

Employment, Population and Housing Projections Halifax Regional Municipality (Revised)



CLAYTON
RESEARCH

Employment, Population and Housing Projections Halifax Regional Municipality (Revised)

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Halifax Regional Municipality

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EXECUTIVE SUMMARY

Clayton Research and Cantwell & Company were retained to provide a 25-year projection of employment, population, and housing needs for Halifax Regional Municipality. Halifax Regional Municipality (HRM) is undertaking a regional planning program to manage growth and guide the future development of the Region. A key element in understanding how and where growth will occur is a projection of the quantity, type, and likely location of housing demand occurring over the next 25 years - the time frame of the Regional Plan. Housing demand information will lead to both enabling supply to meet demand and identifying the trade-offs required if the demand cannot be met.

Economic Background

The projections of employment for HRM take into consideration the macroeconomic environment in Canada, Atlantic Canada, Nova Scotia and specific local economic conditions.

Over the past 20 years employment growth in Canada has averaged 1.5 percent per year. Impending labour shortages, due in part to the aging of the population, will be partially responsible for a gradual slowing in the net pace of job creation to about 0.6 percent per year at the end of the projection period.

Nova Scotia is a significant engine of growth in Atlantic Canada. Nova Scotia has a well-diversified economy, an ideal location in relationship to the important U.S. Eastern Seaboard regions, and a concentration in primary industries such as forestry, fishing, mining, oil and gas. All these factors have served Nova Scotia well in terms of relative economic growth. On three important economic measures, however – GDP growth, employment and productivity – Nova Scotia has performed slightly under Canada's level as a whole during the period 1982-2002.

Within Nova Scotia, and the broader regional economy, HRM has traditionally turned in a strong economic performance, and conditions are set to continue to outperform the regional economy in terms of job creation through the forecast period.

All told, employment in HRM (on a place of work basis) is expected to expand to about **230,000** persons over the period 2001-2031. This

represents growth of about **40,000** persons, or a rate of growth of 0.8 percent per year.

Two alternative employment scenarios are also prepared: a low growth scenario based on employment growth of **20,000** persons, and a high growth scenario based on employment growth of **63,000** persons.

Population

The widely used cohort survival methodology is employed in order to estimate population for HRM through to 2026. This method uses historical data from the Census of Canada and projects future population based on assumptions for the three components of population growth – births, deaths and net migration.

The population of HRM is likely to rise by a total of **84,400** persons over the 2001-2026 period. The driving factor behind this growth is anticipated rise in the employed population by **38,800** persons, based on the employment forecast and assumptions about net commuting. The gap between the total rise in population and the rise in employed population is due to declining total participation rates in the labour force, which is due, in turn, to the aging of the population into retirement years.

Sources of population growth in HRM include a modest increase of about **24,000** persons through natural increase (the net of births and deaths) and a net inflow of some **60,000** persons. About one third of the net migration is expected to come from international sources: the remainder from other parts of Canada.

Net migration is ultimately influenced by local employment opportunities. Migration and thus population growth is affected by the assumptions in the two alternate employment growth scenarios under consideration. In the case of the high growth scenario, population growth is as high as **125,000** persons over the forecast period. In the case of the low growth, it is just **52,000** persons.

Housing

The Potential Housing Demand (PHD) model maintained by CMHC was employed to generate housing demand projections for HRM based on the projected population.

Potential household growth is a function of the projected population by age along with headship propensities (the number of people in each age group who are projected to head up a household).

Over the period 2001 to 2026, a total of **57,000** new households are expected to emerge in HRM. The total number of new dwellings required to satisfy this household demand is projected to be **58,750** units.

Low density housing is expected to account for the majority – about 58 percent – of housing completions over the projection period. Medium and high density should account for about 4 and 37 percent each.

Housing demand is influenced by the alternative employment growth scenarios. In the case of the low growth scenario, potential household demand will grow only about **44,000** households, and in the case of the high employment growth scenario, demand will likely be in the order of **73,000** units.

Suburban areas of HRM have played an important role in residential development in recent years, and will continue to do so through the forecast period. Suburban areas are likely to capture just over **50 percent** of all new housing requirements through to 2026.

Demand for housing in the urban core will continue to play a role through the forecast period, capturing about **26 percent** of demand – most of which should be in the form of apartment units.

There will be demand for rural lots and development throughout the next several decades in HRM. Rural development – primarily single-detached housing – is set to capture just under **one-quarter** of potential housing demand through to 2026.

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1 INTRODUCTION

Clayton Research and Cantwell & Company were retained to provide a 25-year projection of employment, population, and housing needs for Halifax Regional Municipality. Halifax Regional Municipality (HRM) is undertaking a regional planning program to manage growth and guide the future development of the Region. A key element in understanding how and where growth will occur is a projection of the quantity, type, and likely location of housing demand occurring over the next 25 years - the time frame of the Regional Plan. Housing demand information will lead to both enabling supply to meet demand and identifying the trade-offs required if the demand cannot be met.

1.1 WORKPLAN

Clayton Research and Cantwell & Company undertook this assignment in conjunction with planning staff at HRM, members of the Steering Committee and team members at Canada Mortgage and Housing Corp. (CMHC) who participated in the housing needs modelling. As part of the work, Clayton Research staff consulted with the Steering Committee formally on two occasions:

- Prior to initiating the analysis, in order to discuss the model framework and project intent; and
- A formal conference call was held with the steering committee to discuss the draft projections of employment, population and housing.

1.2 REPORT STRUCTURE

In addition to this first chapter, the report has three chapters as follows:

- **Chapter 2** presents projections of total employment for HRM based on an economic analysis;
- **Chapter 3** presents projections of total population for HRM in the 2001-2026 period; and
- **Chapter 4** presents projections of household demand and housing construction in HRM in the 2001-2031 period.

1.3 CAVEAT

Estimates and projections presented in this report rely on the best information available at the time of publication from various agencies and sources such as CMHC, Statistics Canada, and CanaData. In many cases data on which these projections rely may be subject to revisions, which could have implications on the results presented.

In all cases, long term projections should be reviewed periodically in order to assess the continued applicability of the underlying assumptions.

1.4 DISCLOSURE

The prime consultant on this project is Clayton Research. Clayton Research is a firm of urban and real estate economists located in Toronto, Canada. Clayton Research is not involved in real estate development in Halifax, nor does it have any formal ties to any developers currently doing business in Halifax.

2 MACROECONOMIC ENVIRONMENT

2.1 CANADA

In the past 20 years, employment growth in Canada averaged 1.5 percent per year, while the overall economy has expanded by 2.8 percent¹. The difference between economic growth and employment growth is due to the contribution of productivity, which in Canada, contributed about 1.3 percent per annum to economic growth.

The role played by productivity in contributing to economic growth, therefore, is an important aspect to the macroeconomic environment. This is particularly true going forward, as the Canadian economy copes with an impending labour shortage.

During the next 20 to 30 years, an acute labour shortage will develop within the Canadian labour market. As the Canadian population ages, there will be fewer people entering the labour force to replace those retiring from it². Progressively lower birth rates in Canada over the past 40 years, along side the impending retirement of most members of the “baby-boom” generation in the next 30 years is contributing to this trend.

The impending shortage of labour supply from the domestic population can, in part, be offset through effective immigration policy. In recent years, the federal government’s immigration targets have been at about 250,000 immigrants annually. By 2026, in order to make up the reduced domestic labour supply, Canada would need to accept progressively higher numbers of immigrants; the Minister of Immigration and Citizenship has indicated a long-term immigration target of 1 percent of population which would amount to some 300,000 persons per year. Therefore, immigration should, in theory, be able to help offset some of the decline in labour force growth in the near future. There is a question, however, as to Canada’s continued ability to attract sufficient immigrants to the country. In the long run, therefore, immigration’s ability to contribute to the labour force is limited.

¹ Average annual growth in real (chain-weighted) Gross Domestic Product (GDP)

² There is a large volume of literature examining the impact of the aging population on labour force activity in Canada and other industrialized countries. For a good review, see in particular: Boothby, D., Dubois, J., Fougère, F., Rainville, B., Labour Market Implications of an Aging Population, Working Paper 2003 A-01, Human Resources Development Canada (2003); and Kuhn, P., Effects of Population Aging on Labour Market Flows in Canada: Analytical Issues and Research Priorities, Working Paper 2003 A-02, Human Resources Development Canada (2003)

From a macroeconomic perspective, labour shortages (or reduced growth in the available labour supply) result in a slowing of economic growth. The degree to which the pace of economic growth will slow, depends on the prospects for further productivity growth in Canada.

There may be progressively higher productivity growth in Canada over the next 30 years. In general, increasing labour productivity (generating more output per worker) will aid in narrowing the gap between population growth and labour force growth. Some reasons for productivity increases are as follows:

- Continued advancements in automation and other labour-saving technology
- Innovation in goods-producing sectors, including reorganization of production toward higher value-added products
- Innovation in service producing sectors – particularly in health care
- The macroeconomic response to a shortage of labour

However, while increasing productivity will aid in coping with some of the challenges of labour shortages, there may also be a slower economic growth environment, including lower production of goods and services, and a correspondingly lower rate of exports, relative to the size of the economy.

The bottom line for macroeconomic growth in Canada: Slower employment growth, reaching a rate of about 0.6 percent per year by 2026 and beyond.

2.2 NOVA SCOTIA

Nova Scotia is a significant engine of growth in Atlantic Canada. Nova Scotia has a well-diversified economy, an ideal location in relationship to the important U.S. Eastern Seaboard regions, and a concentration in primary industries such as forestry, fishing, mining, oil and gas (see Figure 3). All these factors have served Nova Scotia well in terms of relative economic growth.

On three important economic measures, Nova Scotia has performed slightly under Canada's level as a whole during the period 1982-2002:

- In terms of overall economic growth, as measured by real GDP growth, Nova Scotia has expanded on average 2.5 percent –

about a third of a percentage point per year slower than the rest of Canada.

- In term of employment growth, Nova Scotia's job force has expanded 1.3 percent per year – 0.2 percentage points slower than Canada as a whole.
- In terms of productivity gains, Nova Scotia's productivity advanced at a rate of 1.2 percent per year – some 0.1 percentage points slower than for Canada as a whole.

Nova Scotia's economy will likely continue to grow slightly slower than the Canadian economy over the forecast period, and the gap between Nova Scotia's economic performance and that for Canada as a whole, should remain more or less steady over time.

2.2.1 Regions within Nova Scotia

The final macroeconomic component relevant to the economic and employment outlook in Halifax is the pattern of economic development across Nova Scotia.

Between 1987 and 2001 employment growth across Atlantic Canada averaged 1.2 percent per year. Halifax recorded a relatively strong pace of employment growth through the period at 1.4 percent - about 0.3 percentage points above the rest of Nova Scotia (see Figure 1). The remaining Atlantic Provinces grew at 1.2 percent per year – about on par with the region.

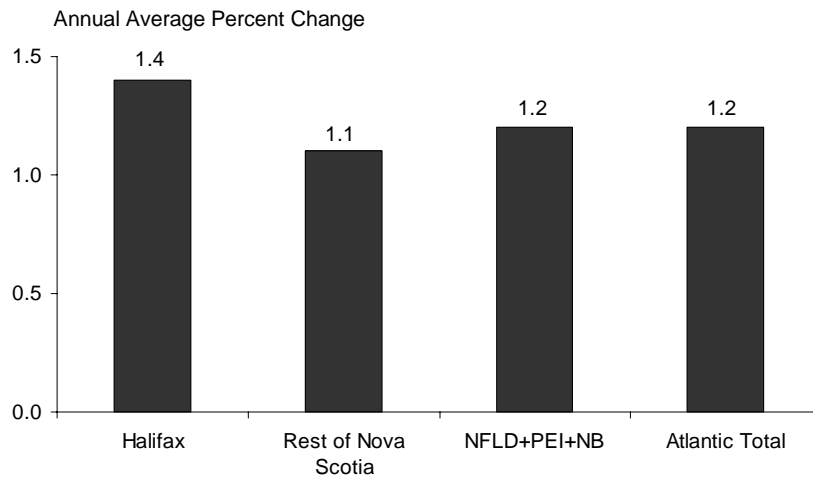
This analysis is based on employment estimates presented by Statistics Canada's Labour Force Survey. Another approach is to track long-term changes in employment using Census data.

Figure 2 presents historical employment growth rates for the Halifax Census Metropolitan Area (CMA)³, for those areas of Nova Scotia outside of Halifax, and for the province, region and country.

³ Most of this report will deal with Halifax Regional Municipality. In 2001 the CMA was roughly equivalent to the HRM (with the exception of the Cole Harbour, Shubenacadie, and Sheet Harbour Reserves) Prior to 2001, the CMA excluded Sub F: Musquodoboit Middle & Harbour and Sub G: Sheet Harbour, Mosher River – about 3.0 percent of what is now the HRM (on a 1996 population basis). Labour Force data are regularly reported by Statistics Canada on a CMA basis, so that is why this reference geography is employed in this section.

Figure 1

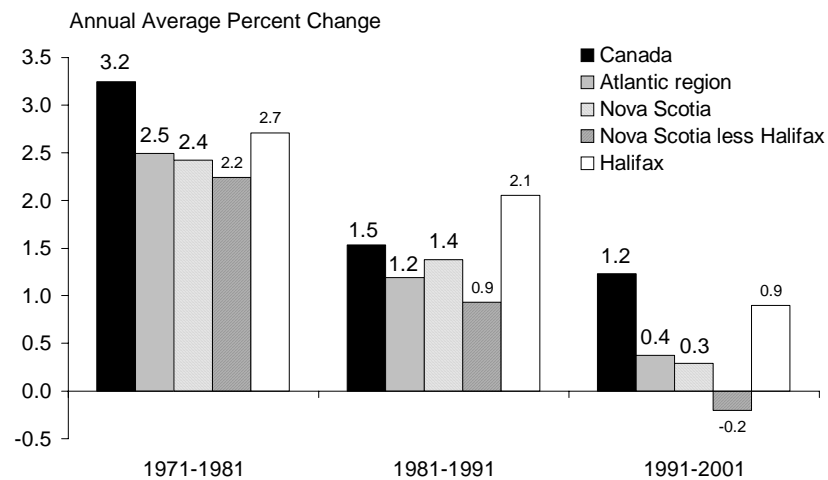
Employment Growth by Region, Atlantic Provinces, 1987-2002



Source: Clayton Research based on data from Statistics Canada (Labour Force Survey)

Figure 2

Employed Labour Force* Growth, Canada, Atlantic Region, Nova Scotia and Halifax**, 1971-2001



* Place of residence (POR) basis

** Data adjusted for boundary changes in 2001

Source: Clayton Research based on data from Statistics Canada (Census)

Even going back as far as three decades, the pattern of Halifax's employment growth vis-à-vis the larger regional context remains clear:

- Employment growth in Halifax is consistently higher than elsewhere within Nova Scotia;
- Nova Scotia has not been consistent in its performance against the Atlantic region;
- For the last two decades, Halifax has either been on par or outperformed growth in the country as a whole.

Going forward, it is reasonable to assume that economic performance in Nova Scotia in general will continue to be on par with the region while the Halifax economy specifically will likely continue to outshine the economic prospects across the Atlantic Provinces as a whole.

2.2.2 Nova Scotia's Key Industries

The industrial composition of Nova Scotia's economy is obviously a key component to understanding the macroeconomic context for growth provincially and within Halifax through the forecast period. Economic growth prospects are tied not only to the fares of existing dominant industries, but also to the prospects for emerging industries. Factors included in this macroeconomic outlook are:

- Nova Scotia's economy is comprised of many industries that have recent growth rates that are higher than the country as a whole, such as primary industries, especially oil and gas, management of companies and administrative services, and educational services which are all projected to display relatively superior growth over the forecast period.
- Nova Scotia is also home to emerging industries that may significantly impact growth over the long term. These industries include: finance, insurance and real estate, professional, scientific and technical services, information, culture and recreation.

The energy sector is emerging as an important driver of economic activity in Nova Scotia in general and in Halifax in particular. According to the Atlantic Provinces Economic Council, economic growth in Nova Scotia has been stronger since 1997 with offshore natural gas production directly contributing to about 11 percent of growth in GDP between 1997 and 2001⁴. Gas production in 2003 declined about 15 percent, and several new exploration wells have been abandoned in recent months. Clearly the impact of the offshore sector will likely be more modest in the years ahead in

⁴ *Atlantic Provinces Economic Council, Atlantic Report Vol. 38 No. 2*

comparison to the 1997-2001 period, but its fundamental longer-term prospects remain sound.

Nonetheless, most new jobs created in the past two years were not in the energy sector, but in manufacturing and public administration. The Sable Gas Production project slowed production in 2003, but the possible addition of up to two new fields could give a lift to production over the next few years. There are also several exploration projects on the go in Nova Scotia which could add many large-scale endeavours to the list, should they be successful.

Future offshore development in the energy sector will likely have a positive impact on the province's economy, but the specific impact on net job creation will remain modest.

Other sectors within Nova Scotia with relatively heavy concentrations of labour force include primary, retail trade, business services, health and education, accommodation food and beverage (tourism) and public administration (see Figure 3).

Figure 3

**Labour Force Distribution by Industry
Canada and Nova Scotia, 2001**

Industry Group	Canada	Nova Scotia
	<i>Percent</i>	
Agriculture, forestry, fishing and hunting	3.6	5.2
Mining and oil and gas extraction	1.1	0.8
Utilities	0.8	0.6
Construction	5.6	6.0
Manufacturing	14.0	10.0
Wholesale trade	4.4	3.7
Retail trade	11.3	12.4
Transportation and warehousing	5.0	4.5
Information and cultural industries	2.7	2.4
Finance and insurance	4.1	3.1
Real estate and rental and leasing	1.7	1.5
Professional, scientific and technical services	6.3	4.3
Management of companies and enterprises	0.1	0.1
Administrative and support, waste management and remediation services	3.9	4.6
Educational services	6.6	7.2
Health care and social assistance	9.7	11.1
Arts, entertainment and recreation	2.0	1.8
Accommodation and food services	6.7	7.2
Other services (except public administration)	4.8	4.9
Public administration	5.8	8.5
	100	100

Source: Clayton Research based on data from 2001 Census of Canada

2.3 HALIFAX

The Halifax Regional Municipality was formed on April, 1996 through the amalgamation of the former City of Halifax, City of Dartmouth, Town of Bedford, Halifax County Municipality, and Metropolitan Authority. The new municipality spans a geographic area of 5,600 square kilometres and provides municipal services to a population of approximately 350,000.

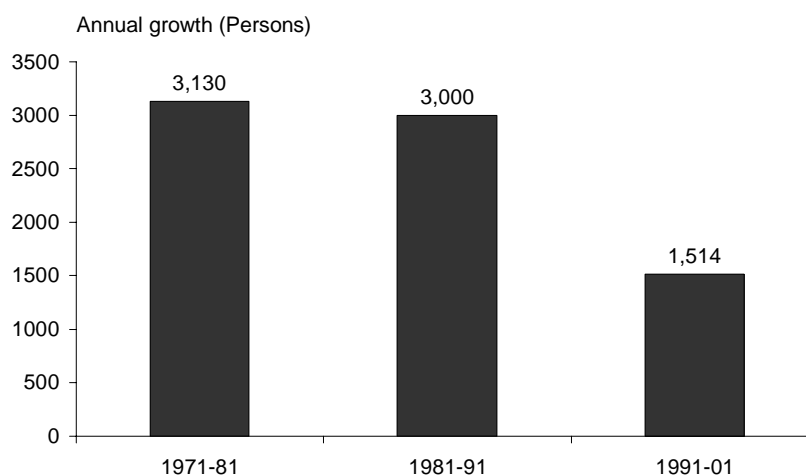
2.3.1 Halifax's Economic Prospects

Halifax, Canada's 10th largest municipality has enjoyed a measure of economic stability over the last several years. With an international port, federal and provincial government offices, significant armed forces presence, seven post-secondary institutions, and regional communications and financial clusters, it boasts a well-diversified economy and labour force. The Canadian Real Estate Association recently ranked Halifax among the hottest real estate markets in the country. With an unemployment rate of only 7.5 percent, well below the provincial average of 9.7 percent, the Halifax job market appears to be in a good position.

The economy provided some 1,500 net new jobs per year for persons living in Halifax during the 1990s (1991-2001) which was about half the rate of job creation recorded over the previous two decades (Figure 4).

Figure 4

Employment Growth, Halifax CMA*, 1971-2001

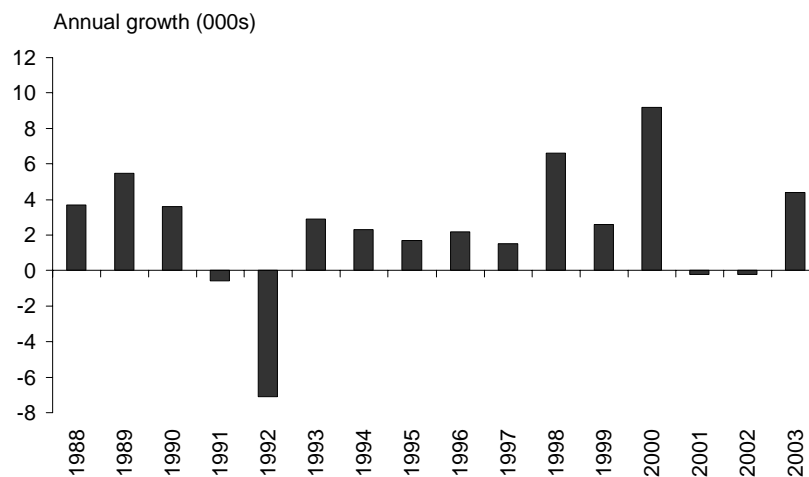


* Data are adjusted to reflect boundary changes between 1996 and 2001
 Source: Clayton Research based on data from Statistics Canada, Census of Canada

The pattern of growth, as illustrated in Figure 5 using Labour Force Survey estimates reflects the high degree of volatility through the 1990s driving the overall pace of economic growth. The recession in the early 1990s which affected most areas of Canada was felt in Halifax relatively severely, with large number of job losses recorded between 1990 and 1992. A slow and unsteady grow environment then emerged with only three sporadic years of strong job growth showing up in 1998, 2000 and again in 2003.

Figure 5

Employment Growth, Halifax CMA*, 1988-2003



* Based on 1996 Census Metropolitan Area boundaries

Source: Clayton Research based on data from Statistics Canada Labour Force Survey

Growth prospects in Halifax relative to the remainder of Nova Scotia, the remainder of Atlantic Canada or Canada as a whole are in part being driven by the relative success of various economic development efforts.

Halifax has traditionally played a role as a regional economic centre for Atlantic Canada – a role it is presently shored up by Halifax's position in emerging industries such as energy extraction and telecommunications along side its continued strong focus on traditional strengths such as education, public administration, tourism, the port and defence.

Two trends in urban growth patterns evident across the country and throughout North America is increasing economic concentration and relative population growth in cities vs. rural areas in general, and a key focus on regional cities in particular. Historical evidence (recall Figure 2) and current realities suggest that Halifax remains the key regional city for Atlantic

Canada, and its relative economic growth prospects will most likely remain elevated.

2.3.2 Halifax's Competitive Position

The performance of the Halifax economy depends in part on its continued ability to attract and retain businesses and employment, which depends, in turn, on the local area's competitive positions vis-à-vis neighbouring urban centres. Within Atlantic Canada, the Halifax economy competes principally with two cities for businesses and jobs: St. John's, Newfoundland and Moncton, New Brunswick. These regions compete directly with Halifax in attracting business investment, and it is helpful to look at how Halifax stacks up:

- The Greater Moncton Region established in 2001 the "Greater Moncton Strategic Partnership", whereby committing itself to supporting economic development efforts ensuring Greater Moncton as a strong, dynamic and vibrant place to live and do business. Specifically, the Partnership attempts to promote increased wealth and employment in the region, keep and attract foreign and local investment, increase the tax base and focus marketing activities.
- The Region of St. John's has also recently launched a new initiative in order to further economic development in the city. "The Network for Economic Progress" combines expertise from the city, local businesses, post-secondary education and both federal and provincial levels of government to address business and economic issues.

In Halifax, some economic development efforts are being coordinated through the Greater Halifax Partnership (GHP). The GHP's efforts focus on activities to increase the business community's confidence. The GHP is also presently engaged in a strategy entitled *Growth from Within*. The focus of this strategy is building Halifax's core skill to keep and grow existing businesses. Promoting growth and expansion of existing businesses is an effective means to achieve significant growth. GHP claims some 80 percent of new job creation stem from existing businesses. The GHP's core economic development vision entails creating sustainable growth by focusing on three main sectors that offer significant potential for the economy: the energy sector, the life sciences sector and information and technology sector.

With active economic development efforts underway, a historical pattern of relatively strong growth within the region, and the prospects of further

urbanization and regionalization ahead, Halifax's economic prospects remain sound through the forecast period.

2.4 EMPLOYMENT PROSPECTS IN HALIFAX

Figure 6 presents employment prospects in Halifax Regional Municipality within the broader macroeconomic environment across the province, the region and across Canada as a whole. The emerging slowdown in employment growth throughout Canada discussed in Section 2.1 is demonstrated in these forecasts. For Canada as a whole, employment growth through to 2016, will be generally similar to performance over the 1991-2001 period. Pronounced slower growth nearing the end of the forecast period will likely then emerge.

Across Atlantic Canada as a whole, employment growth will end out the 2001-2016 period somewhat better than during the somewhat depressed 1991-2001 period, but remain below the national average. Nova Scotia performed well relative to the region during the 1990s, and will round out the next decade or so just above the average for the region and still somewhat lower than the national average. Employment growth in the final years of the forecast period in Nova Scotia will likely slow to about 0.5 percent per year.

Figure 6

	Actual		Projection		Annual Average Growth			Annual Percent Growth		
	1991	2001	2016	2026	1991-2001	2001-2016	2016-2026	1991-2001	2001-2016	2016-2026
	Number of Persons Employed (000s)				Number of Persons (000s)			Percent		
Canada *	13,005.5	14,695.1	17,551.8	18,680.2	169.0	190.4	112.8	1.2	1.2	0.6
Atlantic Canada *	943.7	980.4	1,113.1	1,172.9	3.7	8.8	6.0	0.4	0.8	0.5
Nova Scotia *	390.8	402.3	461.3	483.7	1.2	3.9	2.2	0.3	0.9	0.5
Halifax CMA *	167.3 ^{1.}	182.5	n/a	n/a	1.5	n/a	n/a	0.9	n/a	n/a
Halifax Regional Municipality *	170.2 ^{2.}	190.5	217.9	229.8	2.0	1.8	1.2	1.1	0.9	0.5
Halifax, Alternate Scenarios										
High Growth	170.2	190.5	232.9	253.8	2.0	2.8	2.1	1.1	1.4	0.9
Low Growth	170.2	190.5	205.5	210.6	2.0	1.0	0.5	1.1	0.5	0.2

1. Adjusted to 2001 boundary 2. Halifax County, estimate

* Place of residence basis; ** Place of work basis;

Source: Forecasts: Clayton Research, Historical: Statistics Canada

Employment growth in Halifax has been historically strong in relation to Nova Scotia as a whole and Atlantic Canada as a whole. Employment growth will likely slow in sympathy to the macroeconomic environment through the forecast period, but remain at or above the expected performance for Nova Scotia as a whole.

All told, advances in the Halifax economy could add some 39,500 net new jobs between 2001 and 2026 according to this economic scenario – an average of 1,600 net new jobs per year (1,800 per year through to 2016 and 1,200 per year thereafter).

2.4.1 Alternative Employment Growth Scenarios

While the preceding macroeconomic analysis suggests that net job creation in Halifax Regional Municipality is likely to amount to about 1,500 jobs per year between 2001 and 2026, this estimate is somewhat sensitive to underlying growth assumptions. Prudent regional planning practices ought to take into account the probability that underlying growth patterns may play out differently than anticipated, leading ultimately to economic development and job creation patterns in Halifax which are higher or lower than the 1,500 persons per year estimate. For example:

- Underlying economic growth in Halifax could turn in a stronger than anticipated performance. The Greater Halifax Partnership, for example, has estimated an ambitious estimate for job creation between 2000 and 2020 of 2,000 and 3,600 net new jobs per year (depending on different scenarios of growth and investment in the energy sector). The range of estimates provided by GHP are all in excess of the projections employed in this analysis. There is recent evidence that stronger growth could emerge in Halifax under the right circumstances – including increased concentration of activity in the energy extraction industry and modest accompanying investment in processing facilities. According to Statistics Canada's Labour Force Survey about 4,400 jobs were created in the Halifax CMA in 2003 – although these came on the back of two years of local employment declines.

In order to account for possible economic scenarios which could generate local job growth in excess of the forecast on a sustained basis, an alternative **High Growth** forecast has been prepared, which considers job growth in Halifax of approximately 2,500 persons per year through the forecast period (2,800 per year through to 2016 and 2,100 per year thereafter).

- Alternatively, it is possible that economic growth through the planning period in Halifax could significantly understate the estimates used in this report. The existence of another very sharp early-1990s style recession in the period could significantly derail

many industries in Halifax leading to years of slow recovery. Under these circumstances, net job creation over the planning period could well be significantly lower.

In order to account for possible economic scenarios which could generate local job growth well below the forecast on a sustained basis, an alternative **Low Growth** forecast has been prepared which considers job growth in Halifax of approximately 770 persons per year through the forecast period (900 per year through to 2016 and 500 per year thereafter).

Each of these alternative scenarios is illustrated in Figure 6 on the preceding page. During the remainder of this report, analysis of migration and population implications of the baseline forecast scenario will be presented, along with the accompanying housing needs projections. In all case, the implications of the two alternative economic and job growth scenarios are presented in turn.

3 POPULATION PROJECTIONS

Population projections for the Halifax Regional Municipality are presented in this chapter. First the methodological framework is presented, then population projections are presented as under three different scenarios, based on the three scenarios developed in Chapter 2.

3.1 PROJECTION FRAMEWORK

3.1.1 The Cohort Survival Model is used for the Halifax Regional Municipality

The widely used cohort survival methodology is employed in order to estimate population for HRM through to 2026. This method uses historical data from the Census of Canada and projects future population based on assumptions for the three components of population growth:

- **Births.** Historical fertility rate trends within Halifax and anticipated future trends across Nova Scotia and Canada are used to derive expected fertility patterns in Halifax over the projection period;
- **Deaths.** Historical mortality rates by age and sex within Halifax and anticipated future trends across Nova Scotia and Canada are used to derive expected mortality patterns in Halifax over the projection periods; and
- **Net migration.** Historical migration patterns by age and sex (including international, inter-provincial and intra-provincial) are considered in the model, and anticipated future migration flows are projected to 1) satisfy labour force requirements in conjunction with the employment forecasts (under the three scenarios) presented in Chapter 2, and 2) account for potential migration flows of non-labour-force related migrants such as retirees.

The cohort survival model is based on population growth in five-year increments consistent with the five-year cycle of the Census of Canada.

3.1.2 Alternative Growth Scenarios

Three sets of population projections are presented in this chapter. The underlying drivers of the three scenarios are the three alternative economic and employment growth scenarios developed in Chapter 2.

In comparison to the baseline scenario, the main influence of the alternative scenarios is on migration. Under the lower employment growth scenario, the local needs for in-migration are reduced and the model predicts lower in-migration and thus results in lower population growth through the forecast period. Conversely, under the higher employment growth scenario, the local needs for in-migration are elevated, and the model predicts higher in-migration and thus higher population growth through the forecast period.

Otherwise, specific assumptions used in the cohort survival model, such as the birth rate, death rates, etc. are held constant through the three scenarios.

3.2 BIRTHS

3.2.1 Methodology

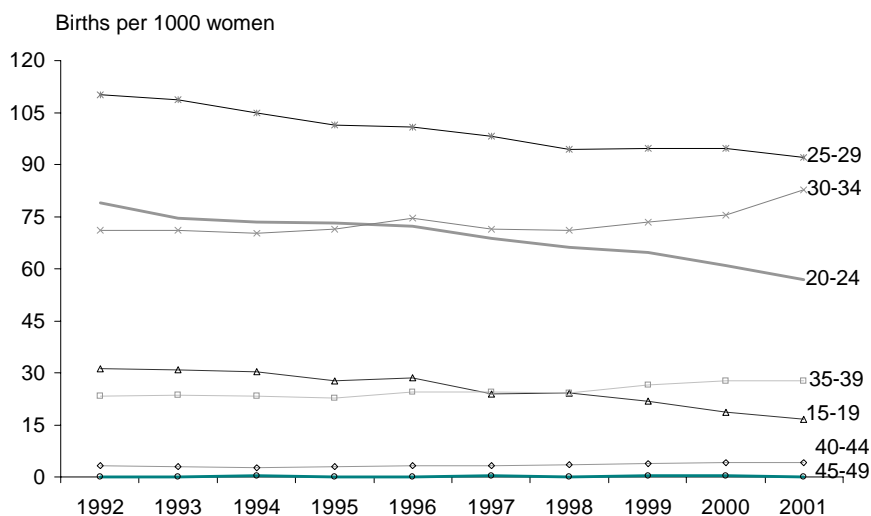
The number of births in each period of the projection is derived using the standard births methodology of the cohort survival approach. Future birth rates are assumed by age of mother and applied to the female population in each period (including an allowance for recent migrants). Typically, women in the 20-34 age cohort account for the bulk of children born.

3.2.2 Recent Trends

Recent Nova Scotia-wide data suggest that birth rates for mothers aged 15-29 have declined over the past several years, but that rates for women aged 30-39 have remained relatively stable – even increasing moderately in the past few years (see Figure 7 below). All told, the total fertility rate (TFR) has declined in recent years in the province of Nova Scotia.

Figure 7

Birth Rates by Age of Mother, Nova Scotia, 1992-2001



Source: Clayton Research based on data from Statistics Canada

There is a consensus among demographers that the total fertility rate (TFR) (sum across each age cohort) will continue to decline in Canada and Nova Scotia at least to 2006. In Statistics Canada's population projections released in March 2001, the total fertility rate declines through 2006 in each of three scenarios presented. Judging from the total fertility rate in 2001 (now the latest data released) it seems likely that somewhere between the "medium" and the "high" growth scenarios is the one most on track (see Figure 8), which has TFR declining to 2006 then either remaining flat or rising modestly. Thus, a modest rise in the TFR after 2006 is adopted in the present set of projections.

Figure 8

Total Fertility Rate* Assumptions, Statistics Canada Projections, Nova Scotia, 1996-2026

	Growth Scenarios		
	Low	Medium	High
<i>Births per woman</i>			
1996	1.5	1.5	1.5
2006	1.3	1.4	1.4
2026	1.2	1.4	1.7
2001**	1.4	1.4	1.4

* Sum of fertility rates across all age groups

** Latest actual data

Source: Clayton Research based on data from Statistics Canada

3.2.3 Projections 2001-2026

Figure 9 shows the projection of age-specific fertility rates by age group for Halifax. In this projection, the fertility rates are expected to continue to decline slightly into the 2001-2006 period and then modestly recover into 2011 then remain stable thereafter. There are a number of reasons why the historical decline in fertility rates, particularly among the 20-34 age cohorts is likely to abate and that some recovery could be expected:

- Some of the historical decline in these age cohorts has been connected to women having their first child later in life, and from more women forgoing childbirth altogether. In part this is connected with a greater participation by women in education and the labour force, which has prompted many women to delay the birth of their first child and to conceive fewer children over their lifetime. The increased participation of women in higher education and the labour force has been converging with that of males in recent years, and thus further advancement of this trend is less likely. There will likely not be much further shifts in the child bearing choices of women in these younger cohorts. Although this alone is not evidence that fertility rates are likely to rise, it does suggest that the long down-trend in fertility rates will likely abate, as female participation rates in the labour force and in higher education converge with male rates and stabilize.

Figure 9

Fertility Rate, Halifax Regional Municipality, 1991-2026

	1991- 1996	1996- 2001	2001- 2006	2006- 2011	2011- 2016	2016- 2021	2021- 2026
Age Groups	<i>Rates per one thousands women (per census period)</i>						
15-19	0.102	0.094	0.092	0.095	0.095	0.095	0.095
20-24	0.335	0.308	0.303	0.311	0.311	0.311	0.311
25-29	0.520	0.478	0.470	0.482	0.482	0.482	0.482
30-34	0.415	0.381	0.375	0.384	0.384	0.384	0.384
35-39	0.153	0.140	0.138	0.142	0.142	0.142	0.142
40-44	0.022	0.020	0.020	0.020	0.020	0.020	0.020
45-49	0.002	0.002	0.001	0.002	0.002	0.002	0.002
TOTAL	1.548	1.423	1.399	1.435	1.435	1.435	1.435
Total Fertility Rate							
Canada *	1.62	n.a.	1.48	n.a.	n.a.	n.a.	1.48
Nova Scotia	1.52	n.a.	1.37	n.a.	n.a.	n.a.	1.37
Halifax	1.55	1.42	1.40	1.44	1.44	1.44	1.44

* at end year of period, Statistics Canada Projections

Source: Forecasts by Clayton Research based on data from Statistics Canada

- Population growth in Canada, Nova Scotia and Halifax is becoming increasingly dependent on international immigration. This is likely to have an elevating effect on the fertility rate. According to Statistics Canada, the TFR for women born outside of Canada (i.e., immigrants) in 1996-2001 period was 1.82 – 24 percent higher than for women born in Canada (1.42)⁵. Moreover, the TFR during this period was highest for recent immigrants – with TFR of 3.1 for women who arrived in Canada between 1996 and 2001. Based on the increasing reliance on immigration as a component of population growth, this could have a modestly elevating effect on the birth rate.
- Population projection guidelines from the United Nations suggest that for developed countries, a long-term steady total fertility rate between 1.5 and 2.0 is a reasonable assumption⁶. Halifax's TFR has declined in the past five years from 1.55 to 1.42, dipping below these guidelines. It is reasonable, therefore, to not expect it to decline much further but rather to expect some modest improvement in order to bring the local fertility rate back in line with this general principal.
- This assumption is consistent with the medium growth projections prepared by Statistics Canada and referred to in Figure 8.

The resulting number of births is influenced by the number of females in each age group in each time period. There was a decline in the actual number of births between the early and the late 1990s, and a further decline is expected through the 2001-2006 period in both the baseline and low growth scenarios as a result of further declines in the fertility rates by age cohort (see Figure 10). However, in the high growth scenario, there is actually an increase in the number of births expected throughout the forecast period.

The birth rates are held constant for each of the three scenarios, but the actual number of births varies by scenario based on the variance in the number of females of childbearing age predicted within each scenario.

⁵ *Bélange, A., Report on the Demographic situation in Canada 2002, Statistics Canada (91-209-XPE), 2003, p.5.*

⁶ *World Population Prospects: The 2000 Revision, Volume III. United Nations Population Division (2002)*

3.2.4 Sensitivity of the Fertility Scenario

Although prudent principles and assumptions have been employed in these projections determining a reasonable fertility rate to apply to the population, the reality is that events could play out much differently over such a long time frame. In as much as the goal of this analysis is to determine projections of housing demand, the ultimate outcome is relatively insensitive to the birth rate assumption.

If for example, the Total Fertility Rate rises unexpectedly sharply, and stabilizing at 2.0 in the 2006-2011 period then the following impacts would be felt on the projections: holding all other critical inputs (such as the employment forecast) constant:

- Net in-migration over the period would be about 6,000 persons lower compensated near the end of the period by increased natural labour supply;
- But overall population growth would be about 23,400 persons higher over the course of the 25 year period; and
- Most of the additional population, however, will be distributed as children and youth, which has a very small influence on household growth. The impact of the lower in-migration outweighs the additional births on household formation. On net, the increased birth rate actually results in 1,940 fewer households formed over the course of the 25 year period.

Conversely, if, The Total Fertility Rate continued to decline after 2006 reaching and stabilizing at 1.0, then there would be a corresponding increase in net in-migration of about 5,000 persons leading ultimately to increase housing demand through the period of some 1,600 units.

Figure 10

Total Births, Halifax Regional Municipality, 1986-2026**Baseline Scenario**

		Male	Female	Total
Census Periods		Persons		
1986-1991	<i>a</i>	12,390	12,171	24,561
1991-1996	<i>a</i>	11,804	11,477	23,281
1996-2001	<i>a</i>	10,551	10,020	20,571
2001-2006	<i>f</i>	10,075	9,570	19,645
2006-2011	<i>f</i>	10,075	9,635	19,710
2011-2016	<i>f</i>	10,045	9,540	19,585
2016-2021	<i>f</i>	9,935	9,435	19,370
2021-2026	<i>f</i>	9,895	9,395	19,290

Low Growth Scenario

		Male	Female	Total
Census Periods		Persons		
2001-2006	<i>f</i>	9,890	9,395	19,285
2006-2011	<i>f</i>	9,890	9,295	19,185
2011-2016	<i>f</i>	9,280	8,810	18,090
2016-2021	<i>f</i>	9,075	8,615	17,690
2021-2026	<i>f</i>	8,945	8,495	17,440

High Growth Scenario

		Male	Female	Total
Census Periods		Persons		
2001-2006	<i>f</i>	10,265	9,745	20,010
2006-2011	<i>f</i>	10,265	9,990	20,255
2011-2016	<i>f</i>	10,925	10,375	21,300
2016-2021	<i>f</i>	11,035	10,480	21,515
2021-2026	<i>f</i>	11,125	10,565	21,690

a: Final data

f: Forecasts by Clayton Research

Source: Clayton Research based on data from Statistics Canada

3.3 DEATHS

3.3.1 Methodology

The projections of deaths in Halifax between 2001 and 2026 rely on the standard deaths methodology used in cohort survival models. Death rates are assumed by age and sex cohort and applied to the population by age and sex in each period. The major assumptions applied to this model are modest declines in death rates for all age groups.

3.3.2 Death Rates

Figure 11 illustrates Halifax death rates estimated for the 1991-2001 period (using data from Statistics Canada Annual Demographic Statistics) and projections of mortality rates through to 2026.

Figure 11

Death Rates, Halifax Regional Municipality, 1991-2026							
Age Groups	1991- 1996	1996- 2001	2001- 2006	2006- 2011	2011- 2016	2016- 2021	2021- 2026
Male							
<i>Deaths per 1,000 Population</i>							
Infant	5.1	2.8	2.5	2.4	2.2	2.0	1.9
0-9	0.3	0.2	0.2	0.2	0.2	0.1	0.1
10-19	0.3	0.5	0.4	0.4	0.4	0.4	0.4
20-29	0.9	0.6	0.6	0.6	0.6	0.5	0.5
30-39	1.3	1.4	1.5	1.4	1.4	1.4	1.3
40-49	2.5	2.5	2.6	2.5	2.4	2.3	2.2
50-59	6.5	6.3	5.8	5.4	5.1	4.8	4.4
60-69	22.5	18.3	16.4	15.5	14.6	13.7	12.8
70-79	51.3	49.1	44.4	42.3	40.3	38.2	36.1
80-89	118.9	115.7	108.3	104.9	101.4	98.0	94.5
90+	237.6	153.0	145.6	143.6	141.4	139.2	137.1
Female							
<i>Deaths per 1,000 Population</i>							
Infant	4.9	3.9	3.5	3.3	3.0	2.8	2.6
0-9	0.4	0.2	0.2	0.1	0.1	0.1	0.1
10-19	0.2	0.2	0.1	0.1	0.1	0.1	0.1
20-29	0.4	0.3	0.3	0.3	0.3	0.3	0.3
30-39	0.7	0.6	0.6	0.6	0.6	0.6	0.5
40-49	1.4	1.5	1.4	1.3	1.2	1.2	1.1
50-59	4.7	3.8	3.5	3.4	3.2	3.1	2.9
60-69	13.1	11.0	10.5	10.3	10.1	9.9	9.7
70-79	28.9	29.2	27.6	27.1	26.5	25.9	25.3
80-89	75.6	77.9	72.1	69.4	66.5	63.7	61.0
90+	160.0	175.0	161.8	156.1	150.3	144.5	138.7
Source: Clayton Research based on Statistics Canada and U.S. Census Bureau data							

Gradually declining death rates per age cohort is a generally standard assumption. Background research conducted by the US Census Bureau was employed in formulating these assumptions, and these call for generally declining death rates by age. Key observations on this scenario include:

- Between 1991-1996 period and the 1996-2001 period, death rates in Halifax declined for most age groups among both males and females.

- Continued advances in health care, disease treatment, improvements in nutrition and real personal wealth will continue to exert a downward influence on mortality rates by age and sex; and
- Infant mortality rates will see the most dramatic decline over the next 30 years, falling from 2.9 per 1,000 live births to just under 2 for males and from 3.6 to 2.5 per 1,000 for females infants.

3.3.3 Projections 2001-2026

Figure 12 shows the projected number of deaths for Halifax by sex, for each of the three growth scenarios. In spite of declining mortality rates, as discussed above, a gradually increasing number of deaths will occur in Halifax as the population continues to age into their higher-mortality years.

Figure 12

Total Deaths, Halifax Regional Municipality, 1986-2026**Baseline Scenario**

		Male	Female	Total
Census Periods		Persons		
1986-1991	<i>a</i>	5,508	4,836	10,344
1991-1996	<i>a</i>	5,724	5,395	11,119
1996-2001	<i>a</i>	5,990	6,045	12,035
2001-2006	<i>f</i>	5,635	5,685	11,320
2006-2011	<i>f</i>	6,430	6,415	12,845
2011-2016	<i>f</i>	7,275	7,230	14,505
2016-2021	<i>f</i>	8,165	8,015	16,180
2021-2026	<i>f</i>	9,215	8,895	18,110

Low Growth Scenario

		Male	Female	Total
Census Periods		Persons		
2001-2006	<i>f</i>	5,560	5,660	11,220
2006-2011	<i>f</i>	6,260	6,295	12,555
2011-2016	<i>f</i>	7,050	7,055	14,105
2016-2021	<i>f</i>	7,900	7,800	15,700
2021-2026	<i>f</i>	8,915	8,655	17,570

High Growth Scenario

		Male	Female	Total
Census Periods		Persons		
2001-2006	<i>f</i>	5,715	5,720	11,435
2006-2011	<i>f</i>	6,605	6,530	13,135
2011-2016	<i>f</i>	7,535	7,425	14,960
2016-2021	<i>f</i>	8,480	8,265	16,745
2021-2026	<i>f</i>	9,575	9,190	18,765

a: Final data

f: Forecasts by Clayton Research

Source: Clayton Research based on data from Statistics Canada

3.4 TOTAL NATURAL INCREASE

In the past 10 years there has been a sharp decline in the net natural increase (births less deaths) within Halifax from over 12,000 persons in 1991-96 to fewer than 9,000 in 1996-2001 (see Figure 13). As a result of the factors discussed individually for births and deaths, continued decline is expected to occur in the net contribution to population growth from natural causes. Examining the three separate scenarios, however, a somewhat different pattern emerges for each. In the baseline case scenario, net natural increase declines to just above zero, whereas, in the low growth scenario, net natural increase does in fact become marginally negative. In the high

growth scenario, the decline is not as significant as the first to cases, and so net natural increase ends up at just a little under 3,000 in the 2021-26 period.

Figure 13

Total Natural Increase, Halifax Regional Municipality, 1991-2026

Baseline Scenario

Census Periods		Births	Deaths	Net Natural Increase
		Persons		
1991-1996	<i>a</i>	23,281	11,119	12,162
1996-2001	<i>a</i>	20,571	12,035	8,536
2001-2006	<i>f</i>	19,645	11,320	8,325
2006-2011	<i>f</i>	19,785	12,845	6,940
2011-2016	<i>f</i>	19,585	14,500	5,085
2016-2021	<i>f</i>	19,370	16,175	3,195
2021-2026	<i>f</i>	19,290	18,110	1,180

Low Growth Scenario

Census Periods		Births	Deaths	Net Natural Increase
		Persons		
2001-2006	<i>f</i>	19,285	11,220	8,065
2006-2011	<i>f</i>	19,080	12,555	6,525
2011-2016	<i>f</i>	18,090	14,105	3,985
2016-2021	<i>f</i>	17,690	15,700	1,990
2021-2026	<i>f</i>	17,440	17,570	(130)

High Growth Scenario

Census Period:		Births	Deaths	Net Natural Increase
		Persons		
2001-2006	<i>f</i>	20,010	11,435	8,575
2006-2011	<i>f</i>	20,510	13,135	7,375
2011-2016	<i>f</i>	21,300	14,960	6,340
2016-2021	<i>f</i>	21,515	16,745	4,770
2021-2026	<i>f</i>	21,690	18,765	2,925

a: Final data

f: Forecasts by Clayton Research

Source: Clayton Research based on data from Statistics Canada

3.5 MIGRATION

Net migration refers to the difference between the number of people moving to a local area from other areas and the number of people moving out of a local area. Net migration can be positive for an area (more people moving in than out) or negative (more people moving out than in). The former is referred to as net in-migration and the latter as net out-migration.

Net migrants are often categorized from where they come or go: movement to and from other countries is called **net international migration**

(immigration less emigration); movement to and from other provinces is called **net interprovincial migration**; and movement within a single province is called **net intraprovincial migration**.

3.5.1 Methodology

The methodology for projecting net international and net interprovincial migration for Halifax, considers only the projections of these components at the baseline scenario level. Projections are also made for net intraprovincial migration based on projections of in-migrants and out-migrants by age and sex within this category.

Two criteria are considered in assessing projections in the case of net interprovincial and net international migration and in projecting the intraprovincial migration by age and sex:

- Migration principally responds to underlying demographic conditions within the area. In the previous chapter three scenarios of potential employment growth for the Halifax Regional Municipality are presented. Based on certain labour force activity rates (the participation rate and the unemployment rate) the potential employment growth implies potential demographic needs, under each scenario. If employment growth is slower than the demographic labour force base, unemployment will rise, and residents will begin to leave the region seeking jobs elsewhere – implying a net-out migration scenario. On the other hand if employment growth is faster than the demographic labour force base, unemployment will fall, wages will rise and migrants from elsewhere in Nova Scotia, Canada and abroad will be attracted into the region – implying a net-in migration scenario.
- Some components of migration are responding to factors other than labour force conditions. For example many migrants in the 55+ age cohorts are moving within Nova Scotia for lifestyle reasons, particularly in retirement. In addition, there is a possibility that native Haligonians who migrated to elsewhere in Canada during their working years, may return to Halifax for retirement. The Halifax population projections take these migrants into account over and above the job-motivated migrants.

3.5.2 Labour Force Needs Model

Figure 14 presents a summary of the projected net migration demand as derived from the labour force needs model with the baseline economic and employment scenario.

As discussed in Chapter 2 total employment in Halifax in the baseline scenario, is expected to rise to about 229,800 persons in 2026 from 190,480 in 2001 – a total anticipated gain of some 40,000 persons over the period. There will be a modest increase in inflow over the period⁷, but growth in the employed labour force will rise by about the same amount. Correspondingly, there is anticipated to also be about 40,000 person rise in the labour force over the same period. Modestly lower unemployment rates are expected through the forecast. Given the anticipated shortage of workers, connected to the aging of the population (recall the discussion in Section 2.1) a gradual decline in the unemployment rate seems likely.

Figure 14

Labour Force Needs Model, Halifax Regional Municipality, 2001-2026						
Baseline Growth Scenario						
Total	2001	2006	2011	2016	2021	2026
Employment (Persons)	190,482	201,000	211,100	217,900	224,100	229,800
Inflow/(outflow) Commuters	8,000	8,100	8,300	8,400	8,400	8,500
Employed Labour Force (Persons)	182,480	192,900	202,800	209,500	215,600	221,300
Unemployment Rate (%)	7.2	8.3	8.0	7.2	6.0	5.5
Labour Force (Persons)	196,590	210,300	220,500	225,800	229,400	234,200
Participation Rate (%)	68.1	68.1	67.4	65.9	64.3	62.9
Population	<i>Persons</i>					
15-84	288,810	308,600	327,000	342,400	356,900	372,200
0-14 and 85+	70,390	68,700	67,700	68,900	70,300	71,800
Total	359,200	377,300	394,700	411,300	427,200	444,000
Natural Increase (Births - Deaths)*		8,325	6,940	5,085	3,195	1,180
Population due to Natural Alone**		367,525	384,240	399,785	414,495	428,380
Implied Net Migration*** Demand		9,800	10,425	11,480	12,750	15,630

* From Figure 13; **Previous Census year's population plus the natural increase over the period

*** from all sources

Source: Clayton Research

The rise in the population, however, which is related to this required rise in the labour force, is much higher. A rise of about 83,600 persons between

⁷ The employment inflow/(outflow) refers to the average daily number of net commuters travelling into HRM to work.

the ages of 15 and 85 are required to support an additional 40,000 persons in the labour force. Fairly steady declines in the overall participation rate (that proportion of the population 15-85 who is either employed or unemployed) accounts for the difference.

The anticipated decline in the participation rate is due to the aging of the population into their lower-participation years. In this analysis, participation rate is projected by age cohort. Most age groups will either see their participation rates rising or remaining steady through 2006 then stabilizing through to 2026 (see Figure 15).

Older female cohorts participation rates are projected to rise through to the end of the projection period, as higher-participation women age their way through the system.

Figure 15

Labour Force Characteristics, Halifax Regional Municipality, 2001-2026**Baseline Scenario**

<u>Males</u>	<u>2001</u>	<u>2006</u>	<u>2011</u>	<u>2016</u>	<u>2021</u>	<u>2026</u>
Participation Rate	<i>Percent</i>					
15-19	48.6	51.6	52.6	53.6	53.6	53.6
20-24	83.4	83.4	83.4	83.4	83.4	83.4
25-34	90.8	90.8	90.8	90.8	90.8	90.8
35-44	91.2	91.2	91.2	91.2	91.2	91.2
45-54	86.0	86.0	86.0	86.0	86.0	86.0
55-64	59.9	62.9	62.9	62.9	62.9	62.9
65+	10.8	12.8	12.8	12.8	12.8	12.8
Total	73.5	72.9	71.4	69.3	67.2	65.5
Labour Force	<i>Persons</i>					
15-19	5,630	6,477	6,461	6,070	6,126	6,344
20-24	10,530	10,364	11,230	11,072	10,409	10,745
25-34	23,435	23,891	24,347	25,241	26,237	25,817
35-44	28,615	27,146	24,844	25,401	26,013	27,254
45-54	22,280	24,873	27,372	26,070	24,049	24,803
55-64	9,335	13,186	15,784	17,647	19,429	18,587
65+	1,635	2,236	2,719	3,498	4,247	5,097
Total	101,460	108,175	112,756	114,999	116,510	118,647
<u>Females</u>						
Participation Rate	<i>Percent</i>					
15-19	53.5	54.5	54.5	54.5	54.5	54.5
20-24	83.5	83.5	83.5	83.5	83.5	83.5
25-34	80.2	82.2	84.2	85.2	85.2	85.2
35-44	80.7	82.7	84.7	86.7	88.7	88.7
45-54	75.0	77.0	79.0	81.0	83.0	85.0
55-64	39.7	43.7	45.7	47.7	49.7	51.7
65+	3.7	6.7	8.7	9.7	10.7	11.7
Total	63.1	63.7	63.7	62.8	61.5	60.5
Labour Force	<i>Persons</i>					
15-19	6,055	6,614	6,535	5,946	5,953	6,174
20-24	11,635	10,180	10,923	10,867	10,100	10,361
25-34	22,650	23,754	23,530	23,209	24,124	23,726
35-44	26,740	26,338	25,283	26,540	26,464	26,183
45-54	20,790	24,078	26,779	26,479	25,587	27,079
55-64	6,525	9,658	12,491	14,703	16,598	16,699
65+	735	1,454	2,163	3,017	4,076	5,341
Total	95,130	102,100	107,700	110,800	112,900	115,600
Total Both Sexes	196,590	210,275	220,456	225,799	229,410	234,247

Source: Clayton Research

Two cohorts are projected to experience a further modest rise in participation rates through to 2006. Thereafter, all participation rates are projected to remain constant. Issues considered include:

- The introduction of the "double cohort" of high school graduates in Ontario into the workforce during the 2001-2011 periods due to the

elimination of the last year of high school, will influence participation for the 15-19 and 20-24 cohorts to some extent all across the country – including Halifax.

- Higher participation in both the 15-19, 20-24 and the 55-64 cohorts will also occur as labour shortages occur. The economic response is impending labour shortages is higher wages, which, in turn attract more persons into the labour force. In addition, firms tend to retain their older employees longer, thus delaying retirement for some individuals, as labour conditions become tighter.

Overall, therefore, fairly reasonable assumptions are used regarding participation rates per age cohort. The net effect is that population in Halifax will have to rise by a total of about 82,000 persons (including the rise in working age population and related dependent aged persons) over the forecast period.

As an illustration of the effect of this demand on the flow of migration, Figure 14 above, also shows that if net migration were zero, then the population growth, governed only by the effects of births and deaths, would be insufficient in all periods to satisfy the population required to satisfy labour force demand.

In order to support the employment forecast within all ranges, therefore, it is expected that total net migration over the projection period will have to be about 60,000 persons. Details of these migration patterns are presented below.

3.5.3 Sensitivity of the Participation Scenario

Although prudent principles and assumptions have been employed in these projections determining a reasonable set of participation rates to apply to the population, the reality is that events could play out much differently over such a long time frame. In as much as the goal of this analysis is to determine projections of housing demand, the ultimate outcome is relatively sensitive to the participation rate assumption.

Some demographers have suggested that over the next two decades, Canadian's will begin responding to the emerging labour shortage by significantly increasing their participation in the labour force – particularly among older age groups. This notion suggests that fewer workers will retire at or around the age of 65. This type of scenario can have an effect on the overall size and composition of the population (as higher participation rates

militate against the needs for in-migration into the community) and, in turn, on the size and composition of housing demand.

If for example, the labour force participation for those persons over the age of 55 began to rise sharply through the forecast period, then the domestic population would be in a better position to address emerging labour demand, thus reducing the need for increased in-migration to support the anticipated job growth.

For example consider an alternative scenario with rising participation rates. Under this scenario, if the rates for persons aged 55-64 rose through the forecast period to the extent that they half closed the gap between this age group and the 45-54 group; and if at the same time participation rates of those aged 65+ also rose somewhat further than anticipated in the baseline scenario, then the participation rates by 2026 could be as illustrated in Figure 16.

Figure 16

Selected Participation Rates, Baseline and Test Scenario

	Male			Female		
	2001 *	2026 Baseline	2026 Test	2001 *	2026 Baseline	2026 Test
Total						
	<i>Percent</i>					
Ages 45-54	86	86	86	75	85	85
Ages 55-64	60	63	73	40	52	57
Ages 64+	11	13	15	4	12	14

* From Figure 15

Source: Clayton Research based on data from Statistics Canada

Under this scenario, the following impacts would be felt on the projections, holding all other critical inputs (such as the employment forecast) constant:

- Net in-migration over the period would be about 9,100 persons lower compensated over the period by increased domestic labour supply;
- Overall population growth would be 10,400 persons lower over the course of the 25 year period; and
- 4,000 fewer households would be formed over the course of the 25 year period.

3.5.4 Labour Force Model Under Alternate Growth Scenarios

Figure 17 and Figure 18 illustrate the analysis governed by the low and high alternative growth scenarios respectively:

- In the case of the low scenario, lower employment growth in Halifax would lead to lower labour force demands and a corresponding lower draw on in-migration as a source of population growth. It is of note that even under the low employment growth scenario, there remains a net positive need for migration in Halifax to satisfy labour force demands; and
- In the Case of the high scenario, higher employment growth in Halifax would lead to higher labour force demands and a correspondingly higher draw on in-migration as a source of population growth.

It is of note that all structural assumptions used in the labour force model such as participation rates, unemployment rates and inflow-outflow rates are held constant between the three scenarios.

Figure 17

Labour Force Needs Model, Halifax Regional Municipality, 2001-2026						
Low Growth Scenario						
Total	2001	2006	2011	2016	2021	2026
Employment (Persons)	190,482	196,100	201,400	205,500	208,600	210,600
Inflow/(outflow) Commuters	8,000	8,000	8,200	8,400	8,600	8,500
Employed Labour Force (Persons)	182,480	188,000	193,200	197,000	200,000	202,100
Unemployment Rate (%)	7.2	8.3	8.0	7.2	6.0	5.5
Labour Force (Persons)	196,590	205,000	210,000	212,300	212,800	213,900
Participation Rate (%)	68.1	68.0	67.0	65.3	63.4	61.9
Population						
15-84	288,810	301,500	313,200	325,100	335,500	345,800
0-14 and 85+	70,390	67,200	65,400	65,300	65,300	65,500
Total	359,200	368,800	378,600	390,400	400,800	411,300
Natural Increase (Births - Deaths)*		8,065	6,525	3,985	1,990	-130
Population due to Natural Alone**		367,265	375,325	382,585	392,390	400,670
Implied Net Migration*** Demand		1,520	3,335	7,810	8,415	10,550

* From Figure 13; **Previous Census year's population plus the natural increase over the period
*** from all sources

Source: Clayton Research

Figure 18

Labour Force Needs Model, Halifax Regional Municipality, 2001-2026
High Growth Scenario

Total	2001	2006	2011	2016	2021	2026
Employment (Persons)	190,482	206,000	221,200	232,900	243,700	253,800
Inflow/(outflow) Commuters	8,000	8,200	8,400	8,500	8,400	8,700
Employed Labour Force (Persons)	182,480	197,900	212,800	224,500	235,300	245,100
Unemployment Rate (%)	7.2	8.3	8.0	7.2	6.0	5.5
Labour Force (Persons)	196,590	215,600	231,300	241,900	250,300	259,400
Participation Rate (%)	68.1	68.3	67.8	66.6	65.2	64.1
Population						
			<i>Persons</i>			
15-84	288,810	315,800	341,200	363,100	383,700	404,700
0-14 and 85+	70,390	70,200	70,100	73,300	76,600	79,700
Total	359,200	386,000	411,400	436,400	460,300	484,400
Natural Increase (Births - Deaths)*		8,575	7,375	6,340	4,770	2,925
Population due to Natural Alone**		367,775	393,375	417,740	441,170	463,225
Implied Net Migration*** Demand		18,230	17,985	18,660	19,125	21,175

* From Figure 13; **Previous Census year's population plus the natural increase over the period
 *** from all sources

Source: Clayton Research

3.5.5 Net Immigration Projections 2001-2026

Figure 19 presents the projections for immigration to Halifax in the context of the projections for Nova Scotia and Canada.

In 2001 Canada admitted about 250,000 new immigrants (exceeding targets by 11 percent), up 40,000 from the average annual number of new immigrants to Canada in the 1996-2001 census period. Immigrant landings in Canada waned modestly in 2002 and 2003. Increased focus on security has been in part responsible for lower migration. However, in a policy statement issued in 2001, the Minister of Citizenship and Immigration declared that the long-term target for immigration levels in Canada will be 1 percent of the Canadian population. By 2026, this implies immigrant levels of over 400,000.

Of course there is a supply issue to also consider. Many years, Canada is unable to attract a sufficient number of immigrants to match its targeted planning range, and with the introduction of tougher eligibility criteria in 2002, insufficient supply could continue to be an issue.

In reality it is unlikely that the government's target will be reached. Immigration levels will most likely fall in Canada through the projection period to about 235,000 persons per year.

Immigration levels across Atlantic Canada have fluctuated in recent years between about 1.5 and 2.0 percent of total Canadian immigration. Atlantic Canada's share of Canadian immigration is presently soft (about 1.3 percent) but set to increase toward the 2 percent range in part influenced by potential immigrant resettlement programs.

Citizenship and Immigration Canada aims to improve efforts to promote immigrant settlements outside of the traditional centres of Vancouver, Toronto and Montreal. In 2003 the Department established The Atlantic Metropolis Centre, an immigration related research institute in Moncton and Halifax. Efforts such as these may help to promote immigrant settlements in Atlantic Canada in the years ahead as local labour force demand provide the requirement.

Immigrant settlements in Halifax will likely rise as a share of overall Atlantic Canada based on relative job creation prospects in Halifax relative to the remainder of the region in particular.

Figure 19

Immigration, Canada, Atlantic Canada and HRM

Baseline Scenario

Census Periods		Canada	Atlantic Canada	Halifax RM	Halifax RM as % Atlantic
		Average Annual Number of Persons			Percent
1986-1991	<i>a</i>	176,722	2,724	937	34
1991-1996	<i>a</i>	235,724	4,474	2,143	48
1996-2001	<i>a</i>	210,110	3,469	1,770	51
2001-2006	<i>f</i>	245,234	3,188	1,662	52
2006-2011	<i>f</i>	235,000	3,408	1,921	56
2011-2016	<i>f</i>	235,000	3,760	2,106	56
2016-2021	<i>f</i>	235,000	4,113	2,306	56
2021-2026	<i>f</i>	235,000	4,465	2,756	62

a: Final data

f: Forecasts by Clayton Research

Source: Clayton Research based on data from Statistics Canada

The projection of emigrants from Halifax follows a similar methodology (see Figure 20). All told, emigration from Halifax is expected to become a marginally smaller share of overall emigration from Atlantic Canada, and will remain around the 400 mark throughout the forecast period.

In terms of net migration, the total number of net international migrants to Halifax will decline modestly through to 2016 then increase thereafter in response to labour force demand and other factors.

Figure 20

Emigration, Canada, Atlantic Canada and HRM

Baseline Scenario

Census Periods		Canada	Atlantic Canada	Halifax RM	Halifax RM as % of Atlantic
		Average Annual Number of Persons			Percent
1986-1991	<i>a</i>	42,320	1,591	205	12.9
1991-1996	<i>a</i>	45,782	2,096	280	13.4
1996-2001	<i>a</i>	59,068	1,558	619	39.7
2001-2006	<i>f</i>	71,900	2,045	406	19.9
2006-2011	<i>f</i>	75,900	2,161	406	18.8
2011-2016	<i>f</i>	77,900	2,216	406	18.3
2016-2021	<i>f</i>	79,900	2,273	406	17.9
2021-2026	<i>f</i>	81,900	2,330	406	17.4

a: Final data

f: Forecasts by Clayton Research

Source: Clayton Research based on data from Statistics Canada

3.5.6 Net Interprovincial Migration Projections 2001-2026

General trends in interprovincial migration are driven by varying economic conditions across the country. In Nova Scotia, net out-migration has been the norm for the past 15 years or so. This is likely due to persons seeking other job opportunities than what might be available in the province.

This trend has generally carried over into Halifax, except for during the 1986-1991 and the most recent period. In 1991-1996, about 400 persons per year on net left Halifax for other locations outside of Nova Scotia. In the 1996-2001 period, net interprovincial migration was only marginally negative, implying that there were roughly similar numbers of people leaving and arriving each year.

Net interprovincial migration will likely remain in positive territory through the forecast period for Halifax, contributing between about 50 to 200 persons per year to the local population (see Figure 21).

Figure 21

Net Interprovincial Migration, Nova Scotia and HRM

Census Periods	Avg. Annual Number of Persons		
	Atlantic Canada	Nova Scotia	Halifax RM
1986-1991	a (3,517)	(267)	37
1991-1996	a (6,212)	(1,094)	(435)
1996-2001	e (9,334)	(1,273)	(15)
2001-2006	f (6,158)	(424)	50
2006-2011	f (6,225)	(450)	100
2011-2016	f (5,089)	(8)	120
2016-2021	f (4,097)	384	150
2021-2026	f (3,698)	542	200

a: Final data

e: Final data and preliminary post-censal estimates

Data not adjusted for error of closure

f: Forecasts by Clayton Research

Source: Clayton Research based on data from Statistics Canada

3.5.7 Net Intraprovincial Migration Projections 2001-2026

Trends in intraprovincial migration are driven, in part, by three factors:

- Relative economic conditions across Nova Scotia;
- Lifestyle considerations; and
- Housing affordability.

In the 1991-1996 period, Halifax saw an average of 112 persons out migrate to other areas of Nova Scotia. In some cases this net out-migration was clearly motivated by the poor economic conditions vis-à-vis the rest of Nova Scotia and in others due to affordability vis-à-vis the immediately surrounding territory.

However, between 1996-2001, Halifax saw significant net in-migration (a gain of about 465 persons per year). This was partially related to the faster than Nova Scotia-wide job creation throughout the late 1990s.

Intraprovincial migration is the component which is most affected by shifts in labour-force demand related migration. There will be a growing need for in migrants to satisfy the employment demands in Halifax. The burden of these needs will be born mostly by intraprovincial migration. Thus, a shift to a modest net in-migration situation is projected for Halifax over the forecast period (see Figure 22).

Figure 22

Net Intraprovincial Migration, Halifax Regional Municipality, 1986-2026



(a) Final data; (f) Forecasts by Clayton Research
Source: Clayton Research based on data from Statistics Canada

3.6 POPULATION PROJECTIONS

3.6.1 Population Projections, Halifax Regional Municipality, 1996-2026

Projections of total population by age for the three different growth scenarios are presented in Figure 23, Figure 24 and Figure 25. The historical population is reported from the Census of Canada, and projected population is presented on a Census population basis. No adjustments are made to account for potential Census undercount.

Figure 23

Population by Age Group, Halifax Regional Municipality, 1996-2026**Baseline Scenario**

<u>Age Groups</u>	<u>Census</u>		<u>Projections</u>				
	<u>1996</u>	<u>2001</u>	<u>2006</u>	<u>2011</u>	<u>2016</u>	<u>2021</u>	<u>2026</u>
	<i>Number of Persons</i>						
0-4	22,455	19,935	19,585	19,690	19,665	19,470	19,380
5-9	23,700	22,370	20,235	19,870	20,180	20,210	20,100
10-14	22,115	23,695	23,180	21,060	20,955	21,390	21,645
15-19	21,135	22,910	24,700	24,280	22,245	22,360	23,170
20-24	25,605	26,565	24,625	26,550	26,295	24,580	25,295
25-29	27,990	26,445	27,750	25,920	27,950	27,945	26,670
30-34	33,175	27,600	27,455	28,830	27,085	29,260	29,605
35-39	32,015	32,860	28,345	28,260	29,690	28,070	30,520
40-44	28,110	31,650	33,265	28,825	28,775	30,285	28,880
45-49	25,735	28,070	31,945	33,595	29,215	29,250	30,940
50-54	19,120	25,530	28,220	32,100	33,760	29,515	29,730
55-59	14,220	18,345	25,180	27,865	31,680	33,370	29,265
60-64	12,390	13,680	17,890	24,565	27,205	30,920	32,590
65-69	10,670	11,845	13,205	17,250	23,660	26,215	29,860
70-74	9,405	9,715	11,030	12,330	16,095	22,065	24,520
75-79	7,075	8,060	8,485	9,660	10,840	14,155	19,475
80-84	4,545	5,535	6,530	6,915	7,890	8,890	11,670
85+	3,515	4,385	5,695	7,105	8,070	9,240	10,690
Total	342,975	359,195	377,320	394,685	411,250	427,195	444,005

Totals may not add due to rounding

Source: Clayton Research; Historical: Statistics Canada

Figure 24

Population by Age Group, Halifax Regional Municipality, 1996-2026
Low Growth Scenario

Age Groups	Census		Projections				
	1996	2001	2006	2011	2016	2021	2026
	<i>Number of Persons</i>						
0-4	22,455	19,935	19,225	19,015	18,130	17,745	17,490
5-9	23,700	22,370	19,960	19,305	19,340	18,490	18,165
10-14	22,115	23,695	22,485	20,220	20,040	20,135	19,455
15-19	21,135	22,910	23,835	22,825	21,020	20,960	21,335
20-24	25,605	26,565	23,135	24,395	24,185	22,550	22,930
25-29	27,990	26,445	26,710	23,525	25,335	25,260	23,950
30-34	33,175	27,600	26,540	27,010	24,300	26,185	26,365
35-39	32,015	32,860	27,615	26,720	27,560	24,925	27,005
40-44	28,110	31,650	32,755	27,660	27,025	27,910	25,440
45-49	25,735	28,070	31,485	32,695	27,865	27,285	28,305
50-54	19,120	25,530	27,820	31,300	32,700	27,980	27,535
55-59	14,220	18,345	25,110	27,410	30,875	32,300	27,705
60-64	12,390	13,680	17,820	24,440	26,735	30,125	31,545
65-69	10,670	11,845	13,010	17,015	23,455	25,690	29,015
70-74	9,405	9,715	10,900	12,040	15,830	21,835	23,990
75-79	7,075	8,060	8,385	9,460	10,545	13,895	19,250
80-84	4,545	5,535	6,415	6,735	7,685	8,620	11,425
85+	3,515	4,385	5,575	6,870	7,800	8,955	10,350
Total	342,975	359,195	368,780	378,640	390,435	400,840	411,260

Totals may not add due to rounding

Source: Clayton Research; Historical: Statistics Canada

Figure 25

Population by Age Group, Halifax Regional Municipality, 1996-2026
High Growth Scenario

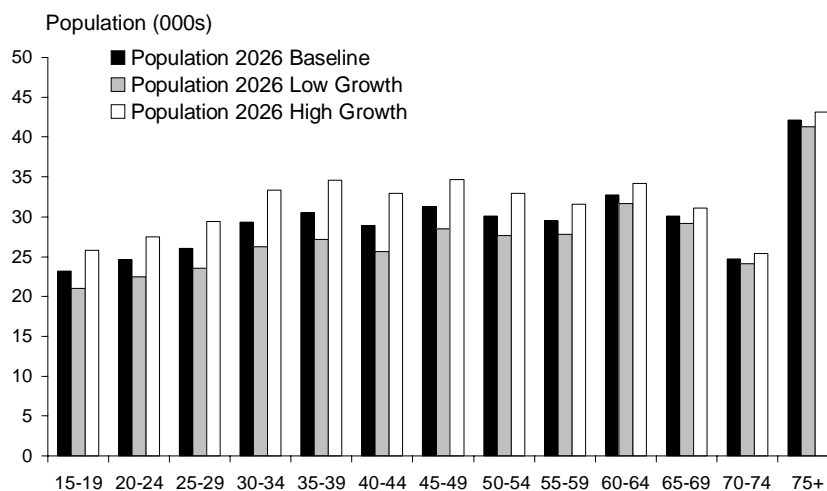
Age Groups	Census		Projections				
	1996	2001	2006	2011	2016	2021	2026
	<i>Number of Persons</i>						
0-4	22,455	19,935	19,950	20,385	21,455	21,680	21,820
5-9	23,700	22,370	20,510	20,455	21,195	22,285	22,540
10-14	22,115	23,695	23,885	21,945	22,225	23,010	24,230
15-19	21,135	22,910	25,575	25,795	23,875	24,335	25,430
20-24	25,605	26,565	26,140	28,810	29,100	27,400	28,325
25-29	27,990	26,445	28,805	28,405	31,105	31,585	30,240
30-34	33,175	27,600	28,385	30,725	30,335	33,100	33,850
35-39	32,015	32,860	29,085	29,860	32,185	31,855	34,835
40-44	28,110	31,650	33,785	30,035	30,785	33,145	32,985
45-49	25,735	28,070	32,410	34,530	30,790	31,585	34,090
50-54	19,120	25,530	28,625	32,930	35,010	31,365	32,310
55-59	14,220	18,345	25,255	28,335	32,540	34,645	31,140
60-64	12,390	13,680	17,960	24,700	27,705	31,770	33,840
65-69	10,670	11,845	13,405	17,490	23,940	26,810	30,760
70-74	9,405	9,715	11,165	12,635	16,425	22,390	25,115
75-79	7,075	8,060	8,585	9,865	11,175	14,480	19,785
80-84	4,545	5,535	6,650	7,105	8,145	9,220	11,970
85+	3,515	4,385	5,820	7,350	8,385	9,595	11,105
Total	342,975	359,195	386,000	411,365	436,360	460,260	484,365

Totals may not add due to rounding

Source: Clayton Research; Historical: Statistics Canada

Figure 26

Population, Halifax Regional Municipality
Three Scenarios, 2026



Source: Clayton Research

Figure 26 illustrates the projected 2026 population for HRM in histogram format. Of note:

- Under all three scenarios, persons aged 75+ are projected to become the largest cohort;
- There is relatively little variation between the three scenarios with respect to the projected size of the cohorts aged 60+, as these groups are affected by net migration to a lesser extent than among certain younger cohorts;
- The largest variation between the baseline scenario and the alternate scenarios is found among the age 30-44 cohorts – which are more prominently affected by variations in the migration scenario; and
- Modest variations between the baseline and alternative scenarios are also evident among younger and youth cohorts (below age 30) and in older working-age adult cohorts (age 45-59).

3.6.2 Population Growth by Age Cohort

Figure 27 illustrates the recent and projected population growth by broadly defined age cohorts, per five year period through to 2026.

In all three scenarios, the effects of the aging of the population can clearly be seen through the pattern of increased relative and absolute growth among the older cohorts as the projection period progresses. In the baseline scenario, for example, persons aged 65 and over represent about 30 percent of growth in the current period (2001-2006) rising to nearly 95% of growth by the 2021-2026 period.

In the slow growth scenario, the effects of the aging population are even more acute as there is less of an offset provided by net in-migration of younger persons. By contrast, in the faster growth scenario, the attraction of an increased number of younger in-migrants provides a modest offset to the effects of the aging domestic population.

Figure 27

Population Growth by Age Group, Halifax Regional Municipality, 1996-2026

	Census	Projections				
	2001	2006	2011	2016	2021	2026
Baseline Scenario						
<i>Number of Persons</i>						
0-14	(2,270)	(3,000)	(2,380)	180	270	55
15-29	1,190	1,155	(325)	(260)	(1,605)	250
30-49	1,145	830	(1,500)	(4,745)	2,100	3,080
50-64	11,825	13,735	13,240	8,115	1,160	(2,220)
65+	4,330	5,405	8,315	13,295	14,010	15,650
Total	16,220	18,125	17,365	16,565	15,945	16,810
Low Growth Scenario						
0-14	(2,270)	(4,330)	(3,130)	(1,030)	(1,140)	(1,260)
15-29	1,190	(2,240)	(2,935)	(205)	(1,770)	(555)
30-49	1,145	(1,785)	(4,310)	(7,335)	(445)	810
50-64	11,825	13,195	12,400	7,160	95	(3,620)
65+	4,330	4,745	7,835	13,195	13,680	15,035
Total	16,220	9,585	9,860	11,795	10,405	10,420
High Growth Scenario						
0-14	(2,270)	(1,655)	(1,560)	2,090	2,100	1,615
15-29	1,190	4,600	2,490	1,070	(760)	675
30-49	1,145	3,485	1,485	(1,055)	5,590	6,075
50-64	11,825	14,285	14,125	9,290	2,525	(490)
65+	4,330	6,085	8,820	13,625	14,425	16,240
Total	16,220	26,805	25,365	24,995	23,900	24,105
Baseline Scenario						
<i>Percent Distribution</i>						
0-14	(14.0)	(16.6)	(13.7)	1.1	1.7	0.3
15-29	7.3	6.4	(1.9)	(1.6)	(10.1)	1.5
30-49	7.1	4.6	(8.6)	(28.6)	13.2	18.3
50-64	72.9	75.8	76.2	49.0	7.3	(13.2)
65+	26.7	29.8	47.9	80.3	87.9	93.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Low Growth Scenario						
0-14	(14.0)	(45.2)	(31.7)	(8.7)	(11.0)	(12.1)
15-29	7.3	(23.4)	(29.8)	(1.7)	(17.0)	(5.3)
30-49	7.1	(18.6)	(43.7)	(62.2)	(4.3)	7.8
50-64	72.9	137.7	125.8	60.7	0.9	(34.7)
65+	26.7	49.5	79.5	111.9	131.5	144.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
High Growth Scenario						
0-14	(14.0)	(6.2)	(6.2)	8.4	8.8	6.7
15-29	7.3	17.2	9.8	4.3	(3.2)	2.8
30-49	7.1	13.0	5.9	(4.2)	23.4	25.2
50-64	72.9	53.3	55.7	37.2	10.6	(2.0)
65+	26.7	22.7	34.8	54.5	60.4	67.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Totals may not add due to rounding

Source: Clayton Research; Historical: Statistics Canada

4 HOUSING NEEDS

This chapter presents projections for housing needs based on the Clayton Research housing demand model for Halifax Regional Municipality.

4.1 METHODOLOGY

The PHD model developed and maintained by Canada Mortgage and Housing Corp. was employed to generate housing projections of HRM in this study. This model is based in the first instance, on the population projections prepared in the previous section. Age-specific propensities are used to project the number of family and non-family households and are applied to obtain projections of non-family and total family households by age group. The family projections are then disaggregated further into couples with children at home, couples without children at home, lone-parent and multi-family households.

These detailed family type projections are then used to help project housing demand by dwelling type in four broad categories – single detached, apartment, mobile and all other (principally semi-detached and row units) based on a relationship between family type and dwelling type. From a planning perspective, an estimate of potential development needs via three density categories is preferred. Clayton Research has imputed from the results of the PHD model, therefore, housing demand by low density (single detached and semi detached), medium density (row housing) and high density (apartments).

Finally, incremental housing needs are assessed based on the resulting underlying household demand, and an assessment of supply factors which might also influence the mix, quantity and location of new housing likely to be provided over the projection period.

4.2 HEADSHIP RATES

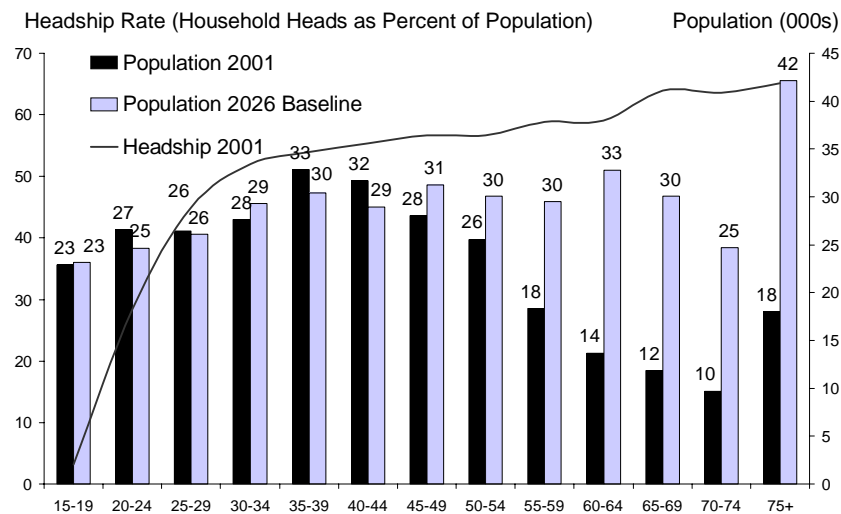
Headship rates have the largest impact on the projections of household needs. Headship rates measure the proportion of the population in a specific age-cohort which is composed of household heads⁸. In general, headship rates are relatively low among the 15-19 year old cohort and then rise

⁸ Referred to as "Household Maintainers" in the Census of Canada

rapidly through the 20s and 30s. Historically headship rates continue to rise, but at a more modest rate through all age cohorts through to the 75+ group.

Figure 28

Headship Rates and Population, Halifax Regional Municipality, 2001-2026



Source: Clayton Research based on data from Statistics Canada

Figure 28 illustrates the headship rates for the HRM by age cohort for 2001. In general, headship rates rose across most age groups by an average of 2.9 percent from 1996 – a change most likely motivated by the relatively buoyant economic conditions in Halifax through the late 1990s. This study employs the following assumptions regarding headship rates through the forecast period:

- In the period 2001-2006, average household growth is estimated to be some 2,800 households per year – based on an analysis of housing starts and completions to date and new development applications. This baseline estimate assumes that rental vacancy rates and inventories of completed but unoccupied dwellings will remain steady between 2003 and 2006. This magnitude of household growth, given population growth estimates through this first period implies that headship rates are likely rising modestly by about 1.1 percent across all age groups through this period – which is about half the rate of increase in headship rates observed over the 1996-2001 period.

- After 2006, it is assumed that any cyclical rise in headship rates will have worked its way through the system, and thereafter this study holds these rates constant for each cohort through to 2026.

Also illustrated on the figure is the population by age cohort in 2001 (actual) and 2026. The baseline population projection anticipates that population levels will rise over the period for all cohorts 45 years of age or older, and signals a mixture of net gains or losses of population through many of the cohorts up to 44 years old.

As a result household growth in Halifax over the projection period is both a function of overall population growth, and the “leveraged growth” from the aging of the population⁹. That is, the pace of household formation will be boosted as the population ages into its higher household formation years.

4.3 HOUSEHOLD GROWTH BY STRUCTURAL TYPE

By observing historical propensities of households toward various structure types and making assumptions about these changing assumptions, the PHD model also yields projections of potential household growth by structure type.

Housing structural type is broken down here into three categories: single and semi-detached (low density), row (medium density), and apartments and other (high density). Household growth is then projected over the period 2001-2026. This projection is presented in Figure 29 and Figure 30. Observations include:

- The demographic shifts anticipated in the population profile, along with factors such as emerging urban intensification all suggest a gradual shift toward medium and high density housing demand in HRM over the next two and a half decades.

⁹ As the population ages, headship rates tend to rise, as illustrated in Figure 28. Housing demand is therefore boosted by an aging population over and above any influence of population growth.

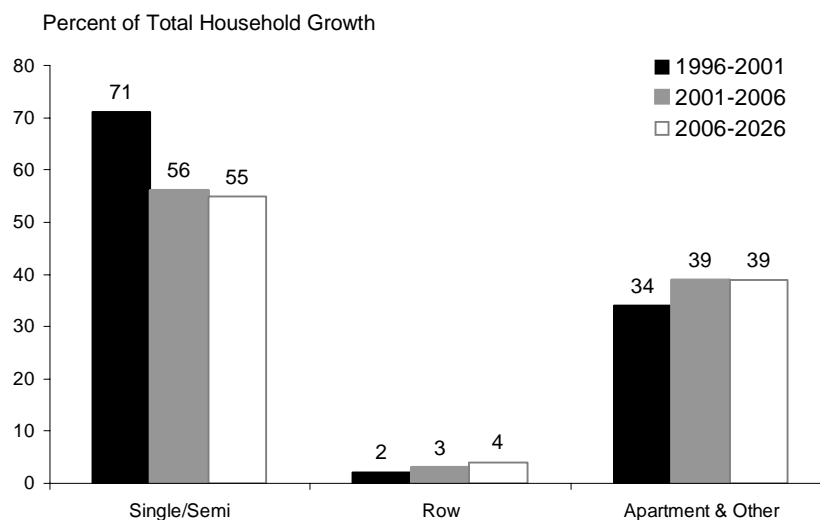
Figure 29

Annual Household Growth, Halifax Regional Municipality, 2001-2026						
Baseline Scenario						
	Single and Semis	Row	Apartments and Other	Mobile	Total	Total Ex. Mobile
<i>Average Annual Occupied Dwelling Units</i>						
<u>Census Periods</u>						
1996-2001	1,832	45	874	(174)	2,577	2,751
2001-2006	1,560	70	1,100	65	2,795	2,730
2006-2011	1,450	65	845	55	2,415	2,360
2011-2016	1,320	90	840	45	2,295	2,250
2016-2021	1,135	105	815	45	2,100	2,055
2021-2026	1,045	115	845	40	2,045	2,005
<u>2001-2026</u>						
Avg. Annual	1,302	89	889	50	2,330	2,280
Total	32,550	2,225	22,225	1,250	58,250	57,000
<i>Percent Distribution</i>						
<u>Census Periods</u>						
1996-2001	71	2	34	-7	100	n/a
2001-2006	56	3	39	2	100	n/a
2006-2011	60	3	35	2	100	n/a
2011-2016	58	4	37	2	100	n/a
2016-2021	54	5	39	2	100	n/a
2021-2026	51	6	41	2	100	n/a
<u>2001-2026</u>	56	4	38	2	100	n/a

Source: Clayton Research

Figure 30

Household Growth, by Structural Type, HRM, 1996-2026



Note: Mobile not shown

Source: Clayton Research based on data from Statistics Canada

- Low density housing (single and semi detached dwellings) will continue to account for the majority of new housing in Halifax,

although this proportion will decline modestly through the projection period.

- Medium density housing has traditionally accounted for a relatively small proportion of overall household growth in Halifax. There is some support to suggest that among ground-oriented housing, medium density row development will capture modestly greater shares through the forecast period as intensification takes place in core zones, and as demand for lifestyle communities increases with the aging of the population. Medium density household demand will likely rise from about 2 to 5 percent of total household demand through the forecast period.
- About one-third (34 percent) of household growth in 1996-2001 was among apartments. This proportion appears to be on the rise in the present period, based on the number of apartments recently started, under construction or recently completed – and assuming that this new supply will be occupied in an orderly manner¹⁰. All told, therefore, apartment dwellings are accounting for about 41 percent of growth in the entire period 1996-2006. Over the remainder of the forecast period, the proportion of household growth destined for apartments is likely to rise modestly due both to the aging of the population and selected intensification efforts in the core.

It is of note that shorter-term cyclical supply and demand factors have influenced the distribution of household growth in recent years over and above the longer-term trends revealed in the modelling. For example, the percentage of household growth accounted for by apartment dwellings was 27 percent in 1996-2001 and will likely end out the 2001-2006 period averaging 42 percent. A change in household composition of this magnitude within one decade clearly is not representative of a longer-term trend. Rather it is likely that supply constraints in the earlier part of the decade are being compensated for in the latter half of the decade. In terms of the longer term trend, therefore, the relevant benchmark would be the average over the decade, where apartments are likely to account for some 35 percent of demand through 1996-2006, then rise to about 41 percent over the next two decades.

¹⁰ That is, assuming that apartment units are occupied upon completion.

4.4 HOUSEHOLD GROWTH – ALTERNATIVE SCENARIOS

Two alternative scenarios of economic and population growth have been presented in this study – a higher and a lower growth scenario. Potential household demand and ultimate household growth will be influenced by the various population scenarios.

The PHD model was employed in order to generate estimates of total potential housing demand under the two alternative scenarios, and to provide guidance on the distribution of this demand by housing structure type. Several demographic and urban growth factors were also taken into consideration in assessing the likely influence of the alternate population scenarios on potential housing demand by structure type, including:

- Demand for low density structures, particularly single detached homes is most heavily influenced by homeowners between the ages of 35 and 59. These cohorts are also the most dramatically influenced by the three scenarios (recall Figure 24). In the low growth scenario, population in some of these groups is actually set to decline over the forecast period, and in the high growth scenario it is expected to expand among all these groups. This differential will have an influence on the potential demand for single-detached homes in particular. Demand for single detached relative to other types will be stronger in the high growth scenario and weaker in the low growth scenario.
- Conversely, propensities toward high density housing, particularly apartments, will be generally lower in the high-growth scenario and generally higher in the low growth scenario. Historically, both rental and ownership apartment demand rises relative to other housing types among householders aged 60+. More of the population growth is concentrated among these age groups in the low growth scenario than the other scenarios, and so apartment demand is expected to get a boost in the low growth scenario relative to other structure types.
- Propensities toward medium density development will also be relatively stronger in the low growth scenario and weaker in the high growth scenario. Niche lifestyle communities primarily appealing to householders over the age of 55, whose growth is relatively strong in the low-growth scenario, will be driving this small but important segment.

Figure 31

Annual Household Growth, Halifax Regional Municipality, 2001-2026**High Growth Scenario**

Census Periods	Single and	Row	Apartments	Mobile	Total	Total
	Semis		and Other			Ex. Mobile
<i>Average Annual Occupied Dwelling Units</i>						
1996-2001	1,832	45	874	(174)	2,577	2,751
2001-2006	1,950	80	1,340	80	3,450	3,370
2006-2011	1,880	75	1,065	70	3,090	3,020
2011-2016	1,730	115	1,075	60	2,980	2,920
2016-2021	1,505	135	1,050	60	2,750	2,690
2021-2026	1,380	145	1,090	50	2,665	2,615
2001-2026						
Avg. Annual	1,689	110	1,124	64	2,987	2,923
Total	42,225	2,750	28,100	1,600	74,675	73,075

Census Periods	<i>Percent Distribution</i>					
1996-2001	71	2	34	-7	100	n/a
2001-2006	57	2	39	2	100	n/a
2006-2011	61	2	34	2	100	n/a
2011-2016	58	4	36	2	100	n/a
2016-2021	55	5	38	2	100	n/a
2021-2026	52	5	41	2	100	n/a
2001-2026	57	4	38	2	100	n/a

Annual Household Growth, Halifax Regional Municipality, 2001-2026**Low Growth Scenario**

Census Periods	Single and	Row	Apartments	Mobile	Total	Total
	Semis		and Other			Ex. Mobile
<i>Average Annual Occupied Dwelling Units</i>						
1996-2001	1,832	45	874	(174)	2,577	2,751
2001-2006	1,170	65	870	50	2,155	2,105
2006-2011	1,035	55	640	40	1,770	1,730
2011-2016	1,050	85	720	35	1,890	1,855
2016-2021	855	90	665	35	1,645	1,610
2021-2026	740	95	660	25	1,520	1,495
2001-2026						
Avg. Annual	970	78	711	37	1,796	1,759
Total	24,250	1,950	17,775	925	44,900	43,975

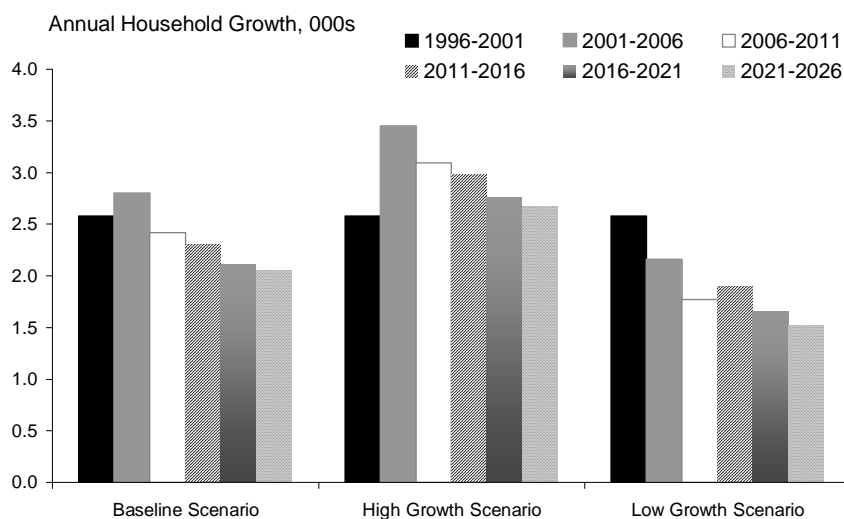
Census Periods	<i>Percent Distribution</i>					
1996-2001	71	2	34	-7	100	n/a
2001-2006	54	3	40	2	100	n/a
2006-2011	58	3	36	2	100	n/a
2011-2016	56	4	38	2	100	n/a
2016-2021	52	5	40	2	100	n/a
2021-2026	49	6	43	2	100	n/a
2001-2031	54	4	40	2	100	n/a

Source: Clayton Research

Figure 32 illustrates the effect of the alternative growth scenarios on total potential household demand through the forecast period:

Figure 32

Potential Household Demand, HRM, 1996-2026



Source: Clayton Research based on data from Statistics Canada

4.4.1 Sensitivity of the Headship Rate Assumption

Although prudent principles and assumptions have been employed in these projections determining a reasonable set of headship rates and housing type propensities to apply to the population, the reality is that events could play out much differently over such a long time frame. In as much as the goal of this analysis is to determine projections of housing demand, the ultimate outcome is relatively sensitive to the headship rate assumption.

The assumptions employed in this study include a modest 1.1 percent rise in headship rates in the current period – which is already in evidence based on recent construction patterns. Thereafter headship rates are held constant. The underlying thinking here is that headship rates are rising in the present period in response to certain cyclical stimuli, such as favourable affordability based on low interest rates, and that in the long term headship rates will remain relatively stable.

Alternatively, it might be that the present period is the beginning of a long trend shift in headship rates. If for example, headship rates in Halifax continue to rise at the rate of 1.1 percent per period through to 2026, then

the following impacts would be felt on the projections: holding all other critical inputs constant:

- 11,000 more households would be formed over the course of the 25 year period;
- The composition of this growth would be very similar to the baseline scenario in terms of structure type and tenure.

4.5 APARTMENT GROWTH BY TENURE

The projections of potential household demand from the PHD model also yields estimates of demand by tenure. This section specifically focuses on the projections of apartment demand by tenure for the baseline scenario and each of the alternate scenarios.

Figure 33 illustrates the breakdown of total potential apartment demand based by tenure for HRM through the forecast period. According to data from the 2001 Census approximately 17 percent of occupied apartment units were owner-occupied and the remaining 83 percent rental. Based on apartment housing starts and completions since 2001, there is clearly a marked shift toward ownership apartments underway in Halifax. Between 2001 and 2003, 33 percent of apartment completions in Halifax were intended for ownership; over 40 percent in 2003 alone. The implication, if this new product becomes occupied in an orderly fashion, is that ownership will compose about 42 percent of apartment household growth over the 2001-2006 period – well above historical trends.

These trends are supportive of an environment of increasing shares of ownership among new apartment households going forward through the forecast period, which is a similar trend identified in many other Canadian cities in recent years.

Figure 33 Apartment Demand by Tenure, Halifax Regional Municipality, 2001-2026

Census Periods	Baseline Scenario			High Growth Scenario			Low Growth Scenario		
	Owner	Renter	Total	Owner	Renter	Total	Owner	Renter	Total
<i>Occupied Dwelling Units, Average Annual Growth</i>									
2001-2006	410	700	1,105	450	895	1,345	370	505	875
2006-2011	250	595	850	250	820	1,070	235	415	645
2011-2016	295	550	845	300	780	1,080	285	440	725
2016-2021	340	480	820	385	665	1,055	300	370	670
2021-2026	400	450	850	430	665	1,095	340	325	665
2001-2026									
Average Annual	339	555	894	363	765	1,129	306	411	716
Total	8,475	13,875	22,350	9,075	19,125	28,225	7,650	10,275	17,900
<i>Percent Distribution</i>									
2001-2006	37	63	100	33	67	100	42	58	100
2006-2011	29	70	100	23	77	100	36	64	100
2011-2016	35	65	100	28	72	100	39	61	100
2016-2021	41	59	100	36	63	100	45	55	100
2021-2026	47	53	100	39	61	100	51	49	100
2001-2026									
Total	38	62	100	32	68	100	43	57	100

Note: Totals may not add due to rounding

Source: Clayton Research

Therefore, under all scenarios, it is expected that the focus of apartment household growth will increasingly shift toward ownership, in comparison to the present stock.

That longer-term trend notwithstanding, it is likely that the elevated level of ownership apartment construction activity in the past several years is not truly reflective of the magnitude of this development. There are likely cyclical factors which are presently elevating ownership apartment demand in excess of the long-term trend, such as increased ownership affordability and some released pent up demand from the 1990s.

In that regard, ownership apartment demand will likely subside somewhat relative to rental demand in the 2006-2011 period, then gradually increase thereafter based on the longer-term trend analysis.

4.5.1 Alternative Scenarios

The tenure composition of apartment demand amongst the alternative scenarios is also illustrated in Figure 33. As with the discussion around potential household demand by structure type, the potential demand by tenure is also sensitive to the composition of population growth.

From a demographic perspective, there are two key groups composing apartment demand, younger householders (under the age of 35) and older householders (over 55). But the tenure composition is split between these groups, with the younger apartment dwellers more likely to be renters, and the older householders more likely to be trending toward ownership.

Thus the major impacts of the two alternative scenarios on tenure include:

- In the higher growth scenario, population growth through the forecast period is skewed toward younger ages, due to the impact of higher migration rates. It is expected, therefore that the trend toward higher ownership apartments relative to all apartment demand will be somewhat less pronounced under the high growth scenario.
- Conversely, in the low growth scenario, the expected skew toward an older population will provide a small boost to the ownership apartment trend in relative terms.

4.6 HOUSING CONSTRUCTION PROJECTIONS

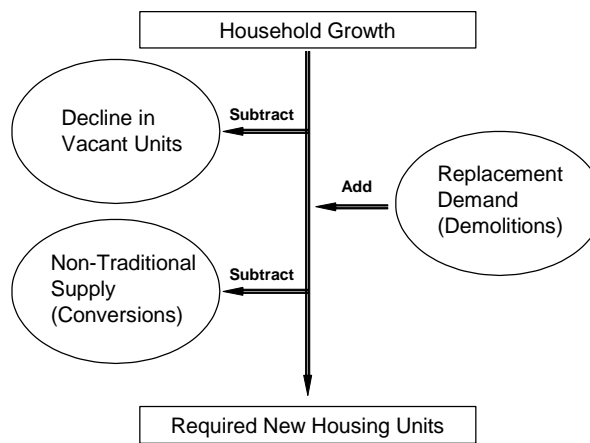
There is a relationship between household demand and the number of new units of housing supply which are required. Household growth can be satisfied by non-traditional forms of supply (such as conversions from non-residential uses, or from secondary suites) and from a decline in the number of vacant units. In this regard, it is possible for new construction to be lower than household growth in certain periods if there is conversion activity, and/or if vacancy rates decline.

On the other hand, there are always losses from the housing stock through formal demolitions, fires, or de-conversions (conversions to non-residential uses, or removal of secondary suites from single-family homes). In this regard, it is possible for new construction to be higher than household growth.

In the long run, vacancy rates tend to be relatively stable, and conversions and de-conversions to balance out. Thus, in general new housing construction is marginally higher than household growth to account for the replacement demand.

Figure 34

Components of New Housing Unit Demand



Source: Clayton Research

In Halifax, new construction fell well below household growth during the 1996-2001 period – in large part because this period witnessed a marked decline in the vacancy rate¹¹. In the current period, 2001-2006 there is likely to be another modest negative gap between household growth and new construction, as there have been further declines in the vacancy rate during the 2001-2003 period. After 2006, changes in vacancy and other factors are likely to balance out, and the relationship between household growth and new construction will likely revert to a modest positive gap due to the influence of replacement demand (Figure 35).

¹¹ The decline in the rental vacancy rate during the census period from an estimated 8.2% in the spring of 1996 to 3.2% in the spring of 2001 accommodated 2,500 new households – 20% of total household growth during the period. Spring vacancy rates are estimated as the average value of the two adjacent fall vacancy rates as reported by CMHC in Halifax Rental Market Report.

Figure 35

Housing Demand and Supply, HRM, 1996-2026**Baseline Scenario**

	Annual Household Growth*	Annual Housing Completions	Difference
Actual	Dwellings	Units	
1996-2001	2,751	2,121	(630)
Projections			
2001-2006	2,730	2,680	(50)
2006-2011	2,360	2,460	100
2011-2016	2,250	2,350	100
2016-2021	2,055	2,155	100
2021-2026	2,005	2,105	100
2001-2026			
Avg. Annual	2,280	2,350	70
Total	57,000	58,750	1,750

* Excluding mobile

Source: Clayton Research based on data from Statistics Canada and CMHC

In the high growth scenario (see Figure 36), there would likely be an even wider negative gap in the current period, due to the strong household growth relative to starts and completions undertaken to date. After that, the difference between household growth and completions is expected to come back into positive territory. Through the remainder of the forecast period, friction in the growth and development process under a high-growth scenario would likely lead to a marginally broader positive gap developing over time between construction and household growth.

By contrast, in the low growth scenario, the present period (2001-2006) would likely evolve into a positive gap, based on relatively weak underlying growth relative to current levels of construction. This would partially correct itself in the following period, and thereafter a very modest positive gap would persist.

Figure 36

Housing Demand and Supply, HRM, 1996-2026
High Growth Scenario

	Annual Household Growth*	Annual Housing Completions	Difference
Actual	Dwellings	Units	
1996-2001	2,751	2,121	(630)
Projections			
2001-2006	3,370	2,870	(500)
2006-2011	3,020	3,070	50
2011-2016	2,920	3,070	150
2016-2021	2,690	2,890	200
2021-2026	2,615	2,865	250
2001-2026			
Avg. Annual	2,920	2,950	30
Total	73,000	73,750	750

Housing Demand and Supply, HRM, 1996-2026
Low Growth Scenario

	Annual Household Growth*	Annual Housing Completions	Difference
Actual	Dwellings	Units	
1996-2001	2,751	2,121	(630)
Projections			
2001-2006	2,105	2,500	395
2006-2011	1,730	1,680	(50)
2011-2016	1,855	1,905	50
2016-2021	1,610	1,660	50
2021-2026	1,495	1,545	50
2001-2026			
Avg. Annual	1,760	1,860	100
Total	44,000	46,500	2,500

* Excluding mobile

Source: Clayton Research based on data from Statistics Canada and CMHC

4.6.1 Construction projections by type

Construction projections by type are presented in Figure 37 and Figure 38.

Construction projections by type are based on household growth by type and assumptions about the distribution of the construction gap among different structure types. By and large, a majority of the on-going replacement demand that drives the long-term expected positive gap in new home construction (vs. household growth) will take place among single family units, which make up a majority of the existing and aging housing stock in Halifax. In addition, a modest amount of the gap will emerge

among apartments, due primarily to the vacancy dynamics as the size of the apartment stock grows (the number of vacant units will expand over time under a constant vacancy rate scenario as the size of the apartment stock expands).

Figure 37

Annual Housing Completions, HRM, 1996-2026
Baseline Scenario

	Single and Semis	Row	Apartments and Other	Total
<i>Annual Average Units</i>				
<u>Census Periods</u>				
1996-2001	1,596	44	480	2,121
2001-2006	1,665	95	920	2,680
2006-2011	1,510	70	880	2,460
2011-2016	1,380	95	875	2,350
2016-2021	1,195	110	850	2,155
2021-2026	1,105	120	880	2,105
<u>2001-2026</u>				
Avg. Annual	1,370	100	880	2,350
Total	34,275	2,450	22,025	58,750
<i>Percent Distribution</i>				
<u>Census Periods</u>				
1996-2001	75	2	23	100
2001-2006	62	4	34	100
2006-2011	61	3	36	100
2011-2016	59	4	37	100
2016-2021	55	5	39	100
2021-2026	52	6	42	100
<u>2001-2026</u>	58	4	37	100

Projections: Clayton Research; Historical: CMHC

Figure 38

Annual Housing Completions, HRM, 1996-2026**High Growth Scenario**

<u>Census Periods</u>	Single and Semis	Row	Apartments and Other	Total
	<i>Annual Average Units</i>			
1996-2001	1,596	44	480	2,121
2001-2006	1,795	100	970	2,865
2006-2011	1,910	80	1,080	3,070
2011-2016	1,790	120	1,110	3,070
2016-2021	1,575	140	1,125	2,890
2021-2026	1,480	150	1,185	2,865
<u>2001-2026</u>				
Avg. Annual	1,710	120	1,090	2,950
Total	42,750	2,950	27,350	73,800

<u>Census Periods</u>	<i>Percent Distribution</i>			
1996-2001	75	2	23	100
2001-2006	63	3	34	100
2006-2011	62	3	35	100
2011-2016	58	4	36	100
2016-2021	54	5	39	100
2021-2026	52	5	41	100
<u>2001-2026</u>	58	4	37	100

Annual Housing Completions, HRM, 1996-2026**Low Growth Scenario**

<u>Census Periods</u>	Single and Semis	Row	Apartments and Other	Total
	<i>Annual Average Units</i>			
1996-2001	1,596	44	480	2,121
2001-2006	1,540	85	870	2,495
2006-2011	1,015	60	625	1,680
2011-2016	1,060	90	735	1,905
2016-2021	860	95	700	1,660
2021-2026	745	100	695	1,545
<u>2001-2026</u>				
Avg. Annual	1,040	90	730	1,860
Total	26,100	2,150	18,125	46,425

<u>Census Periods</u>	<i>Percent Distribution</i>			
1996-2001	75	2	23	100
2001-2006	62	3	35	100
2006-2011	60	4	37	100
2011-2016	56	5	39	100
2016-2021	52	6	42	100
2021-2026	48	6	45	100
<u>2001-2026</u>	56	5	39	100

Projections: Clayton Research; Historical: CMHC

4.7 DISTRIBUTION OF HOUSING

4.7.1 Population Growth Trends

In order to assess where future development growth is likely to occur, it is useful to review past growth. For the purposes of this analysis, the urban areas are defined as lands including:

- The Halifax Peninsula; and
- The former City of Dartmouth inside the Circumferential Highway.

Suburban areas (typically 4 to 5 units per acre) refer to new near urban master-planned communities such as:

- Clayton Park West;
- Paper Mill Lake; and
- Portland Estates;

Rural development is defined to include areas such as:

- Tantallon;
- Hammonds Plains;
- Waverley/Fall River; and
- Porters Lake;

Which are largely developed using on-site sewage disposal systems at development densities of less than one unit per acre.

Census Subdivision C (Sackville, Hammond Plains) was the fastest growing area of HRM from 1986 to 2001, with a net of just over 17,000 people moving into this region during this time period (Figure 39). In particular, the Hammonds Plains area saw tremendous growth in communities such as Kingswood, White Hills and other similar developments not on municipal water or sanitary sewer services. Other areas experiencing relatively strong growth include:

- Census Subdivision D -Waverley/Fall River with 8,785 new people or 16.7 percent of HRM growth,
- The former Town of Bedford (8,092 people or 15 percent of HRM growth). Porters Lake (Subdivision E), and
- Tantallon (Subdivision A), also experienced strong population growth, although to a lesser extent than these other areas.

During the 15 year period from 1986 to 2001, the population of the former City of Dartmouth remained flat, showing strong growth during the 1986-91 period, but a similar reduction in population during the 1991-96 period; there was virtually no population growth in Dartmouth during the 1996-2001 census period.

Population growth in the former City of Halifax exhibited similar characteristics during the 1986 to 1996 period, when total population growth was flat, however it rebounded during the 1996 to 2001 period, with 5,715 more people moving into this community (up 5 percent from the 113,910 in 1996). Most of the growth in the Halifax market during this period was accommodated by new single and multi-family homes in the Clayton Park West and Glenbourne areas, and apartment buildings in the urban core.

This trend towards the residential intensification of the downtown core is one that is becoming more common through North America, and will probably continue in HRM, especially as the new Capital District is re-positioned as a residential and cultural/entertainment district for the region.

Figure 39 Population Growth by Component CSD, Halifax Regional Municipality, 1986-2001

Component CSD*	1986-1991	1991-1996	1996-2001	Total		
				1986-2001	Average Annual	Distribution
	<i>Persons</i>			<i>Percent</i>		
City of Dartmouth	2,555	(2,169)	112	498	33	0.9
City of Halifax	878	(545)	5,382	5,715	381	10.8
Town of Bedford	3,608	2,020	2,464	8,092	539	15.4
Sub A: Hubble, Tantallon	1,246	1,559	1,952	4,757	317	9.0
Sub B: Herring Cove, Prospect	1,391	988	554	2,933	196	5.6
Sub C: Sackville, Hammond Plains	7,704	5,556	4,002	17,262	1,151	32.8
Sub D: Waverley, Fall River	5,035	2,712	1,038	8,785	586	16.7
Sub E: Porters Lake, Lake Echo	2,131	1,882	953	4,966	331	9.4
Sub F: Musquodoboit	29	125	13	167	11	0.3
Sub G: Sheet Harbour, Mosher River	(216)	(35)	(220)	(471)	(31)	(0.9)
Other	67	27	(33)	61	4	0.1
HRM Total	24,361	12,093	16,250	52,704	3,514	100.0

* Census SubDivisions on a 1996 Census basis, all are dissolved CSDs in 2001.

Source: Cantwell & Co. and Clayton Research Associates based on Statistics Canada Census Data

4.7.2 Household Growth Trends

Population growth is not the only factor in determining the demand for new dwellings. A variety of other factors influence headship rates, and the

formation of new households. Figure 40 illustrates the pattern of household formation in HRM between 1986 and 2001.

The former city of Halifax captured almost 27 percent of all new households starts in HRM from 1986 to 2001 – an average of about 660 units per year. During the same period there was also a substantial amount of household formation in Sackville and Hammonds Plains (Sub C). This area accounted for just over 20 percent of all new households in HRM, 496 units per year. Other areas exhibiting strong growth include:

- Waverly, Fall River (Sub D) with 300 households per year (12 percent of total HRM growth), and
- The Former City of Dartmouth, with 262 households per year (11 percent of total).

The flip in position between Halifax and Hammonds Plains on the population and occupied dwelling data illustrates the dramatic differences in average household size between the two communities, with Halifax accounting for 27 percent of all household growth, but just 10 percent of total population growth. In a similar manner, the former City of Dartmouth exhibited strong household formation rates from 1986-2001, with the community generating 3,930 new households during a period where the population was virtually flat.

Demographics are clearly playing a large role in these diverging patterns – as the high growth areas such as Hammond Plains attract growth of larger family units at the same time as an aging of the population in Halifax and Dartmouth is driving lower household sizes.

Figure 40

Dwelling Growth by Component CSD, Halifax Regional Municipality, 1986-2001

Component CSD*	1986- 1991	1991- 1996	1996- 2001	Total		
				1986- 2001	Average Annual	Distri- bution
<i>Change in Occupied Dwellings</i>						
City of Dartmouth	2,753	335	1,670	4,758	317	12.9
City of Halifax	4,255	2,077	5,115	11,447	763	31.1
Town of Bedford	1,366	874	1,140	3,380	225	9.2
Sub A: Hubble, Tantallon	720	495	785	2,000	133	5.4
Sub B: Herring Cove, Prospect	717	513	455	1,685	112	4.6
Sub C: Sackville, Hammond Plains	2,846	2,548	2,040	7,434	496	20.2
Sub D: Waverley, Fall River	2,032	1,406	1,020	4,458	297	12.1
Sub E: Porters Lake, Lake Echo	928	918	660	2,506	167	6.8
Sub F: Musquodoboit	207	173	-	380	25	1.0
Sub G: Sheet Harbour, Mosher River	48	64	-	112	7	0.3
Other	15	-	-	15	1	0.0
HRM Total	15,872	9,403	12,885	36,793	2,453	100.0

* Census subdivisions on a 1996 Census basis, all are dissolved CSDs in 2001.

Source: Cantwell & Co. and Clayton Research based on Statistics Canada Census Data

4.7.3 Existing Residential Development Sites

The supply of serviced and permitted land for residential development within HRM is constantly changing, with new housing lots constantly being serviced to ensure a ready supply on the market.

Figure 41

Major Developments, Permitted or with Conceptual Approval, HRM, 2004

Development	Units
Portland Hills	300
Mill Cove, Bedford	150
Basinview Ridge	150
Paper Mill Lake	800
Bedford South/Wentworth	3,500 **
Royale Hemlocks Subdivision	716 **
Clayton Park, Phase 4R	150
Governors Brook	570 *
Westgate	3,000 **
Total	9,336

* development status under appeal

** permits pending on some units

Source: Cantwell & Company based on *HRM Development and Planning, 2004*

There are some 9,336 units of housing that are currently permitted (see Figure 41), or they have at least received conceptual approval. In particular the communities of Bedford South and Westgate provide 6,500 of these

units, although only 911 units can be built at Westgate until the local sewage treatment plant is upgraded.

In addition to the master-planned communities, illustrated in Figure 41, there are another 6,800 units of housing “in the pipeline”, with development agreement applications having been submitted to HRM. This includes large development projects such as the Butler Brothers property and the Motherhouse Lands, as well as smaller urban parcels such as the Gladstone Stores and many urban in-fill projects.

Thus all told, some 16,100 units are currently either approved or in the development agreement and permitting process - approximately a 6-year supply of housing. In addition to these current projects, HRM has assessed a number of greenfield sites immediately adjacent to their current servicing boundary. The next section discusses the development potential location of these greenfield development sites.

4.7.4 Future Residential Development Sites

As part of HRM’s current regional planning process, an engineering study was commissioned in 2003 to assess the development potential of various “greenfield” sites around the periphery of the existing HRM sewer and water servicing boundary. In total, this greenfield study identified 10 large tracts of land ranging from 419 to 1,913 hectares in size (Figure 42).

Figure 42

Future Residential Development Sites, Halifax Regional Municipality				
Parcel	Total	Undevelopable	Developable	Projected units @ 18 units/ha
		<i>Hectares</i>		<i>Units</i>
Shearwater/Eastern Passage	1,913	597	1,250	22,500
NS Home for Coloured Children	593	132	438	7,884
Dartmouth East/Port Wallace	1,478	728	712	12,816
Dartmouth North/Anderson Lake	1,035	501	507	9,126
Sackville Beaverbank	752	142	579	10,422
Jack's Lake	419	81	321	5,778
Bedford West	849	227	591	10,638
Birch Cove & Governor Lake	1,200	459	704	12,672
Ragged Lake	545	93	429	7,722
Mainland South Backlands	642	83	531	9,558
Total	9,426	3,043	6,062	109,116

Source: Cantwell & Company based on *Greenfield Planning Study*, CBCL Engineers, 2004

The parcels identified in Figure 42 are located in a semi-circle around Halifax Harbour, and are adjacent to existing serviced areas. Most parcels are controlled by one or two large landowners, indicating that if the parcel is included in a revised servicing boundary, that development would likely proceed. In total, these ten parcels can provide 9,426 hectares of land for future housing development. In order to assess how much of these lands are available for development, HRM's consultants deducted about one third of the land as inappropriate (e.g., steep slopes, wetlands, environmental constraints, etc), leaving a balance of some 6,062 hectares as suitable for development. Assuming these lands were developed using a fairly modest density ratio of 18 units per hectare, the future build out of this land accommodate a population growth of just about 110,000 new housing units – a 46 year supply.

The main constraints on development of these sites stem from factors such as:

- Limited capacity in existing sewage treatment plants;
- Difficult access to the trunk highway network; and
- Inflow and infiltration issues limiting the capacity of the trunk sewer network.

All told, at least 50 percent of the capacity of the greenfield sites is available for new development in the coming decades. This equates to sufficient land for 55,000 dwellings.

When the capacity of both existing master-planned communities and projects currently in the planning approvals process are added to this (i.e., the 16,100 dwellings identified in the last section), these combined lands have the potential to support 70,100 dwellings. This is substantially more than the projected demand for new housing over the coming two decades, as identified in this study.

4.7.5 Future Trends in Housing Design and Location

Based on the preceding analysis, the following trends in demand for housing and how these trends may influence the distribution of new housing have been identified.

- Like other municipalities in North America, the aging of the baby boomers will continue to accelerate the demand for lower maintenance housing options, including apartments and condominiums.

- Urban areas with good proximity to cultural facilities, shopping and health care institutions will continue to be favoured for condominium activity, and Downtown Halifax will continue to be a preferred location, although Downtown Dartmouth and the Bedford Waterfront will also be in demand.
- There will continue to be demand for rural large lot properties with good environmental features. However, according to discussions with CMHC staff, there appears to be growing market interest in small wooded lots (e.g., half an acre) that still provide the same secluded feeling, but reduce the need for yard maintenance. These would in part supplant the one and two acre wooded lots currently being sold in rural developments such as White Hills and Westwood Hills, which are sized to comply with provincial on-site sewage disposal regulations¹². The use of innovative sewage treatment options for cluster development, would help reduce the size of rural lot sizes, and will help reduce the impact of this type of development on the environment and the cost of providing municipal services.
- Demand for waterfront properties will continue to be strong, with lake frontage favoured by Nova Scotia residents, while international buyers will favour ocean frontage. This means continued strong demand in St. Margaret's Bay, and more development pressure along the Eastern Shore.
- The continued twinning of 100 series highways to Windsor and Tantallon (and in the future to Hubbards at Exit 6) will make it more feasible for residents to commute to near by municipalities to live¹³. This will continue to be desirable for some baby boomers, especially those interested in purchasing a home that they can retire to in the next decade or so.
- Lifestyle housing communities will be in demand over the next decade. These communities are targeted towards mature adults (45-65) who want to be close to recreational (e.g., walking trails, golf courses) and urban (e.g., cultural and health care facilities) amenities. A number of these types of developments are currently being marketed (e.g., Portland Hills Summer Field, The Ravines of Bedford South), and this trend should continue to accelerate in the future. Desired amenities include nature

¹² 20,000 square feet rural lots were very common in Nova Scotia during the 1970's. Lot sizes were increased in the 1980's in response to new on-site sewage regulations implemented by the Province.

¹³ Armco Properties has assembled a large parcel of land at Exit 6 in Hubbards, Lunenburg County.

preserves and walking trails, as well as good access to health care and shopping facilities.

Between existing master-planned communities and new developments currently in the planning approvals process, there is currently the capacity to build some 16,100 new dwellings in HRM. An additional 55,000 units of land supply is also available as identified in the greenfield study. As this capacity exceeds the projected demand of 58,000 units it would be possible to implement a strict development boundary and still meet the housing needs of the municipality during the next few decades.

In order to maximize opportunities to intensify urban areas in the coming decades, HRM's regional plan will need to streamline the development approvals process in urban areas such as the Halifax Peninsula and Downtown Dartmouth. This will include clear policies on height and the provision of open-space, and perhaps additional emphasis by HRM planning and development staff on the efficiency of the development agreement process. The type of development environment that HRM creates will impact the amount of development that occurs in these urban areas in the future.

4.7.6 Quantification of Future Demand by Location

Figure 43 illustrates the future allocation of housing demand, by geographical location. This projection is based on the baseline scenario.

Urban. There are selective opportunities for development within the urban areas of Halifax and Dartmouth. These include a few undeveloped parcels of land and an estimated 600 vacant lots in the urban core. In addition, brownfield sites (abandoned or disused industrial and commercial sites, sometimes previously contaminated) and greyfield sites (underutilized sites) will provide additional development opportunities. All told, however, the relatively limited potential land supply and the associated higher land costs will limit the allocation of single family housing demand in urban areas to just 10 percent of the overall demand over the next 25 years. At the same time, the trend towards more urban density will result in approximately 70 percent of new row/townhouse starts occurring in urban areas, as well as 45 percent of all apartments and condominium starts.

Suburban. The Suburbs will accommodate most of the projected growth over the next few decades, as many of the currently approved master-planned communities (e.g., Wentworth Bedford South, Westgate, etc) are

developed. Beyond this capacity, a good portion of the sites identified in the greenfield study will likely be developed for housing. These areas will attract just over half (about 55 percent) of all new single family and semi-detached housing, 30 percent of row housing, and 50 percent of all apartment and condominium starts. The suburban share of apartment and condominium starts may vary depending on the availability and permitting of urban sites.

Rural. The rural areas of HRM will likely capture about 35 percent of the single family housing demand. The composition of rural development should reflect trends identified earlier, for example: smaller lot sizes (20,000 to 30,000 square feet) and more multi-family construction (e.g., multi-family or row style development around golf courses and other green amenities). The demand for surface mounted mobile home developments has been strong during the past decade, although the lack of supply, has limited this affordable homeowner option. With the proper planning and design controls, this is a viable option for some rural communities, and would help HRM provide more affordable housing.

Figure 43

Annual Housing Completions, HRM, 2001-2026				
Baseline Scenario				
	Single and Semis	Row	Apartments and Other	Total
<u>Census Periods</u>	<i>Average Annual Units</i>			
2001-2006	1,665	95	920	2,680
2006-2011	1,510	70	880	2,460
2011-2016	1,380	95	875	2,350
2016-2021	1,195	110	850	2,155
2021-2026	<u>1,105</u>	<u>120</u>	<u>880</u>	2,105
Total, 2001-26	34,275	2,450	22,025	58,750
% of Total HRM	100	100	100	100
Urban Areas				
2001-2006	167	67	414	647
2006-2011	151	49	396	596
2011-2016	138	67	394	598
2016-2021	120	77	383	579
2021-2026	<u>111</u>	<u>84</u>	<u>396</u>	591
Total, 2001-26	3,428	1,715	9,911	15,054
% of Total HRM	10	70	45	26
Suburban Areas				
2001-2006	916	29	460	1,404
2006-2011	831	21	440	1,292
2011-2016	759	29	438	1,225
2016-2021	657	33	425	1,115
2021-2026	<u>608</u>	<u>36</u>	<u>440</u>	1,084
Total, 2001-26	18,851	735	11,013	30,599
% of Total HRM	55	30	50	52
Rural Areas				
2001-2006	583	-	46	629
2006-2011	529	-	44	573
2011-2016	483	-	44	527
2016-2021	418	-	43	461
2021-2026	<u>387</u>	<u>-</u>	<u>44</u>	431
Total, 2001-26	11,996	-	1,101	13,098
% of Total HRM	35	-	5	22

Projections: Clayton Research and Cantwell & Co.; Historical: CMHC

If growth control boundaries are put in place to force rural development into suburban areas, most builders/home buyers will purchase properties in these areas, however it is likely that 5 to 10 percent of these homebuyers will travel to the adjacent municipality (e.g., Elmsdale, Windsor or Hubbards) to purchase a home on a larger lot.