	164,694	32,688	0.89%
Sunshine Coast	28,824	31,885	35,897	7,073	0.88%
Columbia-Shuswap	51,101	56,672	63,367	12,266	0.86%
Central Kootenay	59,073	63,084	68,340	9,267	0.58%
Okanagan-Similkameen	81,632	87,575	94,215	12,583	0.58%
East Kootenay	57,309	61,450	63,456	6,147	0.41%
Central Coast	3,236	3,416	3,581	345	0.41%
Kootenay-Boundary	31,220	32,040	33,583	2,363	0.29%
Cariboo	63,422	65,298	67,736	4,314	0.26%
Fraser-Fort George	94,020	96,747	99,666	5,646	0.23%
Skeena-Queen Charlotte	19,085	20,022	20,163	1,078	0.22%
Bulkley-Nechako	39,850	41,343	42,061	2,211	0.22%
Kitimat-Stikine	38,150	38,725	39,242	1,092	0.11%
Alberni-Clayoquot	31,478	31,167	32,222	744	0.09%
Powell River	20,019	19,738	19,605	-414	-0.08%
Mount Waddington	11,814	11,604	11,313	-501	-0.17%
Stikine	674	797	546	-128	-0.84%

## The Model

This project used the household maintainer model to create two demographically driven scenarios to project rental housing demand and core housing need among renter households. The model takes the specific rate of people who are the head of a rental household and multiplies that rate by the total population to obtain a figure that is the number of rental households for that population. This number can be the rate of the total population, multiplying the overall rate by

the total population to obtain a number of households, and can be seen in Figure 8. However, this method becomes more accurate and more responsive to changing demographics when done separately for each specific age group, as rental headship rates vary greatly by age.

For this model, household maintainer rates were calculated by five-year age groups for those aged 15 and over to determine the number of rental households in the province.

Both scenarios (described below) applied 2006 household maintainer rates to 2011 population projections to create a baseline projection for 2011, as shown in Figure 8. This was to create a common starting number for both scenarios. Had this not been done, and both scenarios used 2006 as a starting point, then the two scenarios would have different projections for 2011, and so the model would have lacked a common projection for the current year. All 2011 numbers shown for housing demand are projected numbers rather than observed numbers.

**Figure 8:** Calculating Rental Housing Demand, 2011



The two scenarios considered in this projection are as follows:

Scenario A considers how rental household demand will change if age-specific renter household maintainer rates are held at 2006 levels.

Scenario B assumes tenure patterns will follow their historic trend, seen from 1996 to 2006, to 2036. In many cases this is a shift away from rental and towards ownership.

Each scenario was used first to project demand for rental housing, and then to project rental households in core housing need. These scenarios were applied to each regional district to create projections for that region. A provincial projection was created by taking the sum of each regional district projection.

The two scenarios and the provincial projection are explored in more detail in the following sections.

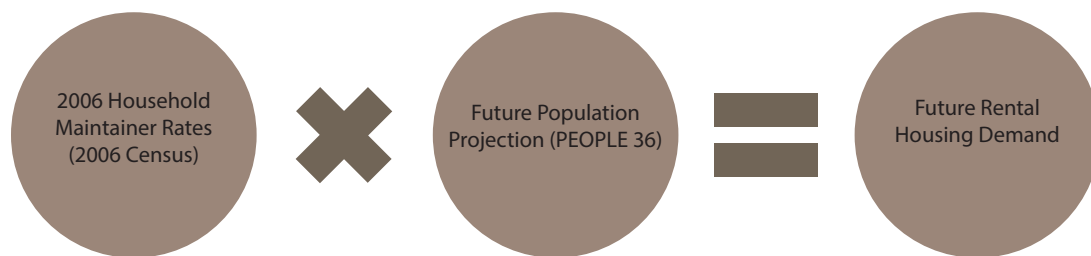
### Scenario A: Constant Tenure

Scenario A provides a baseline projection. This projection holds tenure rates constant at 2006 levels, applying them forward to future projected population, to 2036.

It is, in some ways, a pure demographically driven model. By holding tenure rates constant, its sole driver is changing demographics within each region. This scenario, then, shows the effect that a changing population, both in size and in composition, will have on rental housing demand.

For the projection of renter households in core housing need, tenure rates, as a percent of total households, were held at 2006 levels, as were the percent of total households that were in core housing need, both rental and owner households (Figure 9).<sup>2</sup>

**Figure 9:** Calculating future Rental Housing Demand



### Scenario B: Shifting Tenure

Scenario B examines the role that changing household maintainer rates have on future rental housing demand. This trend-based model examines the past trend in rental household maintainer rates from 1996 to 2006 for each five-year age group in each regional district. The rental household maintainer rate from 2001 was used to verify the trend for each regional district. The degree of change is then projected forward to 2036. Household maintainer rates in 1996, 2006, and the trended rate for 2036 are shown in Figure 10.<sup>3</sup>

As a check on the degree of change, total maintainer rates were held constant throughout the projections. In this way, any change to rental maintainer rates would come with a corresponding shift in ownership rates. When there was a large difference between rates in 1996 and 2006,

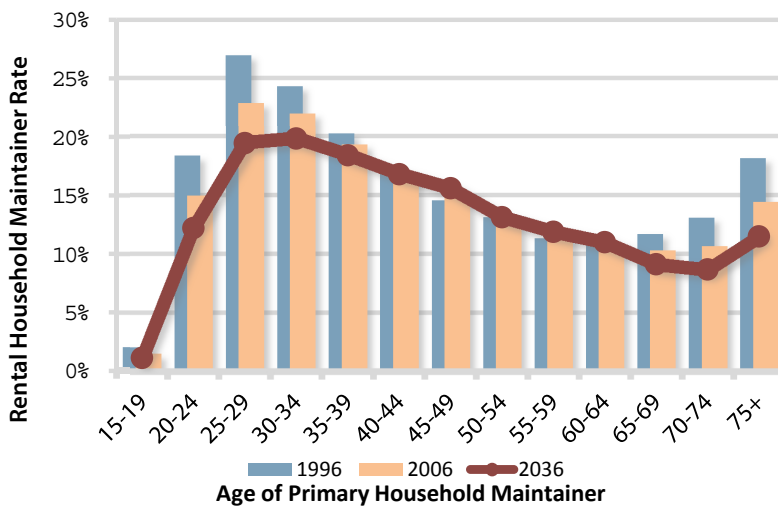
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<sup>2</sup>As a step of this projection, ownership demand was also produced as an output of the model, which could be used to verify rental numbers. However, ownership projections were not a research aim of this project and so are not being produced as findings at present. It is possible that this will be explored in future reports.

<sup>3</sup>This is the sum of the underlying trended maintainer rates from all of the regional districts, and as such was not used for any equations in the model. It is merely shown for illustrative purposes.

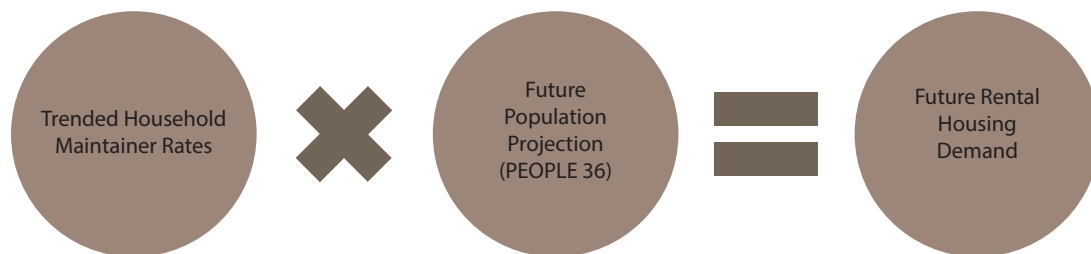
which could be caused by a spike in rates in either 1996 or 2006, the model, as it is constructed, would extend this change into the future, creating a more extreme rate. However, as total maintainer rates were held constant, this would create a corresponding change in ownership rates. This could result in historically low or high ownership rates. For example, in some incidences this led to a negative ownership rate among some age cohorts, which is not possible. To remedy this, the model included a modifier where the amount of change could be reduced to a percent of the initial change – either greater or lesser as needed. This would still uphold the direction of change, but would modify the degree of total change in maintainer rate. This was done at a minimum, and with the minimum amount of change to adjust the rates. It was necessary in an age cohort approximately fourteen times throughout all the regional districts.

**Figure 10:** Household Maintainer Rates, British Columbia, 1996, 2006, and 2036 (Census Canada)



Once a trended maintainer rate was calculated, rental housing demand for each year could then be calculated. It was assumed that the maintainer rate would move smoothly from the 2006 rate, to the new rate in 2036. Calculating the rate for each year could then be made in a similar way to in Scenario A, with the exception that the new maintainer rate would be used instead of the 2006 maintainer rate; this is shown in Figure 11. In this way, the scenario incorporates future changes in the maintainer rate.

**Figure 11:** Calculating rental housing demand using a trended rental maintainer rate



## **Core Housing Need**

Creating accurate core housing need projections creates several challenges. First, it is important to determine factors that contribute to raising rates of households in core housing need. As mentioned above, Canada Mortgage and Housing Corporation defines a household as being in core housing need if “its housing does not meet one or more of the adequacy, suitability or affordability standards and it would have to spend 30% or more of its before-tax income to pay the median rent of alternative local market housing that meets all three standards.” (Canada Mortgage and Housing Corporation, n.d.). Affordability, therefore, is influenced by two key factors – low household incomes and high housing costs. Core housing need is highly influenced by national economic factors, especially changes in employment. Stagnating income levels and reliance on social assistance are large drivers of core housing need; studies show that over half of households in core housing need are on social assistance (Pomeroy, 2001). Housing costs also play a key role in core housing need. Canada’s housing supply is almost completely produced and operated by the private market (Hulchanski, 2005). Over the past fifty years, the private market has largely stopped producing purpose-built rental units (Hulchanski, 2007), raising rents for many Canadians. Rental households are disproportionately affected; over twice the percent of renter households are in core housing need compared with owner households despite making up a smaller segment of the housing market (Pomeroy, 2001). Core housing need also affects the young and old more than the middle-aged (The Co-Operative Housing Federation of Canada, 2009).

In order to create a projection of core housing need, it would be necessary to model future income and employment levels across the province, as well as demographic changes and even changing social assistance rates. Modelling all of these factors is beyond the scope of this study. Instead, this project assumes that the propensity of rental households to be in core housing need will remain constant into the future for each age cohort. In this model, the changing factors are future population figures and future rental households. In this way, a projection can be created without modelling the complete economic future of British Columbia.

Projections for renter households in core housing need were created using the 2006 incidence of core housing need among rental households maintained by people within four particular age groups: 15-29, 30-44, 45-64, and 65 and over.

The 2006 incidences of core housing need were calculated by dividing number of renter households in core housing need by the number of renter households maintained by that particular age group. These age-specific ratios of renters in core housing need in 2006 were then assumed to hold constant from 2006 to 2011 to create a baseline and also from 2011 through

to 2036 for the projections. In both Scenarios A and B, these ratios were applied to the projected number of renter households to calculate the number of rental households in core housing need. The difference between the two scenarios is a direct result of changing projections for rental housing demand, which are then reflected in the core housing need projections.

## Provincial Model

Once projections were in place for the regional districts, a projection could be made for the province as a whole. To build this projection, the sum totals of each regional district's numbers, for each year and age group, were taken together to create a provincial projection for each scenario. In this way, the provincial demand would also be equal to all of the regional district's projected demand.

As a check on the overall reliability of the model, a provincial projection was produced which simply treated the provincial population as another regional district. Under this approach a projection was produced for each scenario which was used to check against the sum model. If a large difference between the two models emerged, then it was possible that the regional districts would have to be revised to account for the new total projection. Each regional district's projections could be adjusted by the percentage that the provincial projection differed from the sum of the regional district projections.

When comparing the two approaches, it was determined for Scenario A in 2036 that the total difference was approximately 0.49% for total households, with the provincial projection producing higher projections than the regional districts projections. This broke down into a difference of +1.14% among owner households and -1.11% among renter households, and is shown in Table 3.

**Table 3:** Percent Difference in Projections in 2036 - Scenario A

Age of Household Maintainer	BC Projection (2036)			Regional District Projections Total (2036)			Difference in Projections		
	Owner HHs	Rental HHs	Total HHs	Owner HHs	Rental HHs	Total HHs	Owner HHs	Rental HHs	Total HHs
15 - 19 years	1,600	4,800	6,400	1,600	4,800	6,400	0.00%	0.00%	0.00%
20 - 24 years	15,000	48,400	63,400	14,900	48,100	63,000	0.67%	0.62%	0.63%
25 - 29 years	52,800	78,600	131,400	52,900	78,300	131,200	-0.19%	0.38%	0.15%
30 - 34 years	93,500	80,700	174,200	93,200	80,600	173,900	0.32%	0.12%	0.17%
35 - 39 years	128,400	76,100	204,500	128,100	76,200	204,400	0.23%	-0.13%	0.05%
40 - 44 years	163,200	72,700	236,000	162,700	73,400	236,100	0.31%	-0.96%	-0.04%
45 - 49 years	192,600	70,100	262,700	191,800	71,000	262,700	0.42%	-1.28%	0.00%
50 - 54 years	195,200	58,000	253,200	193,400	59,700	253,100	0.92%	-2.93%	0.04%
55 - 59 years	178,000	44,700	222,800	176,000	46,300	222,300	1.12%	-3.58%	0.22%
60 - 64 years	159,100	38,100	197,200	157,400	39,600	197,000	1.07%	-3.94%	0.10%
65 - 69 years	169,000	36,000	205,000	165,200	37,700	202,800	2.25%	-4.72%	1.07%
70 - 74 years	173,800	37,200	210,900	168,800	38,100	206,900	2.88%	-2.42%	1.90%
75 years +	360,900	109,100	469,900	355,700	109,100	464,800	1.44%	0.00%	1.09%
<b>Total 15+</b>	<b>1,883,100</b>	<b>754,400</b>	<b>2,637,500</b>	<b>1,861,800</b>	<b>764,000</b>	<b>2,624,500</b>	<b>1.13%</b>	<b>-1.27%</b>	<b>0.49%</b>

When comparing differences in Scenario B, seen in Table 4, the same story emerged, although with a slightly larger difference, especially among younger age groups. Under this scenario, the provincial projection produced 1.73% more owners and 2.98% less renters than the sum of the regional district projections. It produced 0.49% more total households than the regional district. This number is the same as for Scenario A, which is the expected outcome as total household maintainer rates are held constant for both scenarios.

Based on the overall small difference, it was determined to continue with the sum total model for the provincial model, and not adjust the regional district projections. This approach should provide greater accuracy, as it considers smaller scale differences in maintainer rates among age cohorts.

**Table 4:** Percent Difference in Projections - Scenario B

Age of Household Maintainer	BC Projection (2036)			Regional District Projections Total (2036)			Difference in Projections		
	Owner HHs	Rental HHs	Total HHs	Owner HHs	Rental HHs	Total HHs	Owner HHs	Rental HHs	Total HHs
15 - 19 years	2,900	3,500	6,400	2,600	3,700	6,300	10.34%	-5.71%	1.56%
20 - 24 years	23,900	39,500	63,400	18,800	44,200	63,000	21.34%	-11.90%	0.63%
25 - 29 years	64,600	66,800	131,400	59,000	72,200	131,200	8.67%	-8.08%	0.15%
30 - 34 years	101,400	72,800	174,200	97,300	76,600	173,900	4.04%	-5.22%	0.17%
35 - 39 years	131,900	72,600	204,500	133,000	71,300	204,400	-0.83%	1.79%	0.05%
40 - 44 years	163,400	72,600	236,000	164,200	71,900	236,100	-0.49%	0.96%	-0.04%
45 - 49 years	190,100	72,500	262,700	190,800	71,900	262,700	-0.37%	0.83%	0.00%
50 - 54 years	195,300	57,900	253,200	193,800	59,400	253,100	0.77%	-2.59%	0.04%
55 - 59 years	177,100	45,700	222,800	176,400	45,900	222,300	0.40%	-0.44%	0.22%
60 - 64 years	159,000	38,200	197,200	157,700	39,200	197,000	0.82%	-2.62%	0.10%
65 - 69 years	173,300	31,700	205,000	167,700	35,200	202,800	3.23%	-11.04%	1.07%
70 - 74 years	180,700	30,200	210,900	175,300	31,600	206,900	2.99%	-4.64%	1.90%
75 years +	383,200	86,700	469,900	376,600	88,200	464,800	1.72%	-1.73%	1.09%
<b>Total 15+</b>	<b>1,946,800</b>	<b>690,700</b>	<b>2,637,500</b>	<b>1,913,300</b>	<b>712,100</b>	<b>2,625,400</b>	<b>1.72%</b>	<b>-3.10%</b>	<b>0.46%</b>

## Limitations

There are several limitations of this model, which will be explored further below.

First and perhaps most significantly, for this projection, core housing need is only measured as a subset of rental households, without accounting for owner households in core housing need. Furthermore, for the core housing projection, it was assumed that rental households would continue to be in core housing need at the same rates as in 2006. Historically these rates have changed over time. In 1991, roughly 30% of rental households were in core housing need. This went up to 31% in 1996, before dropping to 28% in 2001 and 27% in 2006, and can be seen in Table 5. This could have been addressed by creating two scenarios for core housing need, one being a trend-based scenario of historic rates. This approach was not pursued in the current study because it would have multiplied the total number of scenarios needed (as each core housing

need scenario would need to be applied to the two existing scenarios), and wouldn't necessarily improve accuracy but would instead complicate the findings. Given the variability in historic rate, and greater levels of uncertainty regarding changes in underlying factors determining core housing need, future study could be conducted in this area to consider multiple scenarios.

**Table 5:** Historic Rates of Rental Households in Core Housing Need in British Columbia, Census Canada and CMHC

Age of Household Maintainer	1991	1996	2001	2006
15-29	26.5%	29.0%	24.3%	21.4%
30-44	26.2%	30.1%	26.5%	25.7%
45-64	29.6%	29.4%	27.7%	27.4%
65+	45.5%	43.7%	40.0%	36.4%
Total 15+	30.0%	31.6%	28.1%	27.0%

This model also does not take into account different household types. When determining future housing demand, it can be useful to know how many of the households are forecast to be families compared to those that will be singles or couples. These different household types often have very different housing needs, and so for being able to develop accurate forecasts, this can provide decision-makers greater certainty in their decisions.

In addition to household type, unit type is further information that could be provided. This is typically broken down into multi-family- and single-family-units. This information, while useful in determining rental housing, is even more important in projections of ownership housing demand. In those cases, it is very important to know how much of the demand for owned units will be in the form of single-family homes versus a higher density form of dwelling. In the case of rental housing, it is often assumed that a high majority of the units will be in multi-family dwellings, especially in larger population centres.

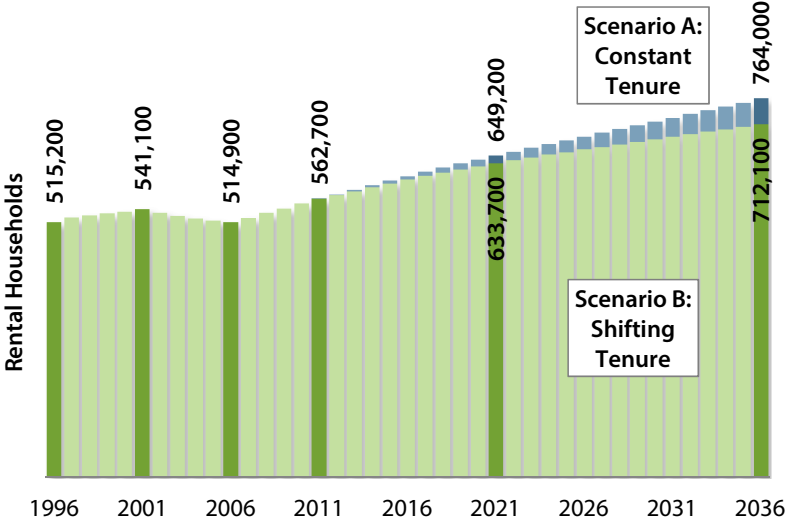
The model is built on a set of assumptions, and is intended to be accurate if these assumptions remain true. It is intended to indicate the direction and degree of change.

# Findings

## Rental Housing Demand

Overall, in both scenarios, rental housing demand in BC is projected to increase at a 0.95% to 1.23% annual growth over the next 25 years, as can be seen in Figure 12. This rise is largely due to overall population growth. As the overall population is aging as it grows, the same period will also see a dramatic growth in rental senior households.

Figure 12: Rental Housing Demand, British Columbia, 1996 to 2036



### Scenario A: Constant Tenure

In this scenario, rental housing demand in BC is projected to increase gradually from 562,700 households in 2011 to 764,000 households in 2036 (Table 6). This is a total increase of 201,300 households, and translates to an average annual increase in rental household demand of 8,052 households between 2011 and 2036.

### Scenario B: Shifting Tenure

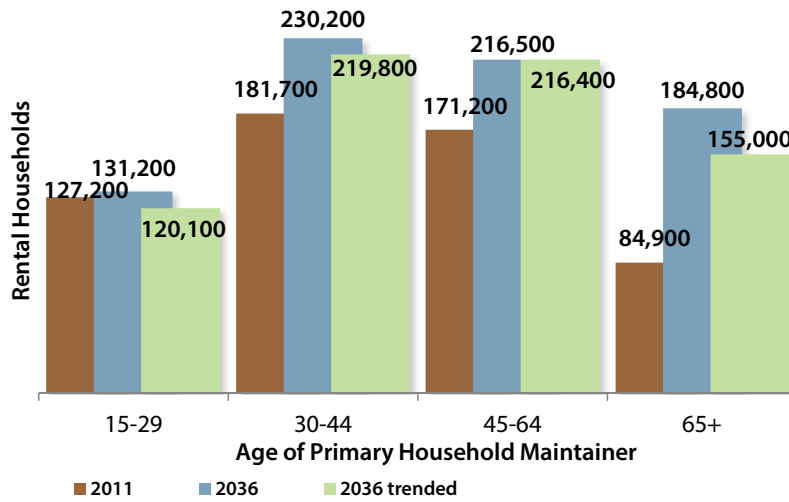
The propensity of households to rent in BC has declined from 16.4% of households in 1996 to 14.4% in 2006. Scenario B assumes this trend will continue to 2036, thereby slowing the growth in rental housing demand. Since the overall population is projected to grow, however, total rental household demand will still increase from 562,700 in 2011 to 712,100 by 2036 (Table 6). The slower growth in this scenario translates into a total increase of 149,400 households, an average annual increase of 5,976 rental households between 2011 and 2036.

**Table 6:** Projected Rental Housing Demand; 2011-2036, British Columbia

Year	Total Households			Additional Households			Avg Annual Additional Households		
	2011	2021	2036	2011-2021	2021-2036	2011-2036	2011-2021	2021-2036	2011-2036
Scenario A: Constant Tenure	562,700	649,200	764,000	86,500	114,800	201,300	8,650	7,653	8,052
Scenario B: Shifting Tenure	562,700	633,700	712,100	71,000	78,400	149,400	7,100	5,227	5,976

Figure 13 shows the age-specific breakdown of rental household maintainers. Significantly, by 2036 the majority of growth in rental demand will come among senior households. Scenario A envisions that the number of senior rental households will more than double by 2036. By 2036, there will be more seniors in rental housing than people under the age of 30 – a large shift in the demographics of people inhabiting rental housing. In fact, the share of renter households that have a maintainer aged 65 and over will increase from currently 15% to between 22 and 24% in 2036 of total rental households.

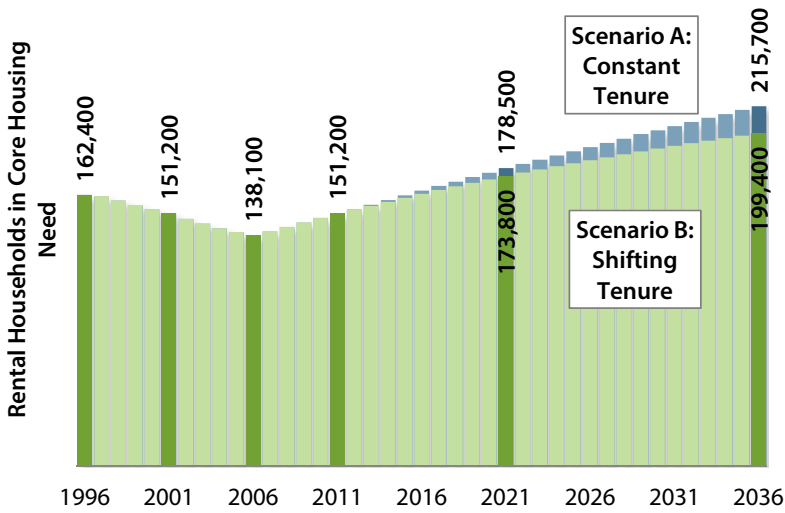
**Figure 13:** Rental Demand by Age of Primary Maintainer, British Columbia, 2011 and 2036



## Core Housing Need

The number of renter households in core housing need is projected to increase by 1.1 to 1.4% annually in BC to 2036, as can be seen in Figure 14. It is estimated that 151,200 renter households were in core housing need in 2011.

**Figure 14:** Core Housing Need, British Columbia, 1996 to 2036



**Scenario A: Constant Tenure**

This scenario reveals an increase of 64,500 households in core need, from 151,200 in 2011 to 215,700 in 2036 (Table 7). This is an average annual increase of 2,580 rental households in core housing need.

**Scenario B: Shifting Tenure**

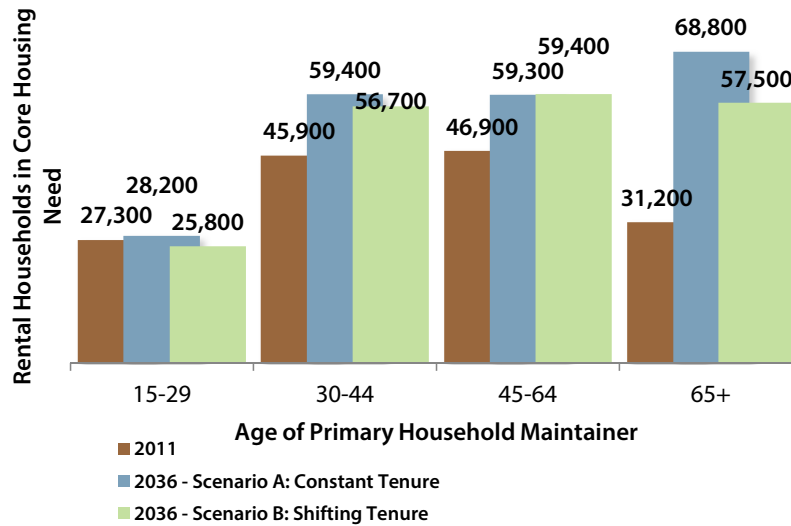
The total projected number of renter households by 2036 is lower in this scenario, as are the number of renter households in core housing need. This scenario projects an annual increase of 1,928 households in core housing need, for a total of 199,400 households by 2036 (Table 7).

**Table 7:** Projected Rental Households in Core Housing Need; 2011-2036, British Columbia

Year	Total Households			Additional Households			Avg Annual Additional Households		
	2011	2021	2036	2011-2021	2021-2036	2011-2036	2011-2021	2021-2036	2011-2036
Scenario A: Constant Tenure	151,200	178,500	215,700	27,300	37,200	64,500	2,730	2,480	2,580
Scenario B: Shifting Tenure	151,200	173,800	199,400	22,600	25,600	48,200	2,260	1,707	1,928

Figure 15 shows the age-specific breakdown of the rental maintainers in core housing need in 2011 and 2036, under both scenarios. While there is little growth, or even decline, among the youngest age category, in 2036 there will be close to double the number of senior households in core housing need. This leads to the share of households that have a maintainer aged 65 and over increasing from 21% of all households in core housing need to 29 or 32% of all rental households in core housing need.

**Figure 15:** Age of Primary Maintainer in Core Housing Need, British Columbia, 2011 and 2036



### Distribution of Rental Housing Demand

As with population growth, growth in rental housing demand will not occur evenly across all regional districts. Instead, growth will be increasingly concentrated in a select few areas of the province.

In terms of the number of additional renter households, it is projected that more than half of the provincial increase will be focused in Greater Vancouver, as seen in Table 8. That region is projected to have by far the strongest growth of rental housing demand from 2011 to 2036, followed by the Fraser Valley, the Capital Regional District, and the Central Okanagan Regional District.

Rental housing demand is growing fastest in Squamish- Lillooet, Fraser Valley, Northern Rockies and Peace River. In Scenario B, Squamish-Lillooet and the Fraser Valley still grow at the fastest rate, but demand in Northern Rockies grows much more slowly. Nanaimo and Comox-Strathcona emerge as locations of rapid increase in demand as well. In these as well as other regions, more rental housing options will be needed, especially where demand will exceed vacancy.

**Table 8:** Rental Housing Demand Growth Rate, by Regional District to 2036

Region	Rental Housing Demand				
		Scenario A		Scenario B	
	2011	2036	Growth Rate	2036	Growth Rate
Squamish-Lillooet	4,800	7,400	1.75%	7,000	1.52%
Northern Rockies	600	900	1.64%	700	0.62%
Fraser Valley	27,400	40,400	1.57%	39,000	1.42%
Peace River	6,100	8,700	1.43%	7,800	0.99%
Central Okanagan	18,300	25,800	1.38%	23,400	0.99%
Greater Vancouver	331,100	466,500	1.38%	428,800	1.04%
Nanaimo	16,000	22,400	1.35%	21,500	1.19%
Comox-Strathcona	10,800	14,700	1.24%	14,300	1.13%
<b>British Columbia</b>	<b>562,700</b>	<b>764,000</b>	<b>1.23%</b>	<b>712,100</b>	<b>0.95%</b>
Cowichan Valley	6,800	9,100	1.17%	8,900	1.08%
Sunshine Coast	2,400	3,200	1.16%	3,200	1.16%
Central Coast	300	400	1.16%	300	0.00%
North Okanagan	7,900	10,500	1.14%	9,800	0.87%
Columbia-Shuswap	4,100	5,200	0.96%	4,900	0.72%
Thompson-Nicola	13,400	16,800	0.91%	15,200	0.51%
Capital	58,300	70,300	0.75%	67,100	0.56%
Central Kootenay	5,700	6,800	0.71%	7,300	0.99%
East Kootenay	5,200	6,200	0.71%	5,800	0.44%
Okanagan-Similkameen	9,000	10,600	0.66%	9,800	0.34%
Fraser-Fort George	10,100	11,500	0.52%	11,400	0.49%
Bulkley-Nechako	3,300	3,700	0.46%	3,400	0.12%
Kootenay-Boundary	2,500	2,800	0.45%	2,700	0.31%
Kitimat-Stikine	3,500	3,900	0.43%	3,900	0.43%
Cariboo	5,900	6,500	0.39%	6,300	0.26%
Skeena-Queen Charlotte	2,600	2,800	0.30%	2,700	0.15%
Alberni-Clayoquot	3,300	3,500	0.24%	3,400	0.12%
Powell River	2,000	2,100	0.20%	2,300	0.56%
Mount Waddington	1,300	1,300	0.00%	1,200	-0.32%
Stikine	100	100	0.00%	100	0.00%

### Distribution of Core Housing Need

In Scenario A, Squamish-Lillooet, Peace River, Fraser Valley and Greater Vancouver show the greatest growth in renter households in core housing need, as seen in Table 9. Several of these regions form the population centre of the province where real estate prices are among the highest. The higher likelihood of renters in Peace River and Squamish- Lillooet being in core housing need might be related to booming local economies, a lag in housing supply, and consequent increases in rent levels. It should be noted that in numbers, the increase in renter households in core housing need in Peace River is only 900, whereas in Greater Vancouver the increase is projected to be 45,500.

In Scenario B, Nanaimo joins the group of fastest increases in incidence of core housing need amongst renters.

## Verifying Findings

**Table 9:** Core Housing Need among Rental Households Growth Rate, by Regional District to 2036

Region	Core Housing Need (amongst renters)				
	2011	2036	Growth Rate	2036	Growth Rate
Squamish-Lillooet	700	1,300	2.51%	1,100	1.82%
Peace River	1,200	2,100	2.26%	1,900	1.86%
Fraser Valley	7,600	11,500	1.67%	11,100	1.53%
Sunshine Coast	800	1,200	1.64%	1,200	1.64%
Greater Vancouver	92,100	137,600	1.62%	125,100	1.23%
Central Okanagan	4,400	6,500	1.57%	5,800	1.11%
<b>British Columbia</b>	<b>151,200</b>	<b>215,700</b>	<b>1.43%</b>	<b>199,400</b>	<b>1.11%</b>
Nanaimo	4,600	6,500	1.39%	6,300	1.27%
Columbia-Shuswap	1,100	1,500	1.25%	1,400	0.97%
Cowichan Valley	2,100	2,800	1.16%	2,700	1.01%
Comox-Strathcona	2,800	3,700	1.12%	3,700	1.12%
North Okanagan	2,200	2,900	1.11%	2,700	0.82%
Thompson-Nicola	3,800	5,000	1.10%	4,500	0.68%
Bulkley-Nechako	700	900	1.01%	800	0.54%
East Kootenay	1,100	1,400	0.97%	1,300	0.67%
Capital	14,300	18,100	0.95%	17,100	0.72%
Fraser-Fort George	2,400	2,800	0.62%	2,800	0.62%
Skeena-Queen Charlotte	600	700	0.62%	700	0.62%
Central Kootenay	1,900	2,200	0.59%	2,400	0.94%
Okanagan-Similkameen	2,100	2,400	0.54%	2,300	0.36%
Kitimat-Stikine	800	900	0.47%	900	0.47%
Kootenay-Boundary	700	700	0.00%	700	0.00%
Alberni-Clayoquot	900	900	0.00%	900	0.00%
Cariboo	1,300	1,300	0.00%	1,300	0.00%
Mount Waddington	200	200	0.00%	200	0.00%
Powell River	600	600	0.00%	700	0.62%

To verify the model, findings were compared to other published housing projections for regional districts in British Columbia. These projections employed different methodologies and different time frames, and also frequently had focuses other than rental housing. However, it is possible to determine how the findings of this project overlap with their findings.

The Regional District North Okanagan created a projection of total households without distinguishing between tenure types. This projection went from 2009 to 2031, and projected that by 2031 the region would need face demand for 10,895 additional households (Regional District of North Okanagan, 2010). By comparison, this model calls for 10,444 additional units over the same time period, a difference of just 451 households.

The Fraser Valley Regional District has created a projection of rental demand. Additionally, the projection has a category for “affordable units” – a category which closely matches this model’s “core housing need.” Their projection sees 552 additional rental households per year from 2006 to 2036, of which 121 need to be affordable (Fraser Valley Regional District, 2009). By comparison, Scenario A of this model sees demand for 521 rental households per year over the same period, of which 152 are in core housing need. Scenario B projects an additional 475 rental households per year, of which 138 are in core housing need.

Urban Futures created a projection of future housing demand for the Nanaimo Regional District. Their projections divided housing demand by unit type instead of tenure type. Their total projection called for 113,083 units by 2036 (Urban Futures, 2007). In contrast, this model projected a total of 94,960 total households by 2036, a difference of 18,123 from Urban Futures.

Finally, Metro Vancouver in 2009 published a background to their Regional Growth Strategy that gave estimated housing demand for the regional district. It estimated that from 2011 to 2021 there will be demand for 66,300 additional rental households (Metro Vancouver, 2009). This compares with 59,000 additional rental households in Scenario A, and 47,000 additional rental households in Scenario B in this model.

When comparing the findings of this model to other published housing projections for regional districts, the results are broadly in line with the other findings. However, this model tends to produce results that are more conservative than other projections.

## **Implications of Findings**

The first question that arises with these findings is, “how can regional districts meet this need?” Purpose built rental housing is often not financially viable for developers to build, when compared with the returns from building condominiums (Coriolis Consulting, 2009), and consequently construction starts have not matched current demand. Instead, renters rely on condos and secondary suites for housing, but this can be challenging as the units can be taken off the market by their owners at any time. Financial incentives that used to exist for the development of rental housing in Canada are no longer in place, and the situation now favours owners (Clayton & D, 2010; Greater Victoris Coalition to end homelessness, 2010). While some municipalities are exploring ways to subsidize purpose-built rental construction (City of Vancouver, 2009), it is unclear if this will be sufficient to meet demand, or if even with incentives it can provide affordable rental rates (City of Vancouver, 2012). Lack of adequate rental housing will force people to live in substandard conditions or live further from work where

they can find affordable accommodation, increasing commutes and worsening health and social outcomes (Kluger, 1998; Lyons & Chatterjee, 2008).

Beyond the growth in the total number of rental households projected for 2036, the changing demographics will lead to shifts in the rental housing landscape. Because of the overall aging population projected for British Columbia, the majority of growth in rental demand will occur in senior households. By 2036 there will be more rental maintainers aged over 65 than aged under 30, and the overall population composition of rental households. This has implications for the nature of rental housing that will need to be provided. Seniors have different housing requirements than young adults. These include physical design details such as wide and level entrances and adequate handholds, and also dwellings that are connected to communities, especially as seniors lose mobility (Burby & Rohe, 1990; Gibler, 2003; Hirono, 2009; Lynch, 1988; Malyan, 1986). These factors will have to be considered when planning new rental housing.

Households in core housing need are those that are unable to meet their housing needs under market conditions. As such, it is often necessary for nonmarket housing to be constructed to provide housing for those who can't afford to compete in the market economy. As with rental housing, by 2036, senior households will comprise of a much larger portion of all households in core housing need. This will require a changed focus on the part of housing providers, needing to provide an even greater amount of seniors housing.

## Future Research

This project aims to provide projections for rental housing occupancy demand – the total number of rental units that would be occupied by households. This does not account for vacant units, and also does not account for how many units are likely to be delivered in the private housing market that exists in BC.

A future project is planned by BCNPHA to consider housing supply – how many current units exist and how many are likely to be built over the next twenty-five years. With both studies complete, it would be possible to examine both supply and demand to consider where gaps exist across the province.

Another opportunity for further work would be to update the projections with updated population figures from the 2011 Census when numbers are released. This would allow for household maintainer rates and core housing need incidence rates to be taken from 2011 instead of 2006. This would also allow for the trend in Scenario B to be built using a fifteen-year trend rather than the ten-year trend built into this model.

Also, as mentioned above, future research could consider different scenarios for rental households in core housing need which would incorporate different historic trends in core housing need. This would create additional scenarios of different possible outcomes of core housing need to account for the complexities of projecting core housing need.

Finally, by 2036, population growth in British Columbia is expected to come exclusively from immigration, both interprovincial and, more significantly, international. In light of this, future research is needed which considers the specific household maintainer patterns of immigrant groups - as compared to the overall population. If significant differences are found, then future projections could consider the implications of growth coming from immigration instead of natural increase.

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