Population, Housing & Employment Projections for the City of Pitt Meadows

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Population, Housing & Employment Projections for the City of Pitt Meadows

Prepared for:

The City of Pitt Meadows

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I Background & Overview

As part of the City of Pitt Meadows's review and update of its Regional Context Statement, Urban Futures has been retained to develop an outlook of population, housing, and employment for the City to 2042. The projections will provide insights into the factors impacting growth and change in the City's demography and economy in the coming decades, thereby providing a foundation for a host of policy directions and strategic plans for Pitt Meadows.

1 Projection Methodology

The methodology used to develop City-specific projections relies on a community lifecycle modeling approach that is built on a wide range of demographic, housing and employment data from the 2006 and 2011 Census and other surveys from Statistics Canada, BC Stats, Canada Mortgage and Housing Corporation (CMHC), and the City of Pitt Meadows. In addition, a number of reports were consulted in developing the Pitt Meadows-specific projections, including the City's Official Community Plan, GP Rollo & Associates' Commercial and Industrial Lands Development Analysis (2013), Metro Vancouver's 2010 Industrial Lands Inventory Study (2011), and CitySpaces' Housing Demand and Residential Policy Review (2006).

While the objective of this research was the development of the City-specific projections, as Pitt Meadows shares a common labour force, transportation network, and social infrastructure with all other municipalities in the region, the analysis begins by exploring the scope and scale of growth and change expected for the regional level (the Greater Vancouver Regional District, or GVRD). In this context, economic, transportation and land use changes in Pitt Meadows will affect, and will be affected by, economic, transportation and land use changes expected throughout the rest of the region.

Built on a series of demographic and economic models that consider growth and change at the regional, provincial and national levels (specifically international migration), the regional context for change can be established. Once the regional population and housing context has been established, the lifecycle approach to developing the City-specific projections begins by accounting for the vital changes (births, aging and deaths) impacting the City's existing residents during a year. Next, the consequences of people moving into and out of the City each year are accounted for. In doing so, consideration is given to both the turnover of existing housing (people moving out of the community, vacating units for other people to move into), and the construction of new housing (people moving into newly-constructed units). For each of these mobility groups, the demographic characteristics of these occupants are developed from the most recent (2006) Census data, which detail mobility patterns by age, sex, structure type of dwelling and period of construction of the dwelling.

When out-movers are subtracted from the City's existing population and in-movers are added and births, deaths and aging are accounted for throughout the year, the result is an estimate of the City's year-end population. This year-end population in turn becomes the new resident population base, described by age, sex, and structure type of dwelling, for the next annual iteration in the modeling process. The result of this lifecycle approach is therefore annual projections of population by age and sex, and the total occupied housing stock by structure type for the City of Pitt Meadows.

The starting point for considering future employment changes in City is a region-wide projection of employment by broad industry sector, for it is at this broader functional economic region level that employment projections can be considered against demographic ones. More specifically, before considering employment changes in Pitt Meadows it is necessary to achieve a resolution between the demand for workers (jobs) and the supply of workers (the labour force) for the Lower Mainland region.

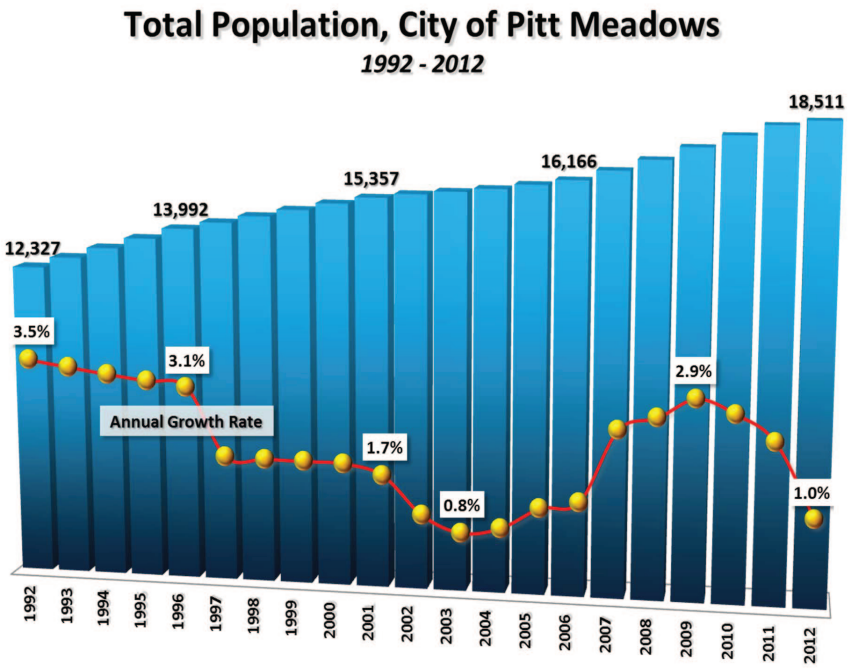
In considering potential employment changes at the municipal level, two distinct types of employment are modelled forward: those jobs that typically serve the local population's needs (the *population-serving* sector) and those that are independent of the local population (the *economic base*, or *non-population-serving*, sector). The population-serving component of employment in each industry category (for example, retailing activities serving local neighbourhood residents) is driven in part by the projections of the City's population and in part by the degree to which the City is under-served or over-served with respect to employment in a particular employment sector (for example, it was found that Pitt Meadows is under-served with respect to jobs in the health care and social services sector when compared to the regional average).

For the economic base dimensions (such as retailing to tourists or manufacturing for export markets), future allocations of employment are based on the existing structure of the City's employment relative to the rest of the region. Further to this, specific consideration is given to the amount of vacant industrial land available within Pitt Meadows and in other municipalities throughout the region as a means to allocate a portion of the non-population-serving employment, specifically those uses that would be found on industrial lands. In summary, this step-down approach recognizes trends in regional economic change, the existing composition of employment found within Pitt Meadows and throughout the rest of the GVRD, and the role of local and regional population change on employment in the coming years.

2 Historical Demographic & Housing Changes in Pitt Meadows

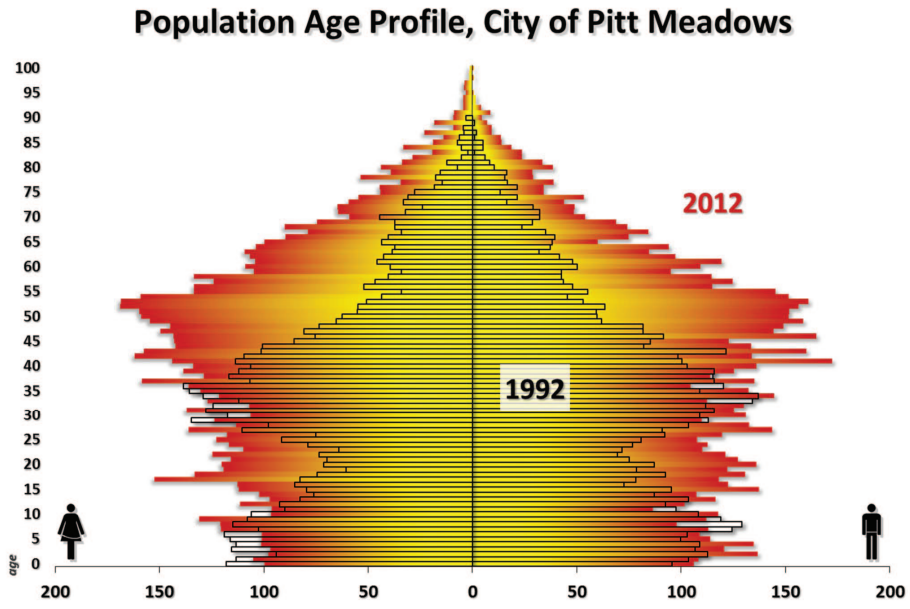
In order to provide some historical context for the projections presented in the following pages, it is useful to briefly outline the changes that the City of Pitt Meadows has experienced in the recent past. Looking back 20 years, the City's population was 12,327 residents (in 1992; Figure 1), accounting for 0.73 percent of the region's (GVRD's) population in that year. While the City's population had grown by 50 percent by 2012—to 18,511 residents—it's share of the regional population only increased marginally, to 0.76 percent.[1]

Figure 1



While growth averaged just under 310 people per year over this two decade period, Figure 1 also shows that when viewed on an annual basis, the City has experienced periods of relatively rapid, moderate, and slow growth. For instance, between 1992 and 1996 the City's annual growth rate ranged narrowly between 3.5 percent (1992) and 3.1 percent (1997). From 1997 to 2006 the pace of population growth declined significantly (as it did throughout much of British Columbia) reaching a period-low of 0.8 percent by 2003. Since mid-2000, growth has been more robust, reaching a high of 2.9 percent in 2009 before falling back down towards 1.0 percent in 2012.

Figure 2



While growth rates have been variant, the major demographic change that Pitt Meadows has experienced over the past two decades is the same one that has characterized the rest of BC and Canada: the aging of the Post War Baby Boom generation (Figure 2). For example, in 1992, 36 percent of the City's population was between the ages of 27 and 46 with the most typical resident being in their mid-30s; these were individuals born between 1946 and 1965, members of the same boomer birth cohort that dominate the national and provincial age profiles. Twenty years later (2012), these people had "moved up" the City's age profile into the 47 to 66 age group, reflecting 20 years of birthdays during the two-decade period. As the boomers children have also aged, Pitt Meadows' age profile shows how the number of 15

1 Unless otherwise stated, all population, housing, and employment figures presented in this report have been adjusted for a net Census undercount.

to 25 year olds has increased significantly since 1992, with the "waist" of the age profile (the 20 year old age group in 1992) filling out by 2012.

In addition to aging, mobility has played a key role in shaping the City's population. Based on the 2006 Census 5-year mobility status data, it is possible to develop a general the pattern of migration and mobility for the City (similar data from the 2011 National Household Survey will be released later this year). In 2006, 73 percent of Pitt Meadows' residents over the age of five indicated that they were living in the City five years earlier (in 2001); this compares to 77 percent of residents in the rest of the GVRD being in the same municipality in both 2006 and 2001. The 2006 Census also showed that the largest share of those who moved to Pitt Meadows came from other parts of the region and province (22 percent). This was much higher than the regional average where only 14 percent of people moved from another municipality in the province.

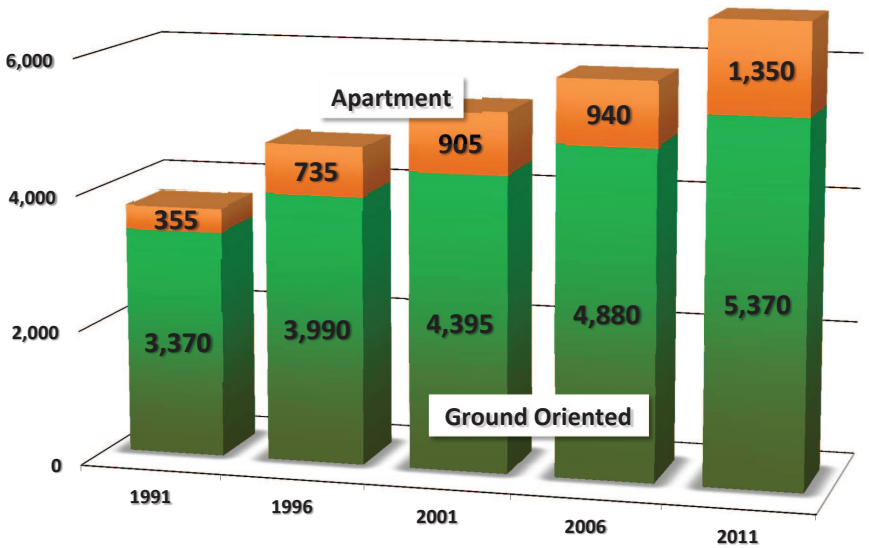
People moving to Pitt Meadows from other provinces comprised two percent of the City's residents in 2006, versus three percent regionally. Similarly, a significantly smaller share of the City's population had moved from other countries between 2001 and 2006 when compared to the region as a whole: three percent of Pitt Meadows' population had moved internationally between 2001 and 2006 versus eight percent of the region's population.

With the 2006 mobility status data showing that Pitt Meadows was not a major destination for recent immigrants when compared to other parts of the region, this pattern is reflected in the recently-released National Household Survey data on the foreign-born population. More specifically, 23 percent of Pitt Meadows' 2011 population was born outside of Canada, much lower than the regional average of 40 percent (but still almost one-quarter of the City's population).

The 2011 Census data on Pitt Meadows' housing stock show that between 1991 and 2011 the number of occupied dwelling units grew from 3,725 to 6,715, a 2,990-unit, or 80 percent, increase. The City's housing stock changed much more when considered on a structure type basis, with the Census showing that while apartment units accounted for only ten percent of Pitt Meadows' dwelling stock in 1991, by 2011 they represented 20 percent. Since 1991 the number of apartment units has grown by 280 percent relative to the number of ground oriented units, which grew by 59 percent (a category that include single detached homes, duplexes, row houses, and garden suites).

Figure 3

Total Occupied Dwelling Stock, City of Pitt Meadows
1991 - 2011



The changing composition of housing additions has also had an impact on the City's demography as, in addition to smaller household sizes, the age profile of people moving into apartments is typically concentrated in the younger early-career and pre-family formation stages of the lifecycle.

II Projected Changes in Greater Vancouver: 2012-2042

1 Demography

Over the past two decades the Greater Vancouver region (GVRD) has grown from 1.69 million residents (in 1992) to 2.43 million today. While the regional population has grown continually over the past two decades, like Pitt Meadows it has experienced a great deal of variance in its rate of annual growth. From highs of 3.2 percent in 1994 to lows of 0.9 percent in 2003 and 2004, growth rates moved back above two percent by 2008. These peaks and troughs are largely reflective of the changing economic conditions within British Columbia, and the impact this has on net migration, both to the province and the region.

The historical levels of migration to the region has resulted in a unique demographic profile for the GVRD when compared to the province as a whole. Relative to the provincial profile, the GVRD has a slightly larger proportion in the under 20 age group (21 percent, compared to 20 percent provincially) and a smaller proportion of its population 75 years of age and older (6.1 percent, compared to 7.0 percent at the provincial level). The same proportion of population was between the ages of 20 and 74 in both the region and the province as a whole (73 percent).

Having noted these relatively small differences, the major demographic change that the GVRD has experienced over the past 20 years is the same one that has characterized the province and the City: growth of the working-aged population as a result of the aging of the baby boom generation. For example, 35 percent of the region's population was between the ages of 27 and 46 in 1992, with the typical resident being in their late-20s at that time; two decades later (in 2012) the GVRD's age profile had shifted upwards, with today's most typical resident being 49 years of age.

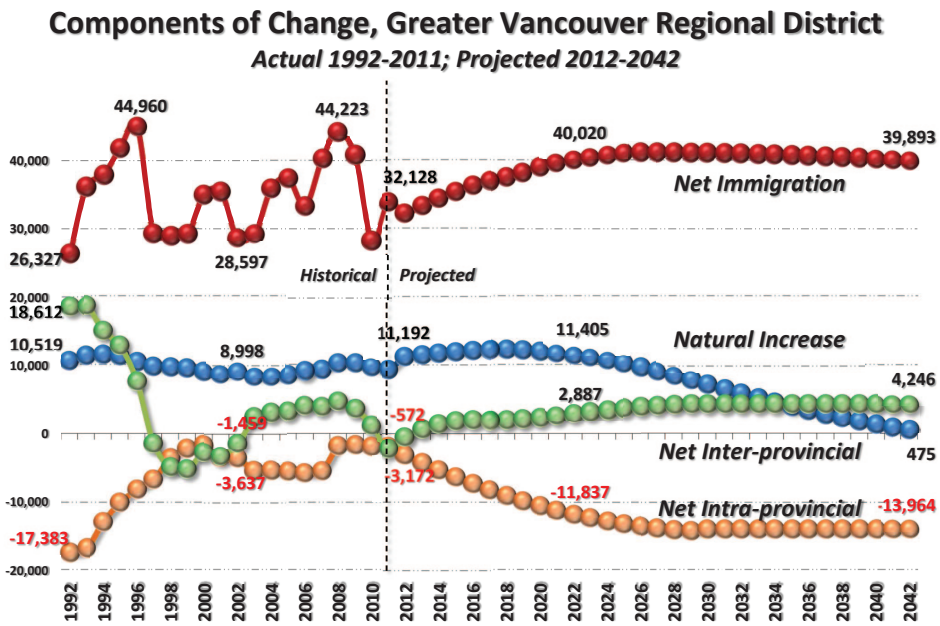
In addition to aging, natural increase (the difference between the number of births and deaths each year) has helped to shape the regional population. More specifically, natural increase increased slightly between 1992 and 2011, going from 10,519 people to 11,192 (Figure 4, next page). Looking ahead, given the age profile of the region's current population, and its below-replacement birth rate of 1.3 children per woman, natural increase is projected to only grow marginally over the next decade (to 11,405 people in 2022), before declining towards a net addition of only 475 people by 2042 as the aging of today's boomers results in a significant increase in the number of deaths relative to the number of births.

Having considered aging and natural increase, the final component to consider is migration. Aside from clearly impacting the total number of people living in the region at any given point in time, each of the region's three migration flows (net international, inter-provincial, and intra-provincial) has a distinct impact on the younger age groups, as it is younger people who are typically the most likely to move.

In terms of magnitude, intra-provincial migration saw a negative net contribution to the region's population change over the past decade as an average of 3,800 more people left the region for other parts of BC each year than came from them. In contrast, net inter-provincial migration added an average of 1,925 people per year over the past decade, while net immigration was the largest contributor, bringing in an average of 35,000 persons per year over the past decade (Figure 4).

In looking forward, net intra-provincial migration is projected to continue to be negative, stabilizing in the range of a loss of 14,000 people per year over the long-term. On the other hand, while net inter-provincial migration has been negative recently (by 572 people), economic growth in the province and region over the longer-term is expected to see net inter-provincial to the GVRD move back into positive territory over the short-term, increasing into the range of 4,200 additions annually by 2042.

Figure 4



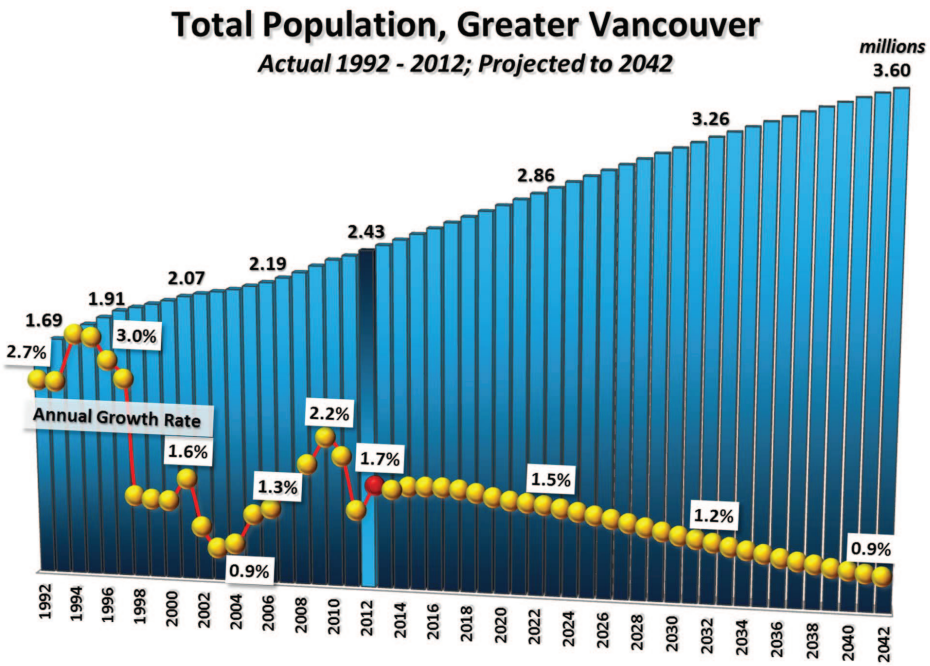
With current levels of net immigration to the GVRD sitting close to the past two-decade average, a national outlook that is expected to see immigration increase would see net immigration to the GVRD increase to just over 40,000 net immigrants by 2022, remaining in the range of 40,000 net immigrants annually to the end of the projection period.

As indicated earlier, migration flows will impact more than just total population, as movers are typically younger than the existing resident population. More specifically, the most typical age for intra-provincial in-movers is 22; for inter-provincial in-movers it is 25; and for immigrants it is 29. As such, with natural increase projected to fall in terms of its impact on the regional population, it will be migration and its relatively youthful profile that will shape the younger segments of the GVRD's age profile, with aging having the most significant influence on the composition of the region`s older residents.

Combining the projected level and composition of migration to and from the GVRD with natural increase and the aging of current residents results in a baseline projection of population growth and change in the region over the next three decades. As Figure 5 shows, the regional population is projected to continue to grow, but at a slower pace than has been experienced historically.

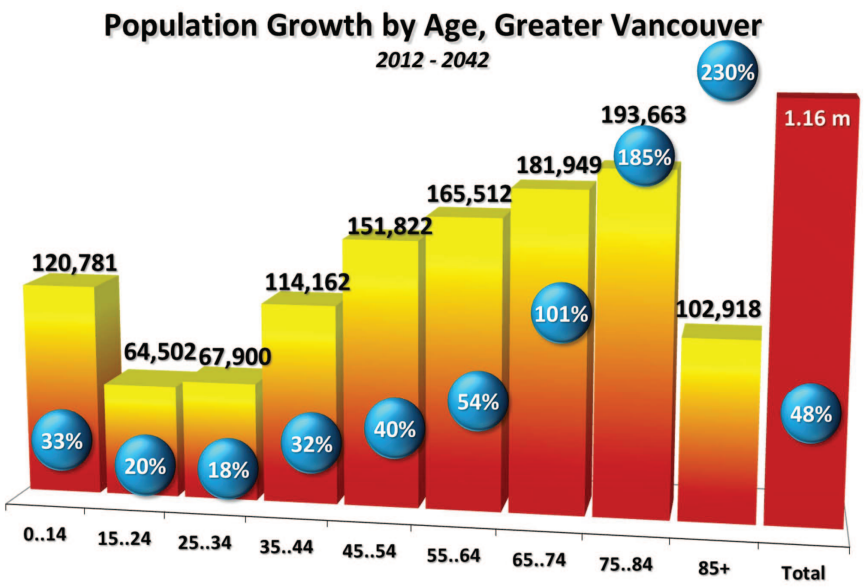
From a 2012 population of 2.43 million residents, the region is projected to grow to 2.86 million by 2021, pass three million by 2031 (3.26) and reach 3.60 million by 2042 (Figure 5). As such, a total of 1.16 million residents are projected to be added to the GVRD by 2042 or average additions of almost 38,800 residents each year, or at an average annual growth rate of 1.3 percent. From its current 1.7 percent, the region's growth rate is expected to slow due to relatively low fertility rates and aging which would see a growing segment of the region`s population age out of the family rearing and into higher mortality stages of the lifecycle.

Figure 5



While the number of people in most age groups is projected to increase in the GVRD over the coming three decades, the older age groups would see the greatest absolute and relative growth (Figure 6). Largely a result of the aging of the GVRD's current residents, a 230 percent increase in the number of people aged 85-plus is anticipated, as well as an

Figure 6



increase of 185 percent for those aged 75 to 84, and a doubling (a 101 percent increase) of those aged 65 to 74.

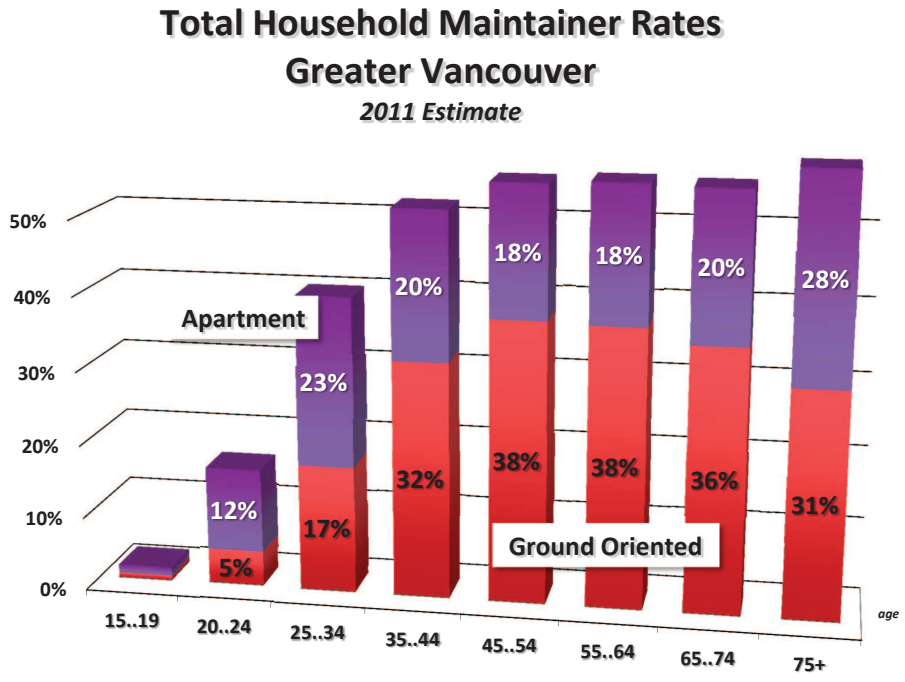
Given these changes, by 2042 19 percent of the GVRD's population would be under 20 years of age (down from 21 percent today) and the 20 to 64 working-age group would account for 59 percent of the population (from to 66 percent today). The 65-plus age group on the other hand would see its share of the population increase significantly—up to 22 percent from 14 percent today. As such, for every additional person of working age in the region in the coming years there would be approximately one additional senior and child (both of which are generally considered to be dependents of the working-aged population).

2 Housing Occupancy Demand

The GVRD's changing and growing population will shape the type of housing required to accommodate its future population. While it will be the region's changing population that will determine the nature and magnitude of housing growth, it will the location of additional units within the region that will, in turn, determine future population changes of the region's communities. Thus, the next step in developing a projection of Pitt Meadows's is a projection of region-wide housing occupancy demand.

Figure 7

The link between housing occupancy demand and the age composition of a population is provided by the percentage of people of each age who are "household maintainers". In the Census questionnaire used to gather data on housing, each group of people living together in a private dwelling (a household) is asked to indicate the age and other attributes of the household member they consider to be primarily responsible for the financial support of that household. This person is referred to as the (primary) household maintainer. Dividing the total number of people of a specific age who are household maintainers by the total number of people in that age group determines the household maintainer rate for that particular age group.



Considering changes in the maintainer rate between various age groups illustrates the strong lifecycle pattern of

maintaining a home. As shown in Figure 7, estimates for maintainer rates in 2011 shows that only two percent of people between the ages of 15 and 19 were household maintainers as most people in this age group (and all of those under the age of 15) live in households maintained by someone else, generally their parents[2]. As people begin to leave the parental home to establish households of their own in their early-20s, the maintainer rates begin to rise, with 16 percent of the 20 to 24 age group and 40 percent of the 25 to 34 age group being household maintainers. This growth is driven by entry into the family formation and working career stages of the lifecycle. For the 35 and older age groups, more than half of the people are household maintainers, a pattern which peaks at 58 percent in the 75 plus age group.

This pattern of increasing age specific maintainer rates has significant implications for future housing demand. Consider the example of 1,000 people in the 15 to 19 age group: in 2011 there would be only 20 households maintained by these 1,000 people. Five years later as these 1,000 people age into the 20 to 24 age group they would maintain 160 households, and five years after that they would maintain 400 units as they became 25 to 34 years old. Over a ten-year period the occupancy demand from the same 1,000 people would increase 20 times, from 20 units to 400. This characterized housing markets throughout Canada in the late-1960s and 1970s as the post-World War II baby boom generation moved out of their parents' homes and into their own housing. It will continue characterize the coming years as the boom ages into the stage of the lifecycle where maintainer rates peak.

The great diversity of housing types people live in can be classified into two broad structural types, ground oriented and apartment. The term 'ground-oriented' accounts for a wide range of housing accommodations, from the traditional single detached house with side yards separating it from other dwellings, and only one household living within it, to a side by side duplex where dwelling units are on the ground but attached to another unit; row houses where the dwelling units are attached to each other on both sides, and moveable and mobile homes. The defining feature of ground oriented units are that they open directly to a yard and do not share a common corridor entrance. Distinct from these ground oriented housing types are apartments, dwelling units that are not only attached on each side, but also stacked one on top of the other. As a result of being stacked, individual dwelling units do not generally have direct access to the street or to a yard, but rather have entrances that open onto a corridor, sharing a common access to the yard and street with other dwelling units.

Each of these structure types has a distinct lifecycle pattern. For example, from the age of 25 onwards a greater proportion of people maintain ground oriented accommodation, a pattern that generally coincides with the family-rearing and empty-nester stages of the lifecycle. Conversely, a person is more likely to be the maintainer of a household living in an apartment in the under 25 age groups (where maintainer rates for apartments are double those of ground oriented). While apartment maintainer rates peak in the 75 plus age group (where almost 28 percent of people in that age group maintain apartment units), ground oriented accommodation still predominates, with 31 percent of people maintaining ground oriented units (Figure 7).

The pattern of age and structure type specific maintainer rates represents what might be called the behavioural component of the housing market; it describes the way in which households, given their resources and the constraints of prices and availability, accommodate themselves in the housing stock. As with the other behavioural variables, age specific household maintainer rates have changed over time and are expected to continue to do so. These changes will be driven by factors such as the continued urbanization of the GVRD, changing social behaviour with respect to family formation, labour force participation, retirement, education and growing environmental concerns. Some of these factors are considered below in presenting how maintainer rates may change in the coming years.

2 Although estimates have been made for 2011 using the most recent Census data on occupied dwellings by structure type, the most recent data on age and structure type specific household maintainers is from the 2006 Census.

3 Projected Household Maintainer Rates

As related to housing, growth and change generally occur in two directions: out and up. The out is the most easily perceived dimension, with the boundaries of urbanized areas expanding as additional housing is added to the edges of regions to accommodate new residents.

Two forces ensure that along with the out comes up, with the first being a by-product of the outward growth. As the expansion of the urbanized area increases, there is an increasing premium attached to locations that are readily accessible to major employment concentrations, which are typically found in the central part of the urban area. Over time, the accessibility advantage of these sites will be capitalized into higher land values.

Figure 8

Ground Oriented Household Maintainer Rates
Greater Vancouver
2011 Estimate; Projected to 2042

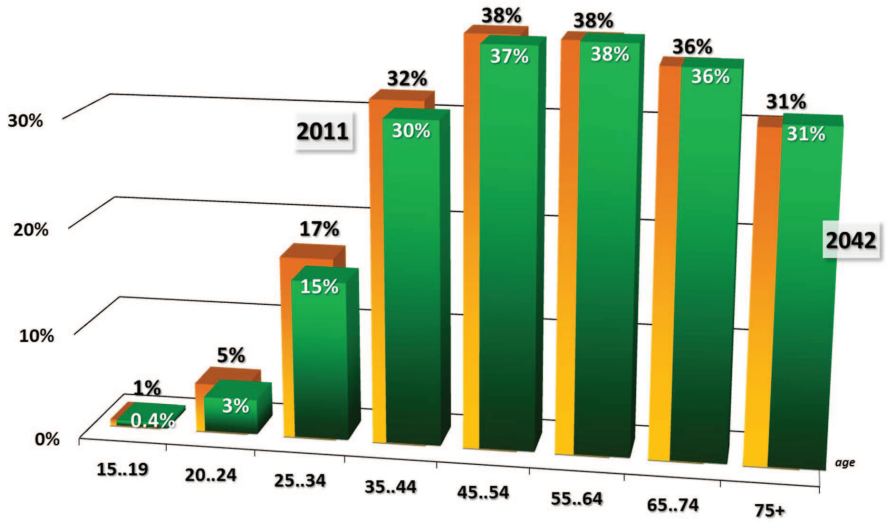
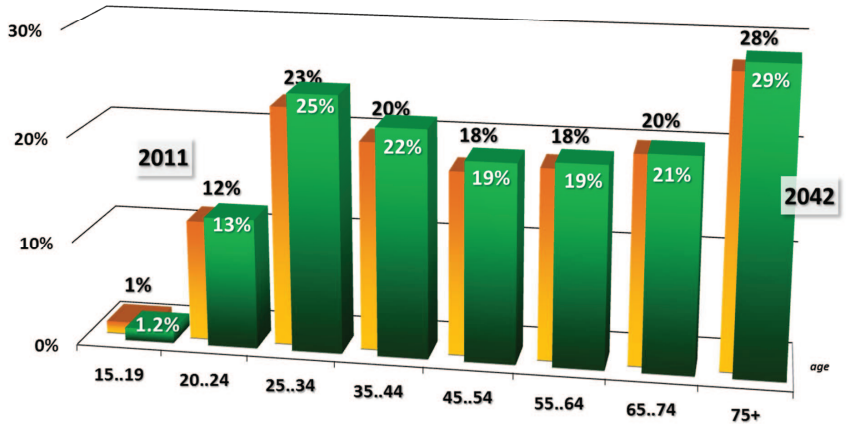


Figure 9

Apartment Household Maintainer Rates
Greater Vancouver
2011 Estimate; Projected to 2042



Efficiency of resource utilization in turn means that as the value of a site increases due to accessibility, it will also become more intensively used, so that the higher costs of the site can be spread over more users. Therefore, accompanying the declining land value gradient is a declining density gradient from the most accessible to the least accessible sites within the region. Thus, as an urban region grows, a residential development pattern emerges whereby emphasis is placed on apartments being located on highly accessible sites (typically the core of the region); conversely, compact forms of ground oriented housing are located in areas of moderate accessibility, and single detached in areas most distant from the highly accessible sites. This general pattern has led to apartments and attached ground oriented housing accounting for an increasing share of the housing stock in urbanizing regions, reflecting the increasing cost of accessibility. Along with this push has been the pull of a growing acceptance of higher density living for all age groups.

In looking forward, age specific maintainer rates for ground oriented accommodation are expected to continue their historical pattern of decline for the under-55 age groups, while rates for those aged 55 or older are be expected to remain relatively stable at current levels. Overall, this would see rates for ground oriented housing fall within the 39 to 44 percent range through the family-rearing stage of the lifecycle and between 36 and 42 percent through the retirement stage (Figure 8). The most

significant relative reductions would be in the younger, market-entrant age groups: ground oriented maintainer rates would fall, for example, by almost 40 percent for the 20 to 24 age group (albeit from relatively low levels of five to three percent).

The decline in ground oriented age specific maintainer rates for these groups is expected to be offset by continuing increases in the propensity to maintain apartment units (Figure 9). The increase in apartment rates would be driven by both the push of affordability and the pull of lifestyle choices. The 25 to 34 and 35 to 44 age groups are expected to see the largest increases with apartment rates going from 23 to 25 percent by 2042 (nine percent growth) and 20 to 22 percent (ten percent growth) respectively. Through the family rearing stage of the lifecycle apartment maintainer rates are expected to increase by six percent for both the 45 to 54 and 55 to 64 age groups.

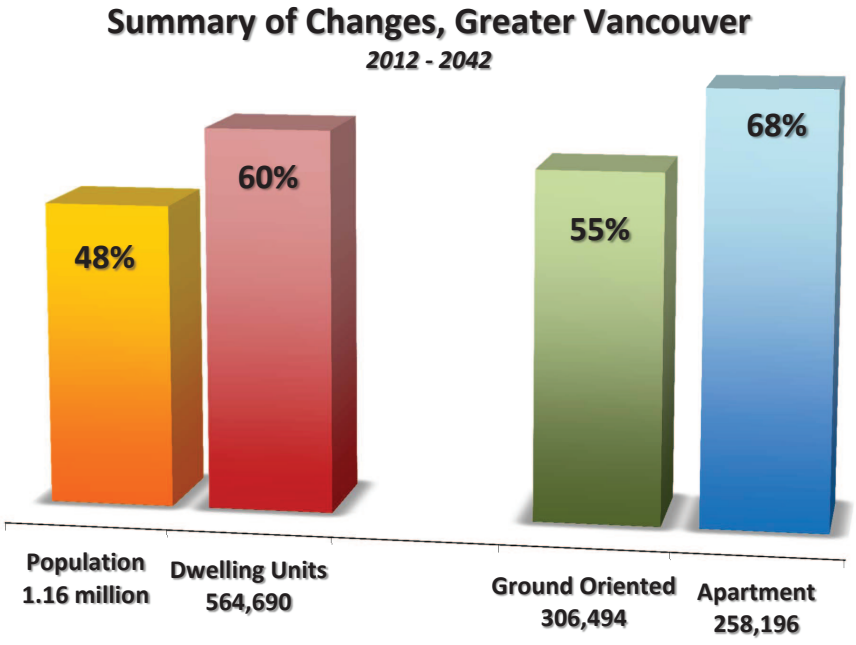
4 Projected Housing Occupancy Demand

Combining this changing lifecycle pattern of household maintainership by broad structure type with projected change in the GVRD's demography results in a projection of the number of dwelling units required to accommodate the region's changing and growing population. Overall, the projected 48 percent growth in population between now and 2042 (an additional 1.16 million people), would be accompanied by a 60 percent increase in total household occupancy demand, or a total of 564,690 new units (Figure 10).

The greatest relative growth would be seen in the apartment segment of the market, growing by 68 percent. In total, 258,196 new apartment units would need to be added to accommodate projected demand by the end of the projection period. While ground oriented accommodation is expected to grow more slowly, increasing by 55 percent between 2012 and 2042, ground oriented additions would outnumber apartments, with 306,494 ground oriented units required to accommodate the projected growth in occupancy demand.

While the relative growth in apartment demand would be significant in the region, the change to the stock of housing in the region brought about by these additions would be gradual. While 46 percent of the housing additions regionally are expected to be in apartment formats, the region would still predominantly be ground oriented in nature: by 2042, 58 percent of the region`s dwelling stock would be ground oriented (down slightly from 59 percent today), with apartments accounting for the remaining 42 percent (from 41 today).

Figure 10



Overall, the projection of housing demand implies gradual changes for the region, with the inertia associated with the large stock of existing housing mitigating, to some extent, the impact that new housing will have. Recognizing these issues, it will be scale, market and environment that will gradually but inevitably shift the GVRD towards more compact forms of housing, a trend that has important implications for the City of Pitt Meadows.

3 Employment

As outlined earlier, the GVRD's employment projection is developed through a multi-step approach that considers regional population and labour force change, along side expectations for regional economic and employment growth.

The general approach used to develop the first iteration of the employment projections is based on the historical correlation of changes in regional employment and provincial GDP and a long-range projection of provincial real GDP to 2042. Given this outlook, the employment projections are developed around two fundamental assumptions. The first is that historical changes in the relationship between employment and real GDP (such as increasing labour productivity) will be representative of future shifts; the second is that real GDP provides a reasonable representation of the provincial and regional economies' ability to generate jobs over the coming three decades.

In terms of GDP change at the provincial level—which represents the independent variable in the mathematics of this projection methodology—few long-range projections of economic activity exist. That said, BC's Ministry of Finance, through its annual economic update and outlook, provides short-term estimates of economic activity in BC, with current assessments anticipating annual economic growth in the range of 2.0 to 2.6 percent through 2017.

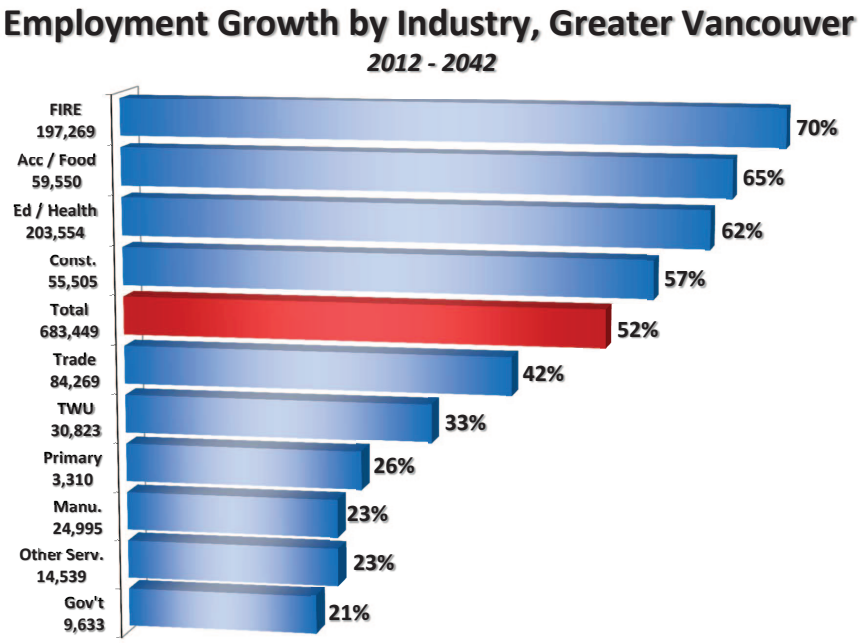
Over the longer-term, the reality that much of GDP consists of factors that are population-dependent (for example, consumption, government spending, and imports) implies that the slower population growth projected in the coming years could also contribute to a slowing in the annual rate of growth in provincial economic activity. This suggests two things for BC's economy. First, long-term growth in real GDP may not continue at rates consistent with recent history, and second, the relationship between GDP and employment observed in the past may change, moving in the direction of fewer jobs per unit increase in GDP (in other words, increases in productivity that are in excess of what has been observed historically).

Considering these factors, long-range growth in BC's real GDP is projected to slow from the Ministry's estimates of 2.0 to 2.6 percent over the short-term back towards 2.0 percent by 2022 and further to 1.5 percent by 2042. The result of this pattern of growth would be BC's real GDP growing from an estimated $210.3 billion in 2012 to $374.6 billion three decades from now. Relative to the past two and a half decades when the province's economy expanded at an average annual rate of 2.8 percent, the coming three decades would see growth average 1.9 percent per year.

Given this projected level of economic growth, and the historical relationship between BC's GDP and regional employment, the number of jobs in the GVRD is projected to grow from 1.32 million in 2012 to 2.00 million by 2042[3]. This 683,449-job, or 52 percent increase, would see an average of just under 34,200 jobs added annually to the region over the projection period (Figure 11). On an industry-specific basis, the most rapidly-growing sector would be FIRE (finance, insurance, and real estate), with the number of jobs increasing by 197,169 by 2042 (a 70 percent increase). As a result, this sector would go from accounting for 21 percent of the GVRD's jobs to 24 percent by 2042. Three other sectors are projected to grow faster than the overall average of 52 percent, including accommodation and food (65 percent growth, 59,550 additional jobs); education and health (62 percent, 203,554 additional jobs—the most of any sector); and construction (57 percent, 55,505 additional jobs). This would see each sector's share of regional employment increase marginally over the next 30 years: from seven to eight percent for accommodation and food services; from 25 to 26 percent for education and health; and from seven to eight percent for construction.

3 In order to estimate base-year (2012) employment for the GVRD, data from the most recent Census (2006) have been used in conjunction with data from Statistics Canada's Labour Force Survey (which includes data up to 2012).

Figure 11



The remaining sectors are projected to grow more slowly than the overall average of 52 percent, ranging from 42 percent growth in trade (retail and wholesale), which would add 84,269 jobs, to 21 percent growth in government (public administration), which would add only 9,633. As a result of growing slower than the regional average, each of the trade, TWU (transportation, warehousing, and utilities), primary, manufacturing, other services, and government sectors would see their share of regional employment fall between 2012 to 2042. While no sector is projected to decline, primary sector activity is expected to grow by the fewest absolute number of jobs of all sectors (3,310 new jobs).

III Projected Changes in Pitt Meadows: 2012-2042

With the regional housing occupancy demand projections representing the number of net additional dwelling units needed to accommodate the region's projected population, it will be the tapestry of land availability and local land use policy that will determine where *within* the region housing development (and population growth) will be seen. Similarly, as the regional projection of employment change provides the backdrop of changing economic activity, the collection of land use change within the region will be one driver to where employment growth within the region will be realized.

As it is not possible to anticipate the spatial consequences of each and every local government land use decision made throughout the region, a logical starting point for the development of the projections was to consider the collection of Official Community Plans throughout Greater Vancouver as an indicator of local land use policy. Further to this, historical development trends were used as indicators of the directions that these decisions have taken historically and could potentially take in the years to come.

Using housing as an example, a number of factors were used to determine how much net new housing would be accommodated in specific areas within the region. First, the regional projection of net additional housing demand by structure type was established, as outlined above. Historical patterns of housing development within the region, as represented through the annual pattern of housing starts by structure type, were considered, with this pattern of development being modified in future years to reflect capacity thresholds and development constraints as per Official Community Plans and policies for all municipalities within the region. Combined, these factors allowed for a projection of net additional housing by structure type to be developed for the City of Pitt Meadows that recognized the regional context as well as the extent of the Agricultural Land Reserve (ALR) and the City's OCP Town Centre boundaries. In turn, this housing projection represented the foundation for developing projections of population.

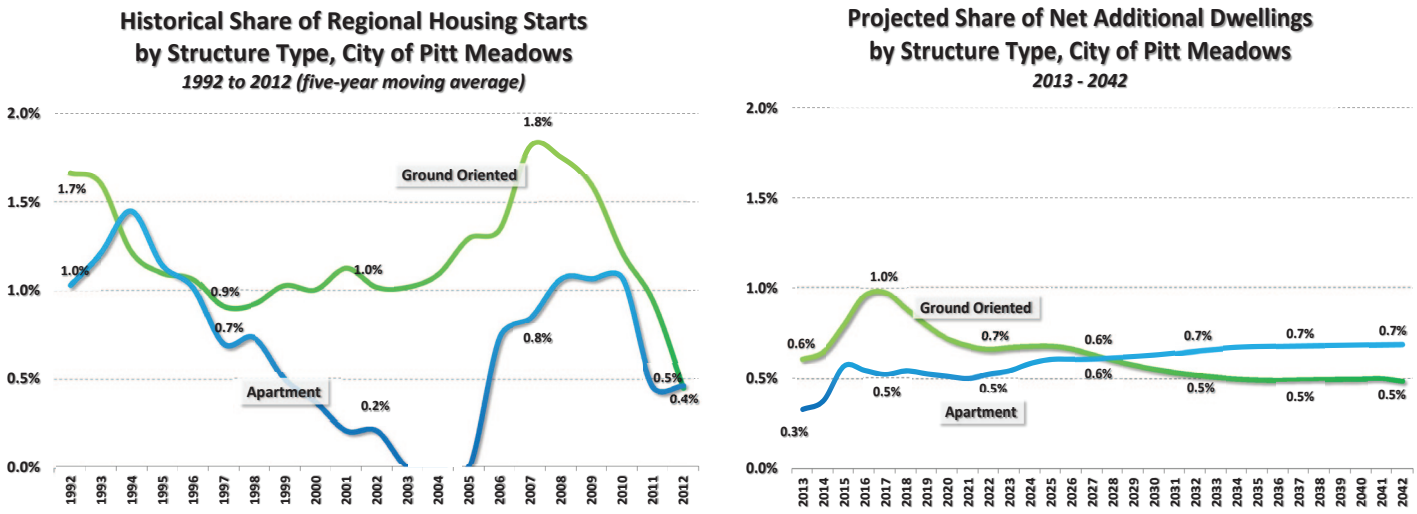
This projected population, in addition to underlying land use considerations, is also used in developing the sub-regional outlook for employment change through the share of employment by sector that is deemed to be local population-serving. Each of the housing, population and employment projections for the City is detailed in the following sections.

1 Residential Development Patterns in Pitt Meadows

As a relatively small municipality within the region, it is not surprising to see that Pitt Meadows has historically accounted for a small proportion of region-wide residential development. In terms of the ground oriented segment, Pitt Meadows' share of regional housing starts ranged from a high of 1.8 percent in 2007 to a low of 0.4 percent in 2012 (on a five-year moving average basis). Municipal apartment starts have accounted for a similarly small proportion of regional apartment development: Pitt Meadows' share of GVRD apartment starts ranged from a high of 1.5 percent (in 1994) to years where there were no apartment starts at all in the City (the early-2000s, Figure 12). On average since 1992 Pitt Meadows has accommodated an average of 1.1 percent of the region's ground oriented starts and 0.9 percent of apartments.

In looking forward, the City's share of regional net additional apartment dwellings is expected to increase from 0.3 percent to 0.5 percent in 2022, further to 0.6 percent in 2026, and further to 0.7 percent by the end of the projection period (Figure 12, right pane). Among the reasons behind this projected increase are some of the same reasons apartment household maintainer rates are expected to increase in the region: the "push" of tightening land supply in Pitt Meadows, as well as the increasing real estate prices for homes in ground oriented formats.

Figure 12

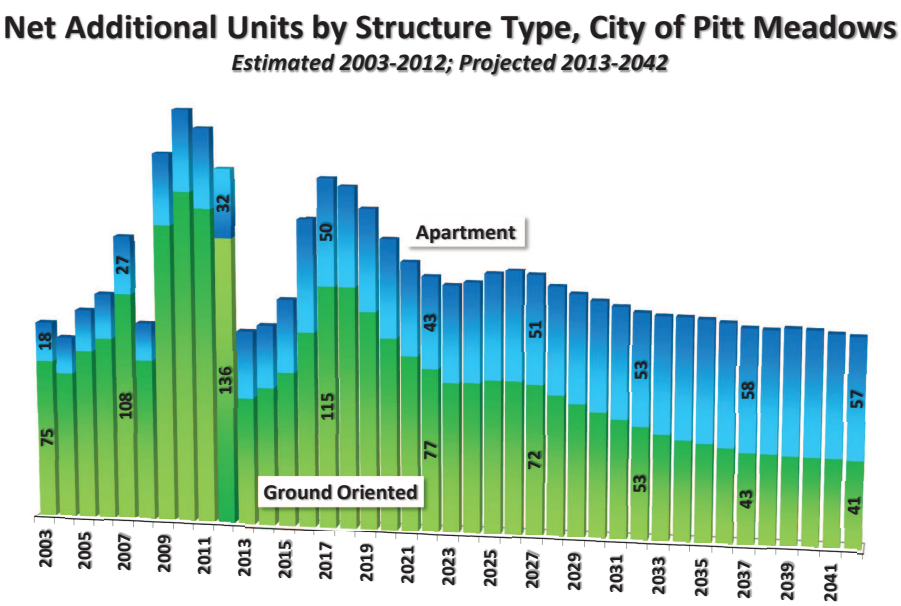


Given its low point today relative to recent history, Pitt Meadows's share of regional net additional ground oriented dwellings is expected to increase slightly in the short-term (to one percent) before moving back towards the 0.6 percent range by 2042.

While this share may appear much lower than the City's historical experience, it is important to note that these trends are consistent with the reality that 85 percent of the land mass in Pitt Meadows lies within the Agricultural Land Reserve, far greater than any other municipality in the region (the next largest being the Township of Langley at 76 percent and Delta at 56 percent). Given this context, as larger municipalities with fewer land constraints increase their share of ground oriented development, regions such as Pitt Meadows will see their shares decline.

Over the short-term, annual net additions to the ground oriented housing stock are projected to increase slightly before declining over the medium- and long-run, to 41 net additional ground oriented units by 2042 (Figure 13). In the coming years an average of 67 ground oriented units would be added annually, below the historical average of 108 units.

Figure 13



Given the declining number of annual additions to the ground oriented stock, the number of ground oriented units in Pitt Meadows would grow relatively slowly over the next 30 years, going from 5,743 units today (2012) to 7,705 by 2042, a 1,982-unit (34 percent) increase.

In contrast, the City's projected share of regional net additional apartment units would see the total number of annual additions to the apartment stock in Pitt Meadows increase slightly over time, to almost 60 units per year by 2042 (Figure 13). Relative to an annual average of 26 apartment units added historically, the projection is for an average of 50 units to be added annually between 2012

and 2042. Thus, the number of apartments in the City would increase much faster in relative terms than would ground oriented accommodation, growing by 135 percent. Upwards of 1,500 units are projected to be added to the City, expanding the apartment stock from 1,127 units in 2012 to 2,654 by 2042. As a result of this pattern of change, apartments would go from representing only 16 percent of the City's total occupied housing stock in 2012 to 26 percent by 2042.

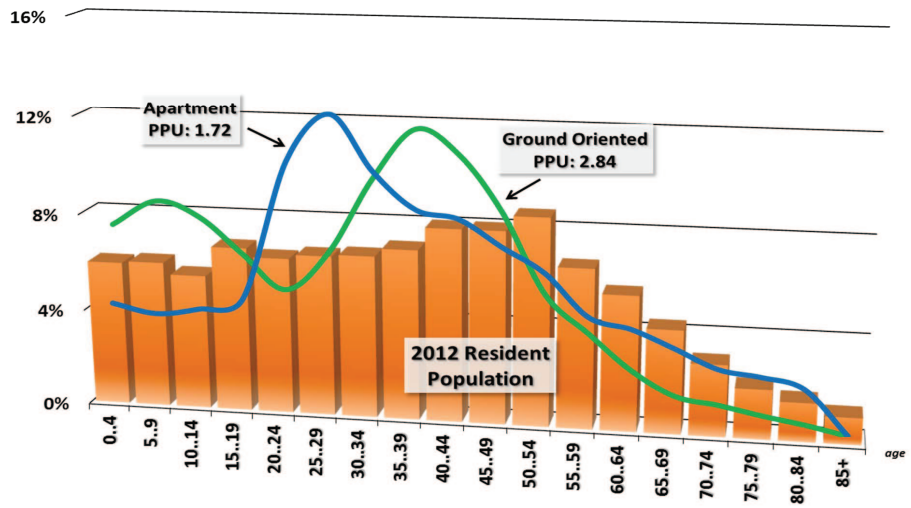
2 From Dwellings to People

Having developed the outlook for housing change in Pitt Meadows, the final step in the demographic modeling process involves populating newly-added dwelling units with residents and accounting for turnover of the existing stock. This process yields the annual increments of net new population to the City by age and sex, which can be added to the aging, mortality and natality of the City's existing residents.

Figure 14 shows the age specific in-mover profile used to populate the turnover of existing units within Pitt Meadows and how this profile compares to the City's existing 2012 resident population. In order to differentiate between existing and new units, Census data were segmented by period of construction, with new units defined by those constructed and occupied within the previous five years (those units built between 2001 and 2006) and existing units constructed prior to 2001.

Figure 14

Age Distribution of Residents Moving into Existing Units, City of Pitt Meadows

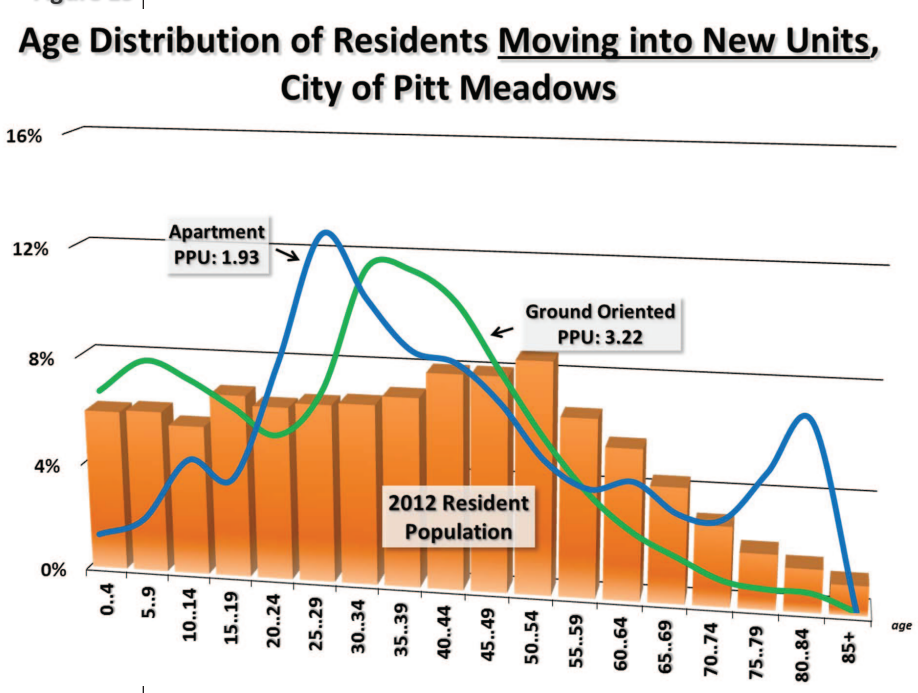


These data from the Census show that the most typical occupant of households moving into existing apartments is younger than that moving into existing ground oriented units, with the typical apartment in-mover being in their mid- to late-20s versus mid- to late-30s for ground oriented units.

In addition to being slightly older, those moving into ground oriented accommodation have a greater likelihood of moving with children: people under the age of 15 made up 25 percent of the households moving into ground oriented units and only 14 percent of those moving into apartments. Another important distinction of mobility into these two structure types is the overall size of the household: the average size of households moving into apartments was 1.94 persons while an average of 3.00 people were seen moving into existing ground oriented homes.

With respect to the age distribution of residents moving into new units, recently-built apartments attract a slightly older resident base compared to the composition of people moving into existing apartment units (Figure 15). For instance, residents aged 50 and older represented 30 percent of people moving into new apartment units while this age group only accounted for 24 percent of those moving into existing apartment units. This also holds true—albeit to a lesser extent—for ground oriented formats: residents aged 50 and older represented 16 percent of people moving into new, versus 15 percent of those moving into existing ground oriented units.

Figure 15



Further, new apartment units were seen to attract a smaller proportion of children under the age of 15 when compared to those moving into older units. For instance, children under the age of 15 accounted for eleven percent of movers into new apartments versus 14 percent for existing apartments. Similarly, children moving into new ground oriented units accounted for 23 percent of in-movers, lower than the 25 percent seen for existing ground oriented units.

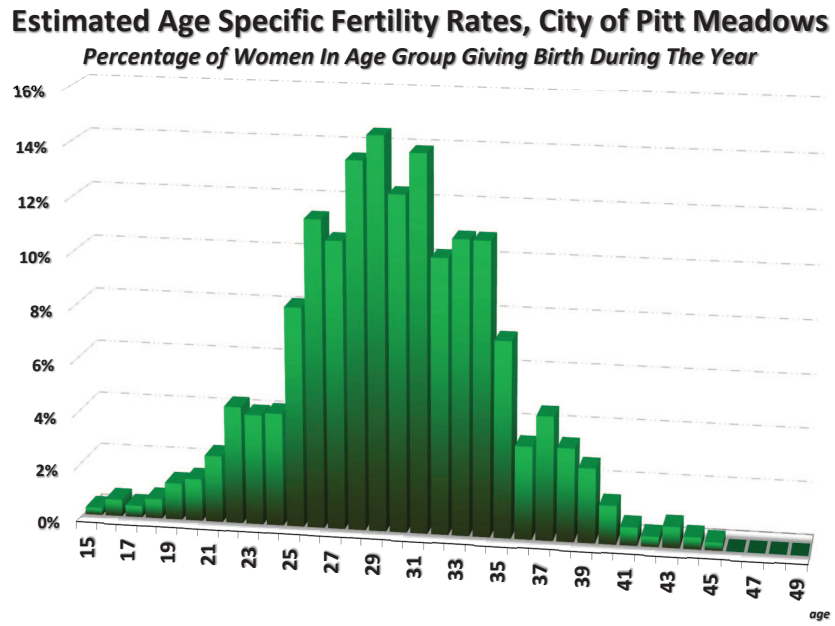
In terms of household size, the number of people per unit who moved into new apartment units was actually larger than that of people moving into existing apartment units (1.94 versus 1.72 persons per unit), as was the size of households moving into new ground oriented formats compared to older ones (3.22 versus 2.84 persons per unit).

3 Fertility & Mortality

In addition to considering mobility of residents for the City, it is also necessary to account for the natural components of change (births and deaths) associated with both the City's existing residents and the new residents who are expected to call the City home in the coming years.

Natality. Based on data from BC Vital Statistics for local health areas in British Columbia, estimated 2012 age specific birth rates for the City of Pitt Meadows are shown in Figure 16. Fertility rates increase from only 0.3 percent of 15 year old females giving birth in a year to a peak of between 12.5 and 14.6 percent of women aged 28 to 31. From here, age specific rates decline to 1.4 percent for 40 year old females—the same propensity as for 19 year old females. Age specific birth rates continue to decline with increasing age, falling to essentially zero by the mid- to late-40s. Compared to the GVRD as a whole, where the most typical mother is a 33 year old, the most typical mother in Pitt Meadows (age 29) is slightly younger.

Figure 16



If female age specific fertility rates are summed together, the result is what is commonly referred to as the total fertility rate (TFR), or the number of children a women could expect to have over the course of her lifetime. Currently,

Pitt Meadows' TFR is 1.61, which is higher than the 1.33 that prevails regionally. This would in part due to the composition of the City's dwelling stock, which is much more weighted towards ground oriented dwellings than in the region as a whole: 80 percent of the City's total occupied stock is ground oriented according to the 2011 Census, well above the regional average of 60 percent.

Looking forward, long-run trends at the regional and provincial levels were used to develop an outlook for age specific fertility for the City of Pitt Meadows to 2042. The projection of fertility rates anticipates that the process of postponement seen over the past decades will continue into the future, although to a lesser extent than has been seen historically. The City's TFR is projected to increase only marginally over the coming decades, rising to 1.66 by 2042, indicating that any declines in seen in the younger age groups will be slightly more than offset by increased in the 30 plus age groups.

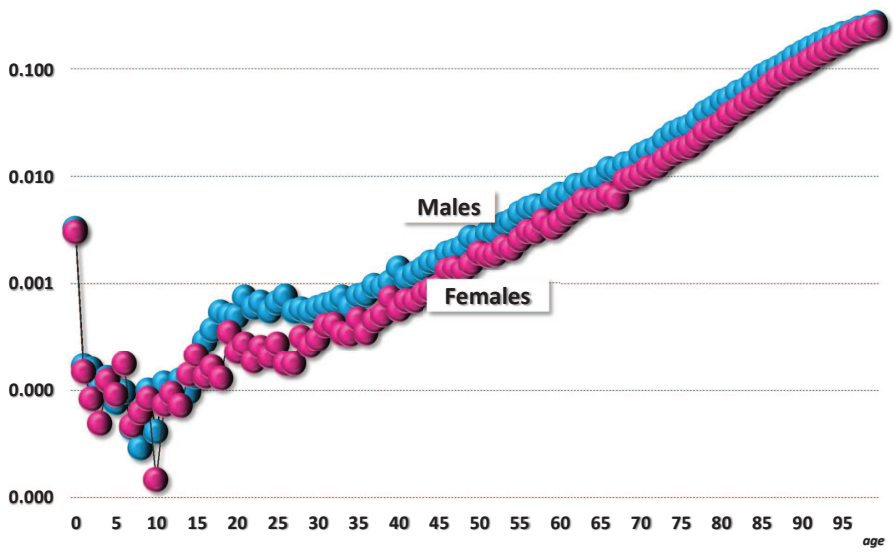
Mortality. Unlike fertility rates, mortality rates differ less dramatically between geographies. Given a relatively uniform landscape of mortality rates, the starting point for developing age and sex specific rates for the City of Pitt Meadows was the regional profile of age-specific mortality.

With life expectancies in Pitt Meadows being slightly lower than in the GVRD as a whole (as per BC Vital Statistics data), age and sex specific mortality rates were adjusted to reflect slight differences in life expectancy seen throughout the region. More specifically, male life expectancies in Pitt Meadows are 3.2 percent lower than their regional counterparts, while female life expectancies are 2.9 percent lower. Combining these life expectancy differentials with the pattern of mortality seen at the regional level yields the age and sex specific mortality rates used to model change in Pitt Meadows (Figure 17).

Figure 17

Age Specific Mortality Rates, City of Pitt Meadows

Annual Number of Deaths Per 100 Persons (Log. Scale)



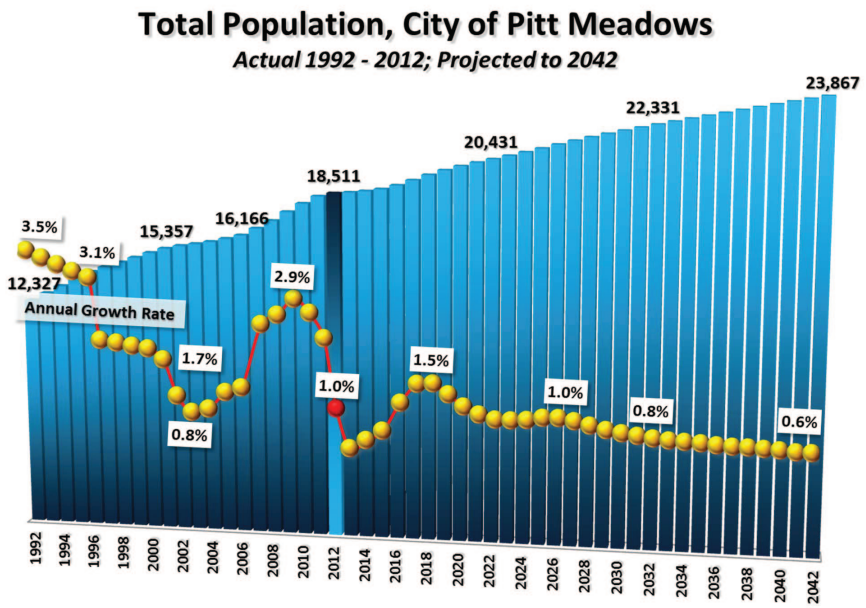
From this base, trends in future mortality rates for the City are expected to follow the patterns of change expected regionally, namely further declines in age-specific morality rates, albeit less dramatic than those that have been seen historically. This would see a further tightening of the gap between male and female life expectancies, a fact that may see an increasing number of elderly couples willing and/or able to remain in private accommodation in the City for longer periods of time.

4 The Demographic Outlook

Combining the projected magnitude and composition of new housing—and new residents—with the natural changes associated with existing residents results in a baseline projection of population for the City of Pitt Meadows. As Figure 18 shows (next page), the City's population is projected to increase by 29 percent by 2042, growing from 18,511 residents today (2012) to 23,867 residents by 2042. As such, the City would add 5,356 residents over the next 30 years, the result of an average of 179 people being added to the population annually between 2012 and 2042. This compares to an average of 309 people being added annually over the past two decades.

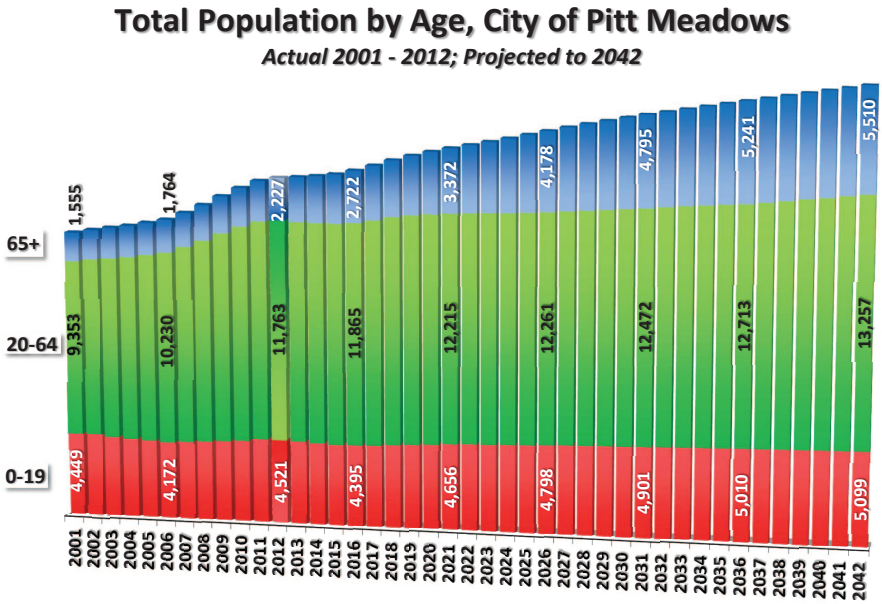
The annual population growth rate is expected to fall below one percent after 2026, driven in part by relatively low fertility rates and an aging population (and hence more deaths over time), and in part by slowing dwelling unit growth. On average, population growth is projected to average 0.9 percent per year between 2012 and 2042, below the 2.1 percent average annual growth rate seen between 1992 and 2012.

Figure 18



While the City's total population is expected to grow more slowly in the coming years, significant growth in the retiree segment of the population will see it change more dramatically in terms of its composition. For example, compared to overall population growth of 29 percent between 2012 and 2042, the retiree segment of the population (those aged 65 and older) is projected to grow by 147 percent as it grows by more than 3,283 people (Figure 19).

Figure 19



In contrast, the City's working- and school-aged populations would grow more slowly over the coming decades. In adding 1,494 people by 2042, the City's working-aged population would grow by only 13 percent. This pattern of a slowly growing working aged population is reflective of the situation that will be seen regionally, provincially and nationally. Similarly, the number of children—those under the age of 20—would grow by 579 people, or by 12 percent increase over the next three decades.

As alluded to above, this pattern of population growth and change is a consequence of two factors—one demographic, and the other housing-related. In large part the growth projected for the older population will emerge due to the aging of the existing residents over the projection period. With a significant share (64 percent) of its population currently between the ages of 20 and 64, long and increasing life expectancies will see many of these residents still alive by 2042 and potentially still resident in the City.

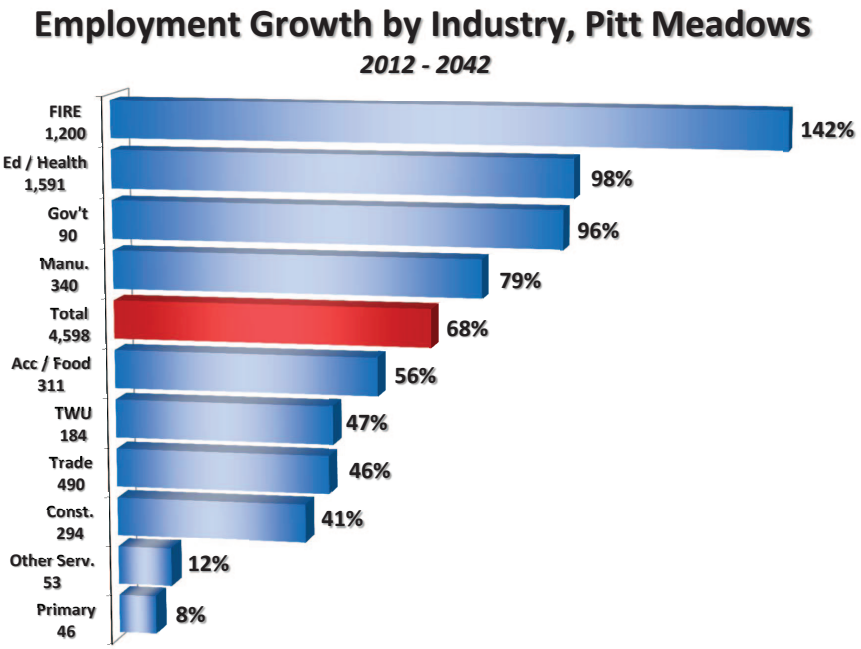
At the same time, however, growth in the younger working-aged population (those aged 20 to 64) and their kids (those under the age of 20) will largely be tied to the scale and mix of dwelling units that are projected to be added in the coming years. With today's dwelling stock in the City projected to be augmented by growth in apartments and compact forms of ground oriented dwellings, population growth for these younger segments would be the result of a growing number of younger, but smaller, households than might be realized in other parts of the region where different forms of housing being added.

5 Future Employment in Pitt Meadows

The final dimension of change to be presented is the outlook for employment in the City. With the 2011 National Household Survey employment data yet to be released, the projections for the City rely on a 2006 Census base, with annual changes to employment (up to 2012 and then out to 2042) being determined by a number of factors. As indicated above, the process begins with an outlook for regional employment change by sector before the local mix of population-serving and economic base employment activities and the extent to which the City is under- or over-served within particular industry sectors is considered[4]. In addition to the population serving employment, the non-population serving sectors consider both the existing composition of employment within the City and City's share of vacant industrial land.

In considering each of these elements, the total number of jobs in Pitt Meadows is projected to grow 68 percent as 4,598 jobs are added in the municipality between 2012 and 2042 (Figure 20). This would see total employment grow from 6,764 jobs in 2012 to 11,363 by 2042. On average, just over 150 jobs would be added to the City each year over the next three decades.

Figure 20



On an industry-specific basis, the most rapidly-growing sector would be the finance, insurance, and real estate sector (FIRE), with the number of jobs increasing by 1,200 by 2042 (a 142 percent increase). As a result, this sector would go from accounting for 13 percent of the City's jobs today to 18 percent by 2042. This is in part the result of the FIRE sector growing significantly at the regional level (by 70 percent), and in part due to the City's low per capita employment in this sector today: for every 100 residents in Pitt Meadows in 2012 there were 23.5 jobs in FIRE; this compares to 59.2 jobs per 100 residents regionally.

Three other sectors are projected to grow faster than the overall average of 68 percent, including education and health (98 percent, 1,591 additional jobs—the most of any sector); government (96 percent, but only 90 additional jobs), and manufacturing (79 percent, 340 additional jobs). By virtue of growing faster than the overall average, each sector's share of municipal employment would increase over the next 30 years: from 24 to 28 percent for education and health; from one to two percent for government (public administration), and from six to seven percent for manufacturing). Growth in the education and health, and in the government, sectors is largely due to Pitt Meadows being under-served in these sectors today, while growth in manufacturing is largely the result of the City's stock of vacant industrial land.

The remaining sectors are projected to grow more slowly than the overall average of 68 percent, ranging from 56 percent growth in accommodation and food services, which would add 311 jobs, to only eight percent growth in the primary sector, which would add only 49 net new jobs. As a result of growing slower

4 As an example, the City is under-served in jobs in the education and health sector relative to the GVRD as a whole, with there being 44 jobs in this sector per 100 residents in Pitt Meadows versus 100 jobs per 100 residents regionally. In this case, the City is expected to see its ratio of employment to population in this sector rise over time; Conversely, where the City is currently over-served in a particular sector (such as primary industry), growth is projected to be slower, with the City's employment-to-population ratio moving towards—but not meeting—the regional average.

than the municipal average, each of the trade, TWU (transportation, warehousing, and utilities), trade, construction, other services, and primary sectors would see their share of Pitt Meadows' employment base fall between 2012 to 2042 (from 56 percent to 45 percent in aggregate), largely due to the below-average growth in population and housing that the City is projected to see versus the region as a whole.

V Appendix

Summary of Projections, City of Pitt Meadows, 2012-2042

Population	Year							2012-2042 Change	
Age	2012	2017	2022	2027	2032	2037	2042	#	%
0-4	1,107	1,057	1,117	1,146	1,141	1,147	1,168	*61*	*6%*
5..9	1,120	1,113	1,122	1,179	1,207	1,202	1,214	*94*	*8%*
10..14	1,033	1,160	1,206	1,216	1,276	1,307	1,310	*277*	*27%*
15..19	1,260	1,087	1,246	1,291	1,305	1,370	1,408	*147*	*12%*
20..24	1,194	1,335	1,166	1,318	1,360	1,381	1,450	*256*	*21%*
25..29	1,227	1,268	1,415	1,247	1,394	1,437	1,464	*237*	*19%*
30..34	1,242	1,288	1,363	1,493	1,327	1,462	1,505	*263*	*21%*
35..39	1,303	1,286	1,390	1,453	1,566	1,401	1,530	*227*	*17%*
40..44	1,475	1,314	1,359	1,457	1,516	1,619	1,464	*-11*	*-1%*
45..49	1,474	1,455	1,346	1,388	1,491	1,550	1,653	*179*	*12%*
50..54	1,587	1,410	1,421	1,308	1,355	1,464	1,529	*-58*	*-4%*
55..59	1,223	1,485	1,344	1,346	1,238	1,293	1,410	*186*	*15%*
60..64	1,037	1,153	1,418	1,283	1,286	1,188	1,251	*214*	*21%*
65..69	794	973	1,097	1,347	1,224	1,232	1,144	*349*	*44%*
70..74	551	738	918	1,038	1,277	1,169	1,183	*632*	*115%*
75..79	381	502	681	851	967	1,192	1,101	*721*	*189%*
80..84	297	325	429	582	731	838	1,032	*735*	*248%*
85+	205	314	392	501	669	868	1,051	*846*	*414%*
Total	**18,511**	**19,265**	**20,431**	**21,444**	**22,331**	**23,117**	**23,867**	*5,356*	*29%*

Housing Occupancy D	Year							2012-2042 Change	
	2012	2017	2022	2027	2032	2037	2042	#	%
Ground Oriented	5,743	6,205	6,631	6,988	7,270	7,495	7,705	*1,962*	*34%*
Apartment	1,127	1,342	1,569	1,819	2,085	2,374	2,654	*1,527*	*135%*
Total	**6,871**	**7,547**	**8,201**	**8,807**	**9,355**	**9,870**	**10,359**	*3,489*	*51%*

Employment	Year							2012-2042 Change	
	2012	2017	2022	2027	2032	2037	2042	#	%
Primary Indust	576	602	617	619	620	622	623	*46*	*8%*
Transport / Warehous	393	415	458	489	520	550	577	*184*	*47%*
Construction	718	736	796	873	917	966	1,012	*294*	*41%*
Manufacturin	433	536	660	701	732	754	772	*340*	*79%*
Wholesale & Retail	1,067	1,157	1,334	1,405	1,466	1,501	1,557	*490*	*46%*
FIRE & Other Pro/Bus	848	1,163	1,443	1,632	1,754	1,942	2,048	*1,200*	*142%*
Edu, Health & Info / Cultı	1,629	2,070	2,478	2,701	2,905	3,045	3,220	*1,591*	*98%*
Accommodation & Foo	551	646	722	775	797	819	861	*311*	*56%*
Other Service	457	457	473	484	494	502	510	*53*	*12%*
Public administra	94	109	142	154	165	175	184	*90*	*96%*
Total	**6,764**	**7,890**	**9,122**	**9,834**	**10,369**	**10,875**	**11,363**	*4,598*	*68%*