



Population, Housing and Employment Projections Study

County of Frontenac

Final Report

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Watson & Associates Economists Ltd.
905-272-3600
info@watsonecon.ca

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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
E.M.S.I.	Employment Modelling Specialists International
G.D.P.	Gross Domestic Product
G.G.H.	Golden Greater Horseshoe
G.T.A.	Greater Toronto Area
G.T.H.A.	Greater Toronto Hamilton Area
L.Q.	Location Quotient
MPAC	Municipal Property Assessment Corporation
MTO	Ministry of Transportation
N.F.P.O.W.	No Fixed Place of Work
O.P.	Official Plan
PPS	Provincial Policy Statement
P.P.U.	Persons Per Unit
PMI	Purchasing Manager's Index



Executive Summary



Executive Summary

The purpose of this study is to revise the County's long-term growth forecasts based on recent demographic and economic trends using the 2016 Census (where available/appropriate) and other relevant data sources. This report will form a key background document to the County's Official Plan (O.P.) review exercise regarding long-term growth and settlement area land needs.

Two deliverables will be produced resulting from this assignment:

- 1) a report that summarizes both historical and forecast population, housing and employment statistics for Frontenac County based on a comprehensive analysis of supply and demand factors which are anticipated to influence the amount, type and location of development throughout the County; and
- 2) a growth projection model for the County, by Township, that allows for low, medium and high growth projections. To guide both planning and hard infrastructure needs, the growth projection model will allow future population and employment growth scenarios to be projected over a 30-year time horizon.

Deliverable 1, which is summarized herein, provides a review and summary of the following:

- The growth forecasting approach used for this assignment;
- Recent demographic and economic/socio-economic trends shaping development and population growth within Frontenac County and each of its local municipalities;
- The provincial and local planning policy context regarding long-term growth projections;
- Regional and local economic drivers of population and employment growth in Frontenac County;
- Potential long-term residential land supply by settlement area and remaining rural area;
- A total of three long-term County-wide population growth scenarios (e.g. low, base case and high) from 2016 to 2046;
- An allocation of population and housing growth (both permanent and seasonal) by local municipality;



- A total of three long-term County-wide employment growth scenarios (e.g. low, base case and high) from 2016 to 2046; and
- Conclusions.

Forecasting residential and non-residential growth in Frontenac County is a rather difficult task given the complex nature of the County's permanent/seasonal population and housing base. Furthermore, potential uncertainty exists regarding the identified growth drivers which are expected to influence forecast population and employment growth across the County. Future population and housing growth within Frontenac County is dependent in large measure by the following:

- The growth and competitiveness of the regional export-based Greater Kingston Area economy;
- The area's attractiveness to the 55+ age group as a destination for retirement/semi-retirement; and
- Market demand for seasonal housing largely from residents within the Greater Kingston Area, the GGH and the Greater Ottawa Area.

The above factors each contribute to the level of future net migration and housing construction expected across Frontenac County over the next 30 years.

The population and household forecast methodology adopted for this study is based on a combined approach, which incorporates both the traditional "top-down" cohort-survival forecast methodology (i.e. population by age-cohort) and a "bottom-up" household formation methodology. Chapter 2 of this report provides a detailed discussion of the forecast approach adopted herein. This combined approach is adopted to ensure that both regional economic/demographic trends and local housing market conditions are adequately assessed in developing the County's long-term growth potential. A key driver of future population growth is the link between local net migration and local/regional economic growth potential.

The growth projection output model (deliverable 2) allows housing and population growth in each municipality to be adjusted on an annual basis. Our output model has been designed to allow Frontenac staff to develop "in-house" population, housing and employment growth scenarios for the County based on adjustments to economic and demographic inputs (i.e. changes to employment growth in the City of Kingston or at the



local municipal level throughout Frontenac County, adjustments to permanent and seasonal housing demand from the 55+ population, etc.).

The following provides a summary of the key findings of this report with respect to forecast population, housing and employment trends for Frontenac County.

Preferred Residential Growth Forecast

- **Frontenac County's permanent population base is forecast to increase over the next 30 years, from approximately 27,300 in 2016 to 33,200 in 2046.¹ This represents an annual growth rate of approximately 0.7% annually.** Comparatively, this represents a slightly higher forecast annual population growth rate to the City of Kingston Base Case Scenario, but lower than the Province as a whole.^{2,3} Two alternative Growth Scenarios were also explored which consider varying levels of forecast net migration for the County. The Low Growth Scenario forecasts that Frontenac County will reach a 2046 permanent population of 30,500, while the High Growth Scenario projects a County-wide permanent population of 35,500 by 2046.
- **The County's population is older and aging slightly more rapidly than the Province of Ontario as a whole.** From 2016 to 2046, the percentage of the Frontenac County population aged 65+ will increase from 21% to 35%. This trend poses implications regarding future housing needs across the County, including seniors' housing and affordable housing options.
- **The rate of permanent population growth for Frontenac County is forecast to gradually decline over the next 30 years, largely due to the aging of the population.** This aging trend is anticipated to result in a reduced average housing occupancy. As a result of this demographic trend, each of the County's settlement areas will require a modest level of new housing development to maintain stable population levels.
- **Over the long-term planning horizon, approximately 80% of forecast permanent population growth is anticipated to occur within the Township of South Frontenac.** The Township of South Frontenac will continue to attract a

¹ Population figures include an upward adjustment of approximately 2.3% to account for the net Census undercount.

² City of Kingston and Kingston CMA, Population, Housing and Employment Projections.

³ Ministry of Finance Summer 2019 Ontario Population Projections, 2018-2046.



large proportion of County-wide permanent population growth due to its proximity to the City of Kingston, employment opportunities for commuters and continued local employment growth opportunities.

- **An increasing share of permanent population and housing growth is anticipated to be accommodated in the County's settlement areas.** While this report provides a foundation for future growth management, further planning direction will be required at the County and local level through its Comprehensive Review / Official Plan Review process to ensure that appropriate policies, infrastructure and tools are provided to effectively direct new development in a sustainable manner.
- **Seasonal housing accounts for a significant component of the County's total population base, accounting for 50% of total base population as of 2016 (41% of the total 2016 housing base).** As outlined in Chapter 6, the County's proximity to the G.G.H., the Greater Ottawa Region and the City of Kingston continues to be a major source of demand for seasonal population growth in Frontenac.
- **Including the County's seasonal population base, the total permanent + seasonal population for Frontenac County is forecast to reach a total of 62,900 persons by 2046.** This represents a total increase of approximately 8,200 persons from 2016 to 2046.
- **In spite of forecast new seasonal housing development, Frontenac County's seasonal housing and population base is forecast to increase modestly over the next 30 years, due to the net conversion of existing seasonal housing units to permanent dwellings.** This trend in seasonal housing and population is consistent with many other municipalities across Ontario's "cottage country."

Preferred Employment Growth Forecast

- **It is expected that job growth within Frontenac County will be steady over the next 30 years, in part, driven by employment growth in retail and tourism services to serve the growing permanent and seasonal population base.** Local job growth within the County is expected to be in response to permanent and seasonal population growth within the County and surrounding area.



- **The number of residents within the County who work from home or have no fixed place of work is expected to steadily increase.** This increase is anticipated to be primarily driven by the transition of the economy towards the service sector and “knowledge-based” economy, combined with continued improvements to telecommunications and communication technology.
- **The County is expected to experience modest employment growth in the industrial sector.** Potential industrial sectors include utilities and construction, small scale manufacturing and energy.
- **Over the 2016-2046 period, the County’s employment base is forecast to increase from approximately 5,400 in 2016 to 7,000 by 2046.** This represents an increase of approximately 1,600 employees from 2016 to 2046, of which almost 56% of job growth is forecast in the “work at home” and “no fixed place of work” employment categories. Remaining County job growth (approximately 700 employees) is forecast within the commercial sector and, to a lesser extent, the industrial and institutional sectors.



County of Frontenac

Population, Housing and Employment Growth Forecast, 2016 to 2046



Chapter 1

Introduction



1. Introduction

1.1 Terms of Reference

The purpose of this study is to update the 2014 Population, Housing and Employment Forecast for Frontenac County¹, based on recent demographic and economic trends using 2016 Statistics Canada Census and other relevant data sources. This report provides defensible projections of population, housing and employment change for Frontenac County including an analysis on seasonal and permanent population growth for each Township by settlement area and rural area. The updated report will form a key background document to the County's Official Plan (O.P.) review exercise regarding long-term growth and settlement area land needs. This analysis has been designed to answer the following key questions:

- What is the long-term economic and population growth potential for the broader economic region (i.e. Kington Census Metropolitan Area (C.M.A.) and eastern Ontario)?
- What share of forecast population growth within the broader regional market area should be assumed for the County? How is this share expected to change over time?
- What are the existing and emerging industry clusters that are anticipated to influence the demand for employment by major sector within Frontenac County? How are these forecast employment growth trends by sector anticipated to compare with historical conditions?
- What are the key drivers of future population, housing and employment growth within Frontenac County?
- How will evolving demographic/economic trends (e.g. aging population, housing affordability), identified growth drivers and planning policy impact future population growth rates and market demand for housing by type, tenure and development location (i.e. settlement area and remaining rural areas)?
- What will future housing development look like in Frontenac County? What forms will new housing take within the local municipalities, in terms of structural type and housing occupancy? Who will be the target demographic groups?

¹ Population, Housing and Employment Projections for the Frontenacs. Final. June 13, 2014.



Chapter 2

Approach



2. Approach

2.1 What Drives Population Growth

It is important to recognize that future population and housing growth potential within Frontenac County is influenced by the competitiveness of the export-based economy within Frontenac County, as well as within the surrounding regional economic area (i.e. Kingston C.M.A. and Eastern Ontario). Figure 2-1 and 2-2 provide a map of Eastern Ontario and the Kingston C.M.A., respectively. In assessing the County's long-term population growth potential, it is important to explore the connection between provincial/regional economic growth trends, regional labour force demand and forecast net migration potential across the County. This represents a fundamental starting point in addressing the forecast growth potential of Frontenac County.

Figure 2-1
Eastern Ontario

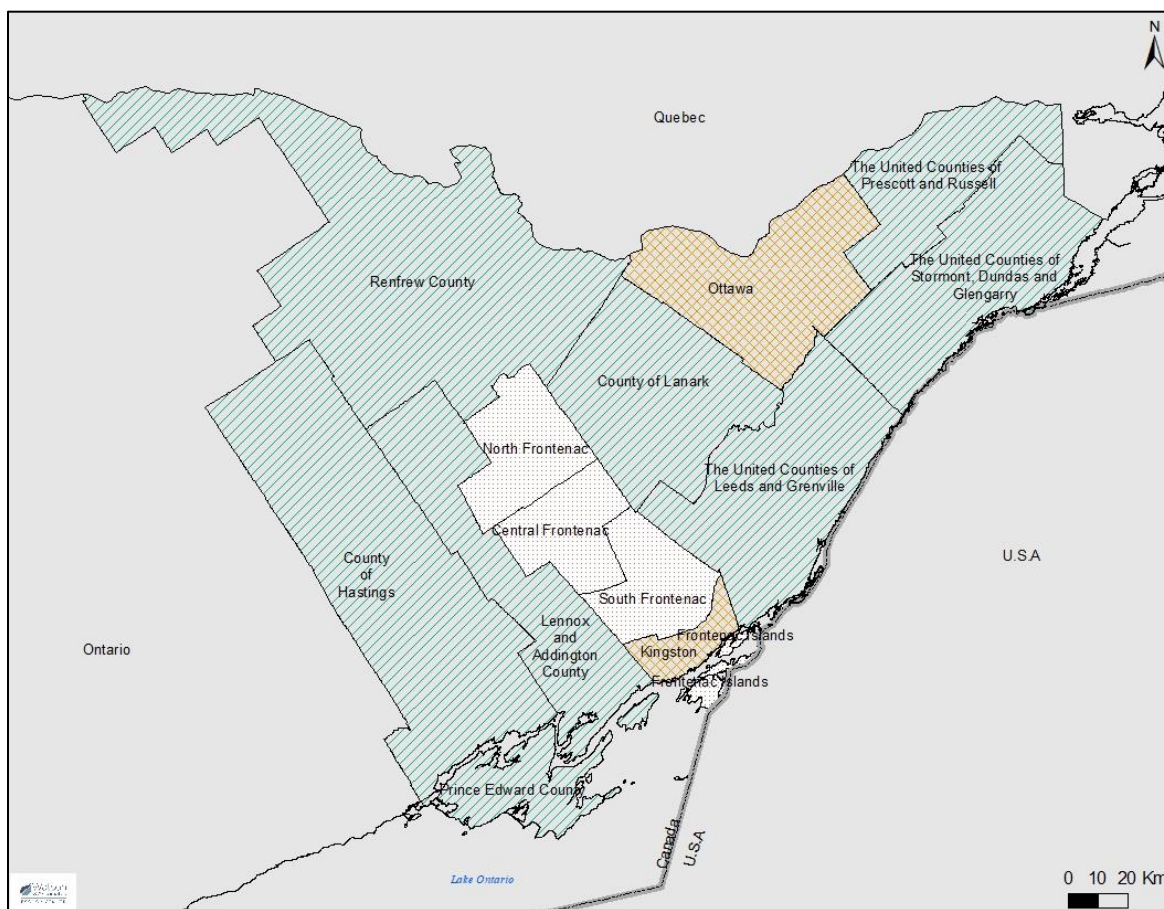
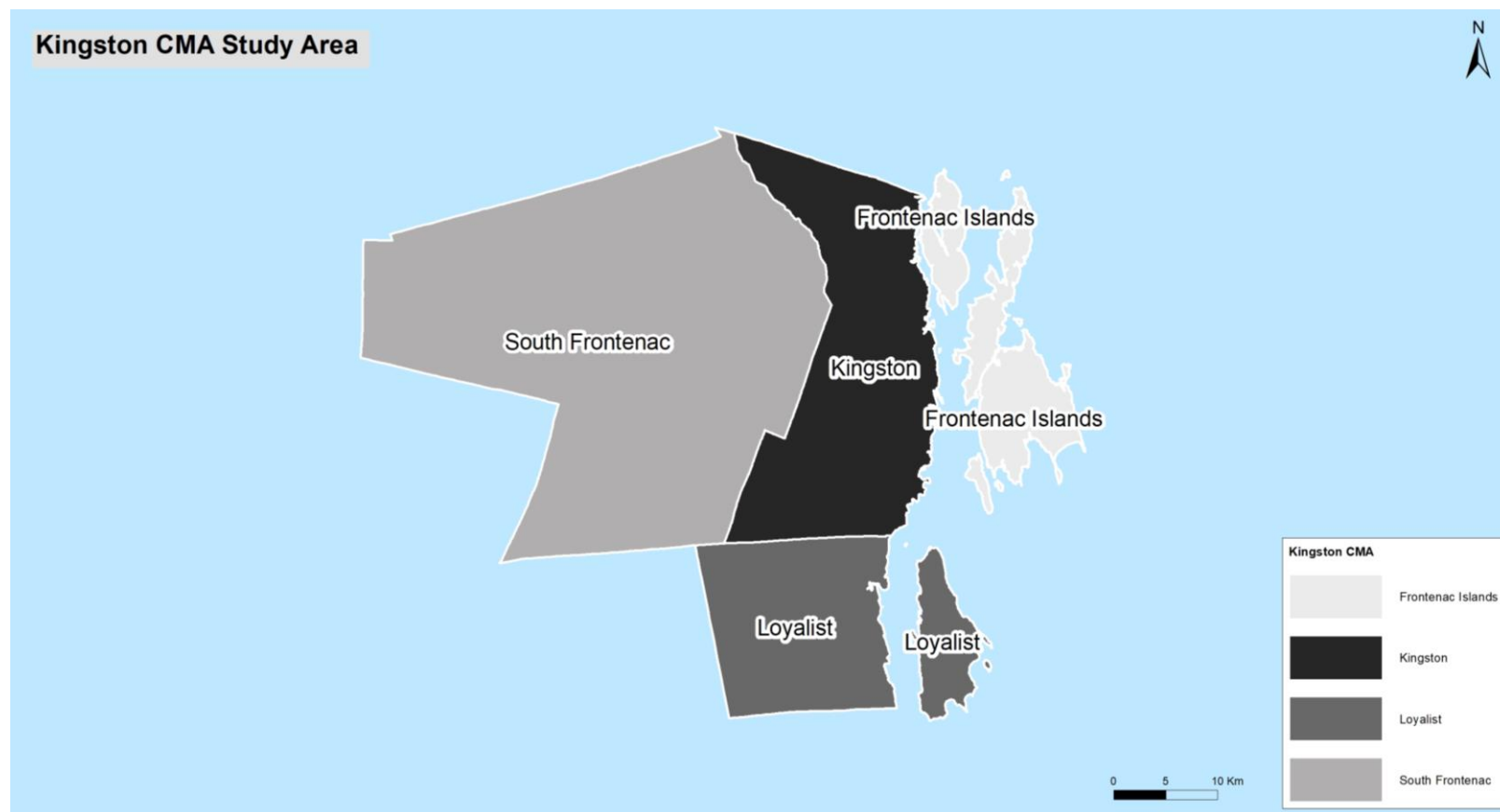




Figure 2-2
Kingston C.M.A.
Population and Employment Growth Trends





According to the 2016 Census, approximately 17% of total dwellings in Frontenac County (12,900 of 77,200) were not occupied by usual residents, of which most can be considered seasonal dwellings.¹ This seasonal component of the population has the potential to further drive population and economic growth as well as place demands on community services and municipal infrastructure across the County primarily during peak summer months. While the rate of long-term permanent population growth in Frontenac County is projected to be moderate, seasonal population growth potential is anticipated to be strongest over the next decade driven by demand from both Baby Boomers² and Millennials³.

In recent years, the County has experienced “conversions” of residences occupied by seasonal residents to permanent households. This trend is anticipated to continue in the future, largely given the County’s attractiveness as a retirement destination. As such, the conversion of seasonal dwellings to permanent housing units further contributes to permanent population and housing growth in Frontenac County. Recent conversion data suggests that this trend will likely be more pronounced over the next two decades than previously anticipated in the 2014 Growth Projections Study. Seasonal population growth is discussed in greater detail in Chapter 8.

In developing the Frontenac County population and housing projections prepared herein, the following key economic trends, growth drivers and disruptors have been briefly addressed:

- National, provincial and region-wide economic trends that are anticipated to influence the growth and economic competitiveness of the regional and local employment market;
- Regional labour force trends based on a review of historical and forecast labour force growth and commuting patterns;
- Economic and demographic drivers of population and employment growth within the Kingston C.M.A. as well as Frontenac County, including:
 - Forecast employment growth potential within Frontenac County by major employment sector and potential spin-off or value-added employment;

¹ Statistics Canada defines dwellings occupied by usual residents as a “private dwelling in which a person or a group of persons is permanently residing.”

² Includes those born between 1946 and 1964.

³ Generally includes those born between 1980 and 1992.



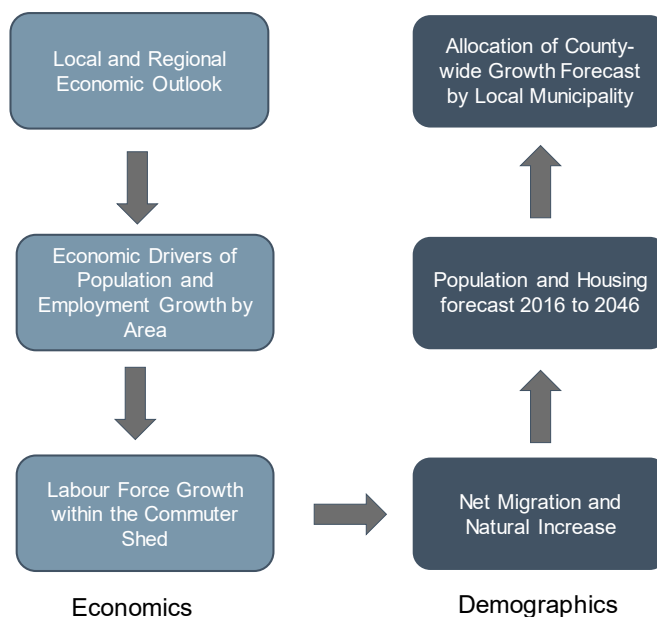
- Local employment opportunities within the County and the surrounding commuter-shed;
- Demographic and labour-force impacts associated with an aging population;
- Forecast housing market demand geared to young adults, families, empty-nesters and retirees;
- Housing affordability trends within the County; and
- Major infrastructure improvements.

This broader analysis has been used to assess local long-term trends and potential within Frontenac County related to the following:

- Net migration by age;
- Population change by age;
- Future housing needs and forecast trends in household occupancy;
- Housing demand by structure type, tenure and location; and
- Employment change by sector.

Figure 2-3 provides a schematic overview of the employment, population and housing growth forecast approach discussed above.

Figure 2-3
Approach to Long-Term Employment, Population and Housing Growth Forecast





2.2 Long-term Permanent Population and Housing Forecast Approach

The County-wide population forecast, prepared herein, is based upon the cohort-survival methodology. This provincially accepted approach assesses annual population by age and sex, taking into consideration age-specific death rates and age-specific fertility rates for the female population in the appropriate years (to generate new births). To this total, an estimated rate of net migration is added (in-migration to the County less out-migration, by age group).

Historical and forecast population trends are also considered at the regional and provincial level relative to Frontenac County in accordance with historical Census data and approved municipal, regional and provincial forecasts. This analysis provides further insight into the County's potential share of population growth relative to the broader regional market area. While the previous 2014 study for Frontenac County did not utilize 2011 Census housing statistics because of reporting inconsistencies, housing data from the 2016 Census is a valuable resource in this report.¹

Building on the above analysis, three long-term growth scenarios, including a preferred population and housing forecast for Frontenac County have been prepared. The preferred growth forecast provides details regarding population growth by age, sex, net migration, births and deaths from 2016 to 2046, summarized in five-year increments.

Forecast trends in population age structure provide important insights with respect to future housing needs based on forecast trends in average household occupancy. Accordingly, County-wide total housing growth has been generated from the population forecast by major age group using a headship rate forecast. A headship rate is defined as the ratio of primary household maintainers, or heads of households, by major

¹ For the 2014 study, building permits between 2006 and 2011 did not align with household growth as reported by the 2011 Census. This discrepancy made MPAC data a more valuable resource in evaluating permanent housing growth in Frontenac County. Reporting inconsistencies are believed to exist regarding 2011 Statistics Canada employment data resulting from the removal of the mandatory long-form Census with the 2011 National Household Survey (N.H.S). Refer to the June 4, 2015 article, The 2011 National Household Survey – the complete statistical story. <https://www.statcan.gc.ca/eng/blog-blogue/cs-sc/2011NHSstory>



population age group (i.e. cohort).¹ An understanding of historical headship rate trends is important because this information provides insights into household formation trends associated with population growth by age. While major fluctuations in headship rates are not common over time, the ratio of household maintainers per capita varies by population age group. For example, a municipality with a higher percentage of seniors will typically have a higher household maintainer ratio per capita (i.e. headship rate) compared to a municipality with a younger population. This is because households occupied by seniors typically have fewer children than households occupied by adults under 65 years of age. Forecast trends in population age structure and average persons per unit (P.P.U.) for the County are further discussed in Chapter 4.

Forecast trends in households by structure type (i.e. singles/semi-detached, townhouses and apartments) are also explored based on the following supply and demand factors:

- Historical housing activity from Census data, Municipal Property Assessment Corporation (MPAC) data and building permit activity/housing completions;
- A high-level review of housing affordability (household income trends vs. trends in housing prices by structure type);
- Historical housing propensity trends (i.e. demand) by structure type for Frontenac County and the impacts of the aging of the County's population on future types of housing demand; and
- Consideration of the County's appeal to families, empty-nesters, seniors and seasonal residents.

Forecast market demand for seasonal housing has also been analyzed herein, based on an analysis of market demand for seasonal housing by local municipality in Frontenac. Seasonal dwelling counts were derived from MPAC data between 2011 and 2018. MPAC determines the value and property-type classification for all properties in Ontario. These property-type classifications inform the analysis herein, to determine the amount and type of seasonal dwellings across the County. Forecast seasonal housing demand is also largely based on an assessment of the key market areas which are anticipated to drive the demand for seasonal housing (i.e. City of Kingston, Greater Golden Horseshoe (G.G.H.), Ottawa Region and other major market areas).

¹ It is noted that each household is represented by one household maintainer.



Chapter 3

Overview of Macro-Economic Employment and Demographic Trends



3. Overview of Macro-Economic Employment and Demographic Trends

The following chapter provides a summary of the macro-economic trends influencing regional labour force and employment trends within Ontario, the Kingston C.M.A. and Frontenac County over the past two decades.

3.1 Ontario Economic Outlook within the Canadian Context

The Ontario economy is facing significant structural changes. Over the past several decades, the provincial economic base, as measured by G.D.P. (gross domestic product) output, has shifted from the goods-producing sector (i.e. manufacturing and primary resources) to the services-producing sector, driven by G.D.P. declines in the manufacturing sector immediately following the 2008/2009 global economic downturn.

Over the past decade, the Ontario economy has experienced a steady rebound in economic activity since the 2008/2009 downturn; however, this recovery was relatively slow to materialize. That said, provincial G.D.P. levels have sharply rebounded since 2013, as illustrated in Figure 3-1. This economic rebound has been partially driven by a gradual recovery in the manufacturing sector, fueled by a lower-valued Canadian dollar and the gradually strengthening the U.S. economy.¹ Provincial G.D.P. growth is anticipated to ease from just over 2.2% in 2018 to approximately 1.7% by 2020, largely as a result of a tightening labour market and slowing global economic growth.²

While the performance of the Ontario economy is anticipated to remain positive over the near term, there are potential risks to the national and provincial economies that are important to recognize. This includes risks with respect to the adoption of protectionist trade measures in the U.S., rising global debt and slowing global economic growth in the near-term. Domestically, the housing market continues to pose a risk to the overall economy. The sharp rise in Ontario's housing prices – particularly in the Greater

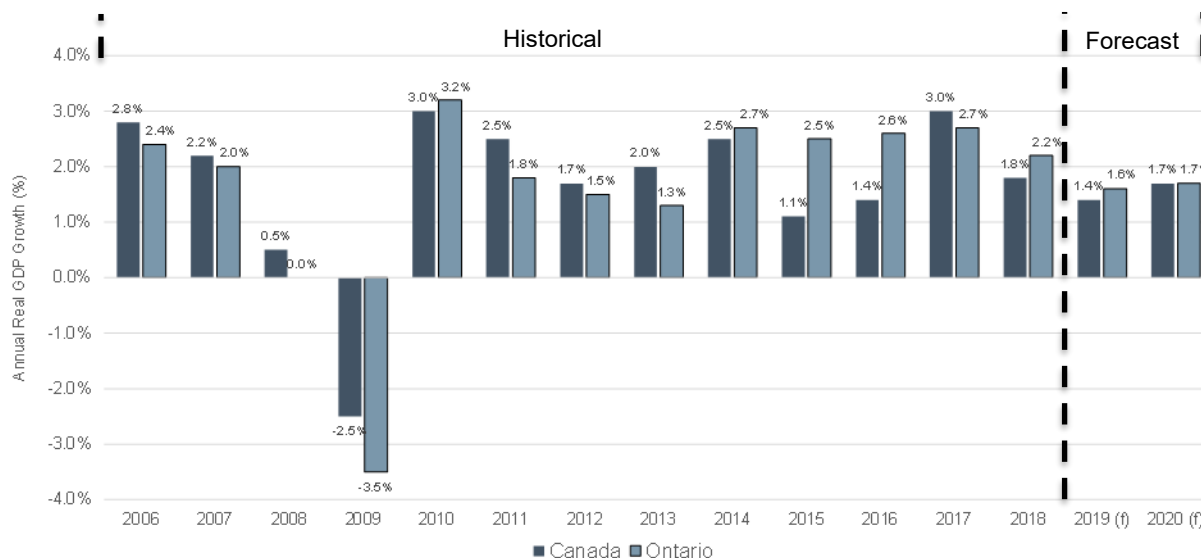
¹ Valued at approximately \$0.76 U.S. as of November, 2019.

² BMO Provincial Outlook, Spring 2019.



Toronto Area (G.T.A.) – has contributed to record consumer debt loads, which may force consumers to scale back on spending.¹

Figure 3-1
Province of Ontario and Canada
Annual Real G.D.P. Growth, Historical (2006 to 2018) and Forecast (2019 to 2020)



Source: Derived from BMO Capital Markets Economics, Provincial Economic Outlook, April 20, 2018 and Provincial Monitor, Spring 2019 by Watson and Associates Economists Ltd.
Note: 2019 and 2020 are forecasts by B.M.O. Capital Markets Economics.

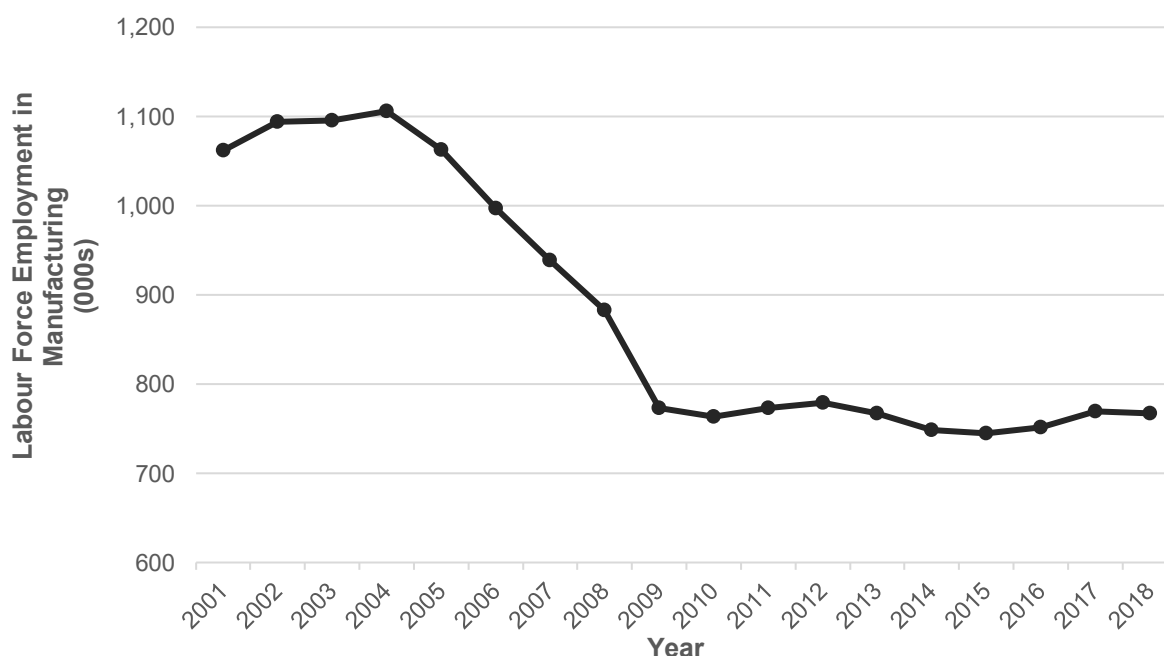
3.1.1 Outlook for Ontario's Manufacturing Sector

As summarized in Figure 3-2, the manufacturing sector in Ontario experienced significant declines between 2004 and 2009. Between 2009 and 2018, provincial labour force levels have stabilized in the manufacturing sector. According to the Purchasing Manager's Index (PMI), the first half of 2019 has shown a weakening in the manufacturing sector relative to the previous 10 years. Looking forward, modest labour force growth is anticipated in this sector across the Province of Ontario.

¹ Economic and Budget Outlook. Financial Accountability Office of Ontario (F.A.O.). Assessing Ontario's Medium-Term Budget Plan, Spring 2018.



Figure 3-2
Manufacturing Labour Force Employment in Ontario, 2001 to 2018



Source: Data from Statistics Canada Labour Force Survey, CANSIM Table 282-0125 by Watson & Associates Economists Ltd., 2019.

3.2 Regional Economic Trends

This section examines labour force trends over the past 15 years in Frontenac County in relation to the Kingston C.M.A. and the Province of Ontario. These trends are important to understand given the close relationship between regional labour force growth, net migration and population growth.

3.2.1 Regional Labour Force Trends, Kingston C.M.A., 2001 to 2016

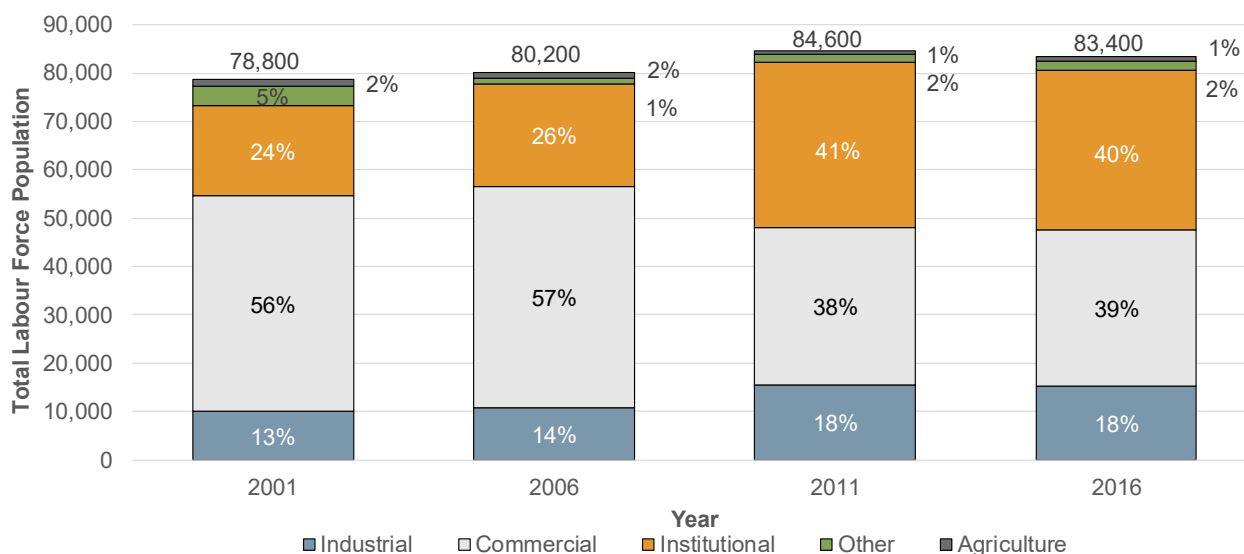
Figure 3-3 summarizes historical labour force trends within the Kingston C.M.A. over the 2001 to 2016 period. The total labour force represents the number of Kingston C.M.A. residents who live within C.M.A and are in the labour force, regardless of where they work. This includes residents who live and work within the Kingston C.M.A, including those who work from home and those who commute outside the C.M.A. for work. Key observations include:

- During the 2001 to 2016 period, the Kingston C.M.A. total labour force base increased at a moderate rate of 0.4% per year;



- The Kingston C.M.A. experienced a slight increase in total labour force of approximately 1,400 between 2001 to 2006. This was followed by steady labour force growth between 2006 and 2011 of approximately 4,400. During the following period, from 2011 to 2016, the Kingston C.M.A. labour force decreased by approximately 1,200; and
- Over the 15-year period, the share of labour force within the Kingston C.M.A. gradually shifted away from commercial and other sectors towards the institutional sector. To a lesser extent, the industrial sector also experienced an increase in the share of the labour force base. As of 2016, just over 80% of the Kingston C.M.A. labour force base was comprised of commercial, institutional and other sectors. The industrial and agricultural sectors represent approximately 18% and 1% of the regional labour force base, respectively.

Figure 3-3
Kingston C.M.A.
Total Labour Force by Major Sector, 2001 to 2016



Source: Data derived from Statistics Canada Census, 2001-2016 by Watson & Associates Economists Ltd., 2019.
Note: Wholesale and Retail trade group into Commercial in 2001.

Change in Total Labour Force		
2001-2006	2006-2011	2011-2016
1,400	4,400	-1,200

Source: Data derived from Statistics Canada Census, 2001-2016 by Watson & Associates Economists Ltd., 2019.



Figure 3-4 summarizes the historical change in the total and employed labour force as well as the labour force participation rate¹ for the Kingston C.M.A. over the 15 years, 2001 to 2016. The following observations are identified:

- Between 2001 and 2016, the unemployment rate within the Kingston C.M.A. has remained relatively stable at around 7.0%. Comparatively, Ontario's unemployment rate was estimated at 7.3% in mid-2016.
- Over the 15-year period, the labour force participation rate within the Kingston C.M.A. moderately declined from approximately 65% to 63%. This decline was largely driven by the aging of the region's labour force. Looking forward, it is anticipated that the labour force participation rate for the Kingston C.M.A. will continue to moderately decline as the regional population base continues to age.

Figure 3-4
Kingston C.M.A.
Labour Force Trends, 2001 to 2016

Year	Total Labour Force	Employed Labour Force	Unemployment Rate (%)	Participation Rate (%)
2001	78,800	74,900	6.9%	65.4%
2006	80,200	74,900	6.6%	64.7%
2011	84,600	77,800	8.1%	65.1%
2016	83,400	77,300	7.3%	62.9%

Source: Derived from 2001 to 2016 Statistics Canada Census profiles and a custom order Place of Work data by Watson & Associates Economists Ltd., 2019.

3.2.2 Frontenac County Economic Trends

3.2.2.1 Regional Labour Force Trends, Frontenac County, 2001 to 2016

Figure 3-5 summarizes historical labour force trends within Frontenac County over the 2001 to 2016 period. The following trends can be observed:

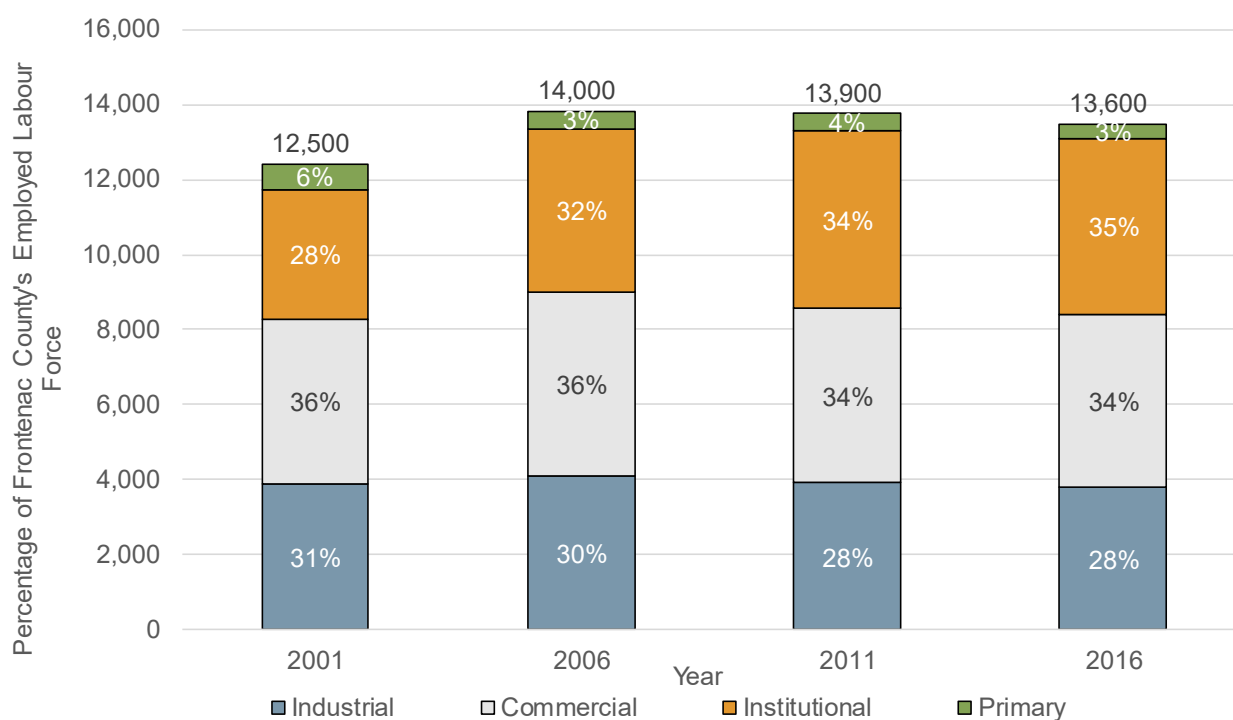
- The total labour force base in Frontenac County increased at a rate of 0.6% annually during the 2001 to 2016 period;

¹ The labour force participation rate is defined as the ratio of employed and unemployed people to the total working-age population (age 15 years and older).



- Between 2001 to 2016, the labour force in Frontenac County increased by approximately 1,100. Total labour force increased during the 2001 to 2006 period, but has been slightly declining since 2006; and
- Over the 15-year period, the share of labour force within Frontenac County has gradually shifted towards the institutional sector, with a percentage decline in all other major sectors.

Figure 3-5
Frontenac County
Total Labour Force by Major Sector, 2001 to 2016



Source: Statistics Canada Census, 2001 to 2016, by Watson & Associates Economists Ltd., 2019.

Note: Primary industries include Agriculture, forestry, fishing and hunting and Mining, quarrying, and oil and gas extraction

Change in Total Labour Force		
2001-2006	2006-2011	2011-2016
1,500	-100	-300

Source: Data derived from Statistics Canada Census, 2001 to 2016, by Watson & Associates Economists Ltd., 2019.



Figure 3-6 summarizes the historical change in the total employed labour force, the labour force participation rate and the unemployment rate for Frontenac County between 2001 to 2016. The following observations are identified:

- Between 2001 and 2016, the unemployment rate within Frontenac County has slightly declined from 5.4% to 5.2%; and
- The labour force participation rate in Frontenac County has slightly declined between 2001 to 2016. Similar to the Kingston C.M.A., this decline was largely driven by the aging of the region's labour force. Looking forward, it is anticipated that the labour force participation rate for Frontenac County will continue to moderately decline as the regional population base continues to age.

Figure 3-6
Frontenac County
Labour Force Trends, 2001 to 2016

Year	Total Labour Force	Employed Labour Force	Unemployment Rate (%)	Participation Rate (%)
2001	12,500	11,800	5.4%	63.4%
2006	14,000	13,200	5.4%	63.2%
2011	13,900	13,100	6.3%	63.3%
2016	13,600	12,900	5.2%	60.3%

Source: Derived from 2001-2016 Statistics Canada Census profiles and Place of Work data by Watson & Associates Economists Ltd., 2019.

3.2.2.2 Frontenac County Employment by Place of Work and Sector

Between 2001 and 2016, the County's employment base increased slightly, rising from 5,000 in 2001 to 5,400 in 2016, as illustrated in Figure 3-7.¹ During this period, employment growth within Frontenac County averaged 0.5% annually; however, it is noted that between 2011 and 2016, the County's total employment has declined at a rate of -2.3% annually. This 5-year decline occurred primarily in the sectors of agriculture, forestry, fishing and hunting; transportation and warehousing; educational services; and health care and social assistance. Combined these sectors accounted for 75% of the employment decline between 2011 and 2016, shrinking by 520 jobs. Based on a review of recent E.M.S.I. data, employment has rebounded, with a slow post-2016

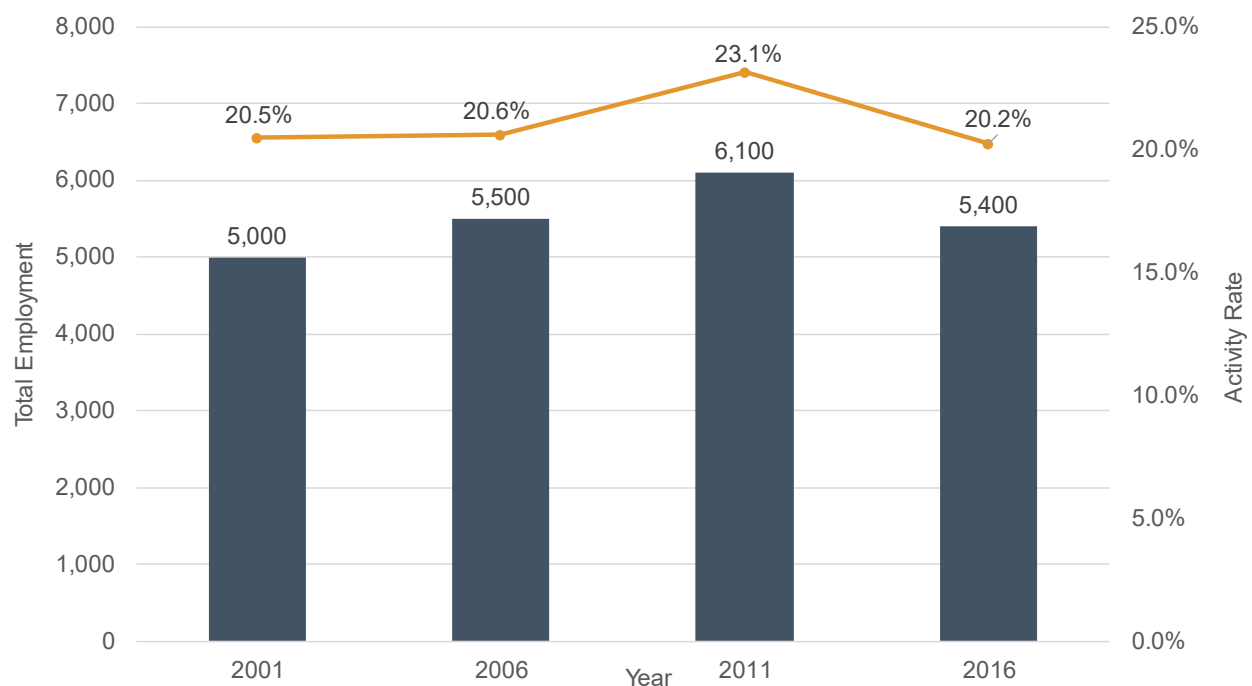
¹ Watson & Associates Economists Ltd. (includes no fixed place of work and work at home).



increase. Employment growth is anticipated to continue across the County over the near term (i.e. next five years).¹

Over the past five years, the County's employment activity rate² has declined from 23% to 20%. This indicates that recent employment levels (i.e. local jobs) have declined at a slightly higher pace than the population base.

Figure 3-7
Frontenac County
Employment Base and Activity Rate, 2001 to 2016



Source: Data derived from Statistics Canada Census Profiles, 2001 to 2016 by Watson & Associates Economists Ltd., 2019.

Note: Total employment includes work at home and no fixed place of work.

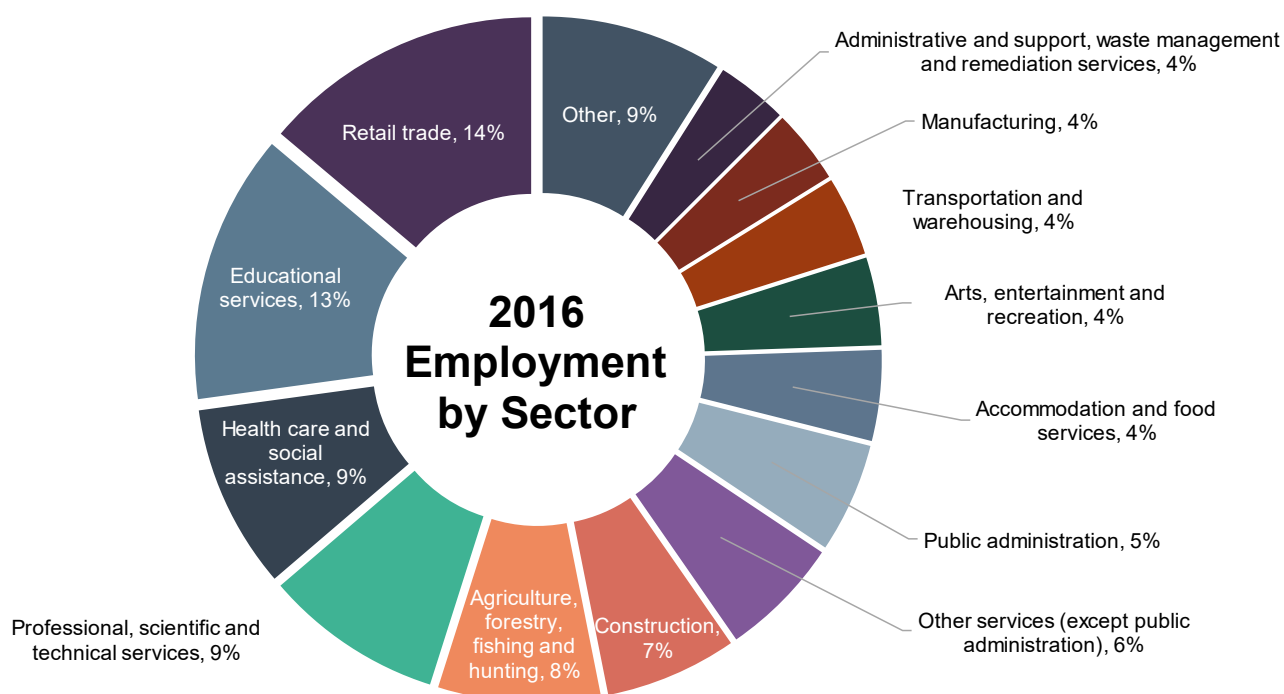
¹ According to E.M.S.I., employment in Frontenac County has steadily increased from 2,860 jobs in 2016, to 2,910 jobs in the third quarter of 2019.

² An employment activity rate is defined as the number of local jobs in a municipality divided by the resident population.



Figure 3-8 summarizes Frontenac's employment base by sector for 2016. The largest sector in Frontenac is retail trade which accounts for 14% of the total employment base. Other key sectors in Frontenac include educational services; health care and social assistance; professional, scientific and technical services, agriculture, forestry, fishing and hunting; and construction.

Figure 3-8
Frontenac County
Employment Base by Sector, 2016



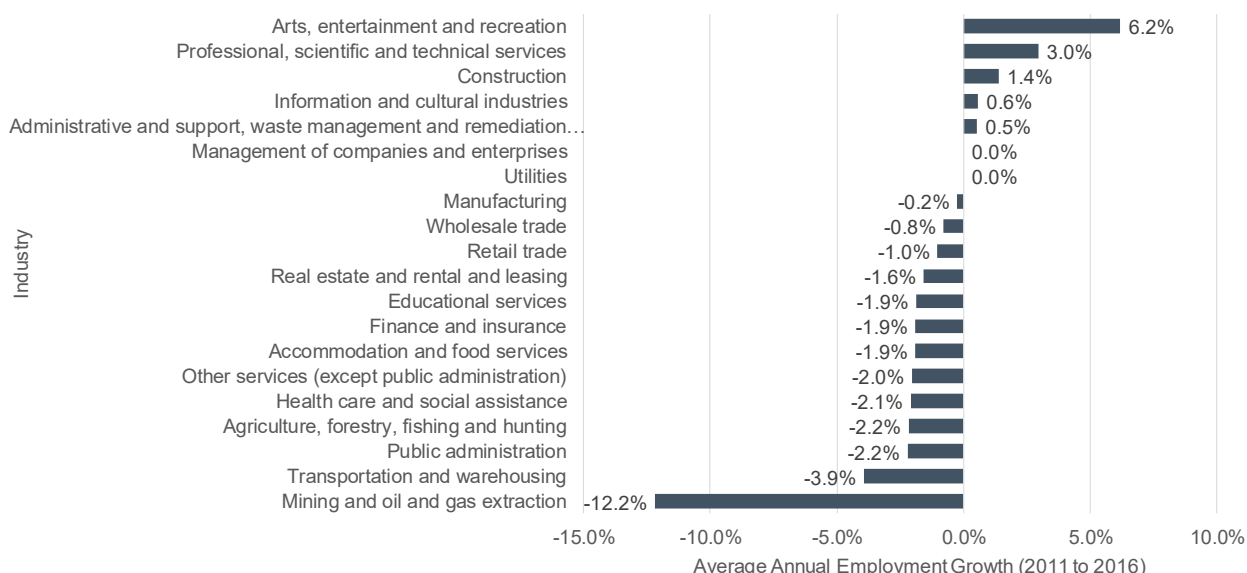
Source: Derived from custom order Statistics Canada 2016 Place of Work data by Watson & Associates Economists Ltd., 2019.

Note: Employment figures include work at home and exclude no fixed place of work.



Figure 3-9 summarizes employment change by industry sector over the 2011 to 2016 period in Frontenac County. As previously discussed, total employment in the most recent five-year Census period has shown a steady decline. Notwithstanding this overall downward trend, some employment sectors within the County have experienced positive employment growth. These sectors were primarily in knowledge-based or “creative class” sectors as well as other services-producing sectors, including arts, entertainment and recreation; professional, scientific and technical services; construction; information and cultural industries; and administrative and support, waste management and remediation services. In contrast, employment in the mining and oil and gas extraction sector experienced a significant annual decline, decreasing by 12.2% annually.¹ This sector declined from 105 jobs in 2011 to 15 in 2016 – most notably in South Frontenac, where mining and oil and gas extraction jobs decreased from 70 to 10.

Figure 3-9
Frontenac County
Average Annual Employment Growth by Sector, 2011 to 2016



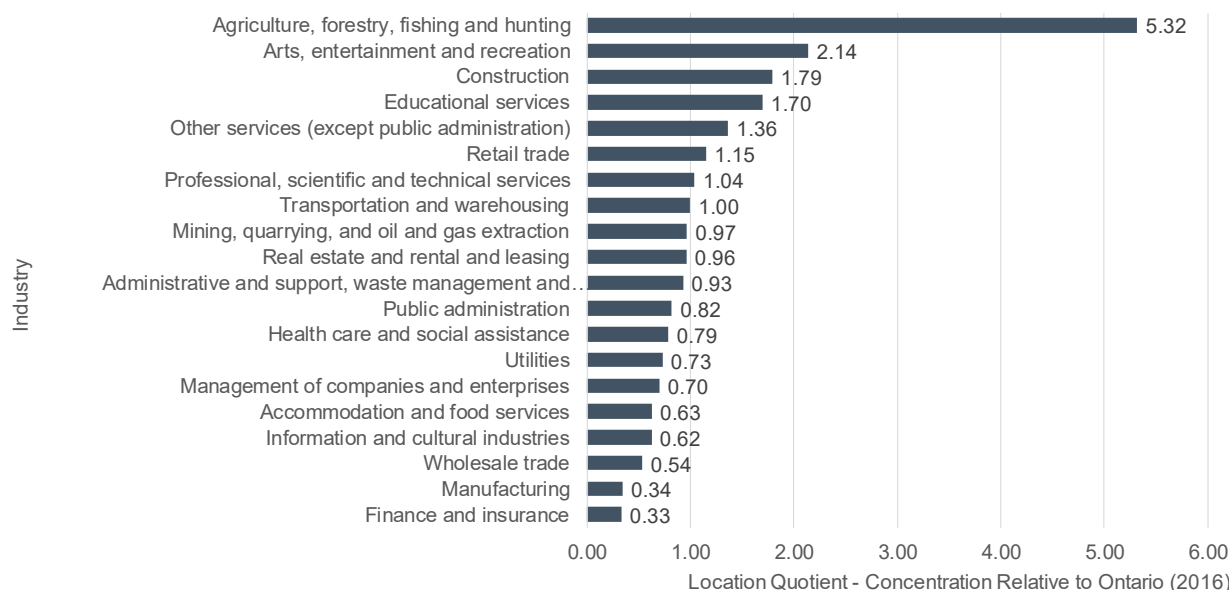
Source: From Statistics Canada 2011 and 2016 place of work data, by Watson & Associates Economists Ltd., 2019.

¹ Mining and oil and gas extraction sector includes employment in mineral aggregate extraction.



Figure 3-10 illustrates the strength of employment sectors in Frontenac County relative to the Province of Ontario using location quotients (L.Q.). An L.Q. of 1.0 identifies that the concentration of employment by sector is consistent with the broader employment base average. An L.Q. of greater than 1.0 identifies that the concentration of employment in a given employment sector is higher than the broader base average, which suggests a relatively high concentration of a particular employment sector or “cluster.” As shown, Frontenac County’s economy is largely oriented towards agriculture, forestry, fishing and hunting; arts, entertainment and recreation; construction; educational services; retail trade; professional, scientific and technical services; and other services. Frontenac has a relatively lower concentration of employment in all other sectors compared to the provincial average, most notably in wholesale trade, manufacturing as well as finance and insurance.

Figure 3-10
Frontenac County
Location Quotient Relative to Ontario, 2016



Source: From Statistics Canada 2016 place of work data, by Watson & Associates Economists Ltd., 2019.

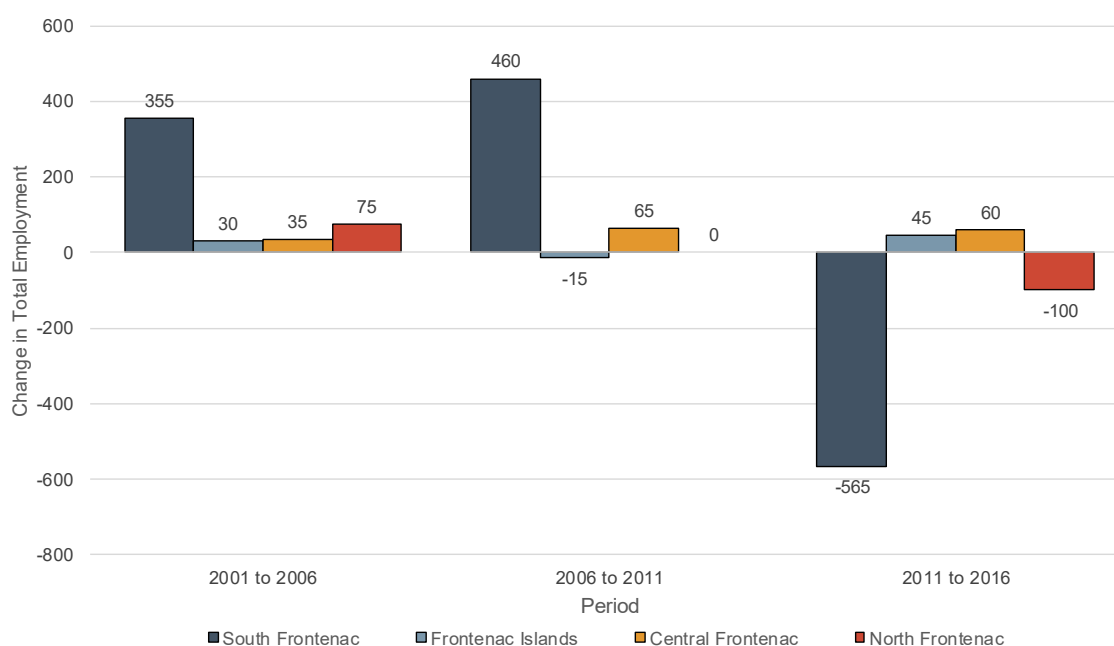
3.2.2.3 Recent Employment and Non-Residential Development Trends in Frontenac County by Local Municipality

Figure 3-11 summarizes historical employment growth trends across Frontenac County by local municipality. Key observations include the following:



- Between 2001 and 2006, all Frontenac County Townships experienced positive employment growth, with South Frontenac growing by the largest increment;
- South Frontenac continued to demonstrate strong employment growth over the 2006 to 2011 period, with only Frontenac Islands experiencing negative growth; and;
- As previously discussed, Frontenac County and the Kingston C.M.A was hit relatively hard by the 2008/2009 economic downturn. In particular, South Frontenac experienced the greatest number of job losses, with North Frontenac also declining in total employment. Across all three of the previous Census periods, Central Frontenac has been the only Township to continually experience positive employment growth.
- It is important to note that while Frontenac County's employment base during the 2011 to 2016 period declined, more recent employment data provided by Employment Modelling Specialists International (E.M.S.I) suggests that the County's employment base has increased by approximately 50 jobs between 2016 and 2019. During this most recent period, employment growth has been observed in South Frontenac, Frontenac Islands and North Frontenac.

Figure 3-11
Frontenac County
Total Employment Change by Township, 2001 to 2016



Source: Statistics Canada 2001 to 2016 place of work data, by Watson & Associates Economists Ltd., 2019.

Note: Employment includes work at home and no fixed place of work.



3.3 Observations

The following observations are provided with respect to recent trends regarding current regional economic trends within Frontenac County:

- Over the past several years, the Ontario economy has experienced steady economic growth partially driven by a gradual recovery in the manufacturing sector which has been fueled by a lower-valued Canadian dollar and gradual strengthening of the U.S. economy. Looking forward, provincial G.D.P. growth is anticipated to ease from over 2% in 2018 to approximately 1.6% by 2020, largely as a result of a tightening labour market, rising household debt and increased global economic uncertainty¹.
- Similar to national and provincial trends, the Frontenac County economy is transitioning from goods to services production. Looking forward, existing and emerging knowledge-based sectors such as professional, technical and scientific services, finance and insurance, real estate and rental leasing, health care, information technology and agri-businesses are expected to represent the fastest growing employment sectors for the County.
- In addition to growing knowledge-based sectors, manufacturing remains important to the provincial and regional economy with respect to jobs and economic output.
- The Townships of Frontenac County are characterized by a blend of expansive rural lands and vibrant settlement areas. The existing employment base is concentrated in retail trade; educational services; health care and social assistance; professional, scientific and technical services, agriculture, forestry, fishing and hunting; and construction.
- The employment base is also highly concentrated in the “creative class” economy. People engaged in the arts, entertainment and recreation sector form a growing foundation which creates the “quality of place” that attracts new residents to each of the County’s settlement areas and surrounding countryside. The economic base is also highly oriented towards small businesses and home-based occupations.

¹ Bank of Montreal. Provincial Economic Outlook. April 2019.



Chapter 4

Demographic and Housing Trends within Frontenac County



4. Demographic and Housing Trends within Frontenac County

This chapter explores historical demographic and housing trends within Frontenac County and the surrounding market area, based on recent Statistics Canada data and other available information sources. It is noted that the historical time period investigated varies throughout this chapter, subject to data availability.

4.1 Frontenac County Historical Demographic Trends

4.1.1 Historical Population Trends, 2001 to 2016

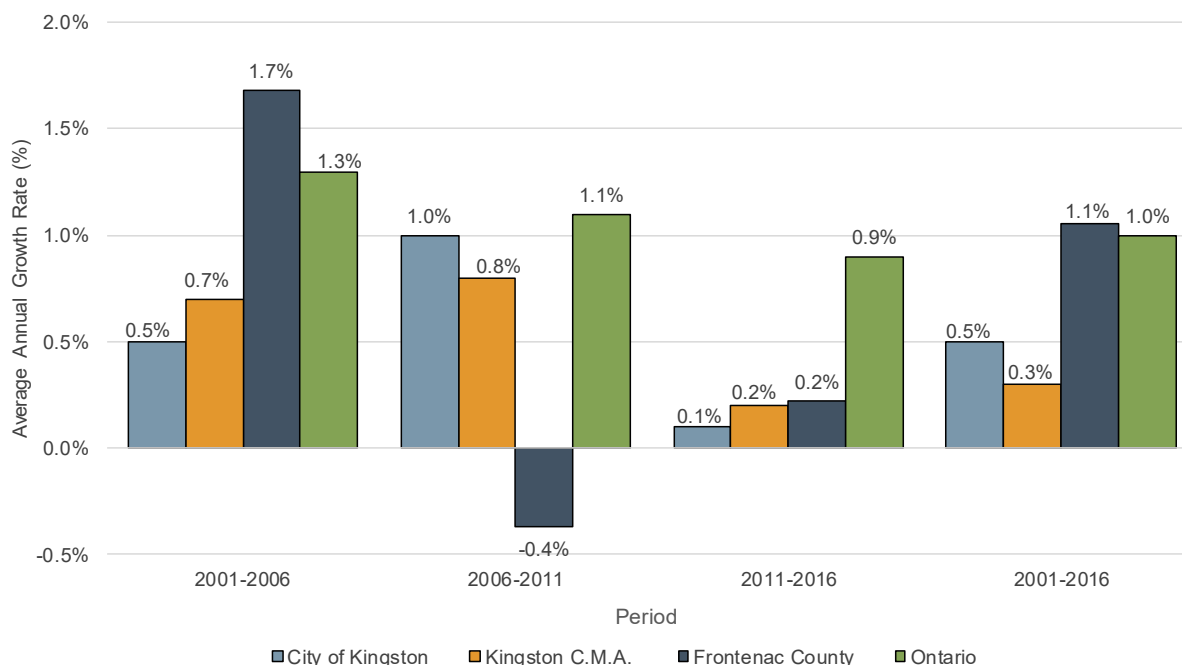
Figure 4-1 illustrates the historical population growth rates across Frontenac County, the City of Kingston, the Kingston C.M.A. and the Province of Ontario.¹ The following trends can be observed:

- Relative to the surrounding regional market area, annual population growth within Frontenac County has been relatively faster when considering longer-term historical trends;
- Between 2001 to 2016, annual population growth rates in Frontenac County outpaced both the City of Kingston, the Kingston C.M.A., and the Province of Ontario; and
- While Frontenac County grew at the fastest rate between 2001 and 2016, a majority of this population growth occurred between 2001 and 2006.

¹ Population figures report in this figure include a Census undercount.



Figure 4-1
Frontenac County
Historical Permanent Population Growth Rate Comparison, 2001 to 2016



Source: 1996 to 2016 Census Profiles, by Watson & Associates Economists Ltd., 2019.
Note: Population figures include the net census undercount.

4.2 Kingston C.M.A. Short-Term Population Estimate, 2018

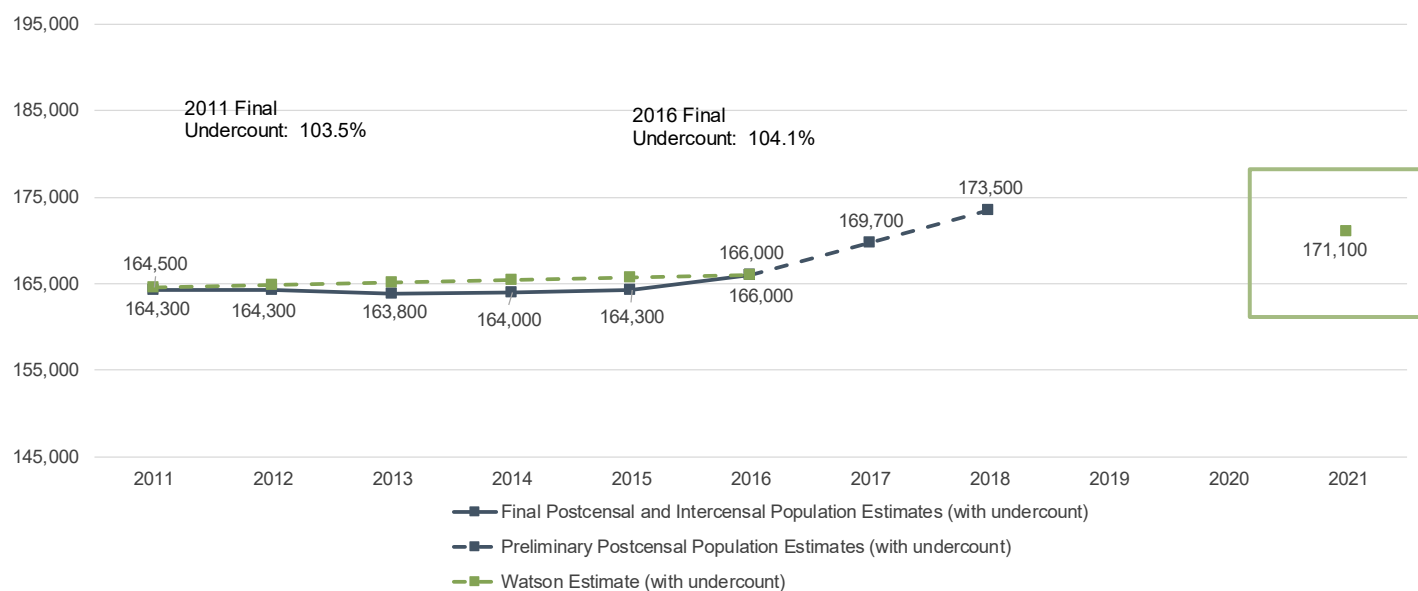
Figure 4-2 summarizes the annual intercensal and postcensal population estimates for the Kingston C.M.A. provided by Statistics Canada. The 2018 postcensal population estimate provided by Statistics Canada for the Kingston C.M.A. is 173,500. As identified in Figure 4-2, the Statistics Canada population estimates for the Kingston C.M.A. are tracking noticeably higher between 2016 to 2018 compared to historical levels from 2011 to 2016. It is recognized that the Statistics Canada 2018 population estimates are preliminary and are subject to change. Based on Statistics Canada components of population growth data,¹ the main driver of population growth from 2016 to 2018 primarily relates to an increase in intra-provincial migration (i.e. immigration to

¹ Statistics Canada. Table 17-10-0140-01 Components of population change by Census division, 2016 boundaries.



the Kingston C.M.A. from other areas of Ontario) as well as an increase in non-permanent residents which saw a noticeable increase during the 2011 to 2016 period.¹

Figure 4-2
Kingston C.M.A.
Short-Term Population Comparison, 2011 to 2021



Source: Population with the undercount derived from Annual Demographic Estimates: Subprovincial Area, Statistics Canada, Demography Division. 2011 and 2016 Census taken from Census Profiles, by Watson & Associates Economists Ltd., 2019.

Figure 4-3 summarizes historical population trends specially for Frontenac County during the 1991 to 2016 period in accordance with Statistics Canada Census data. Key observations are as follows:

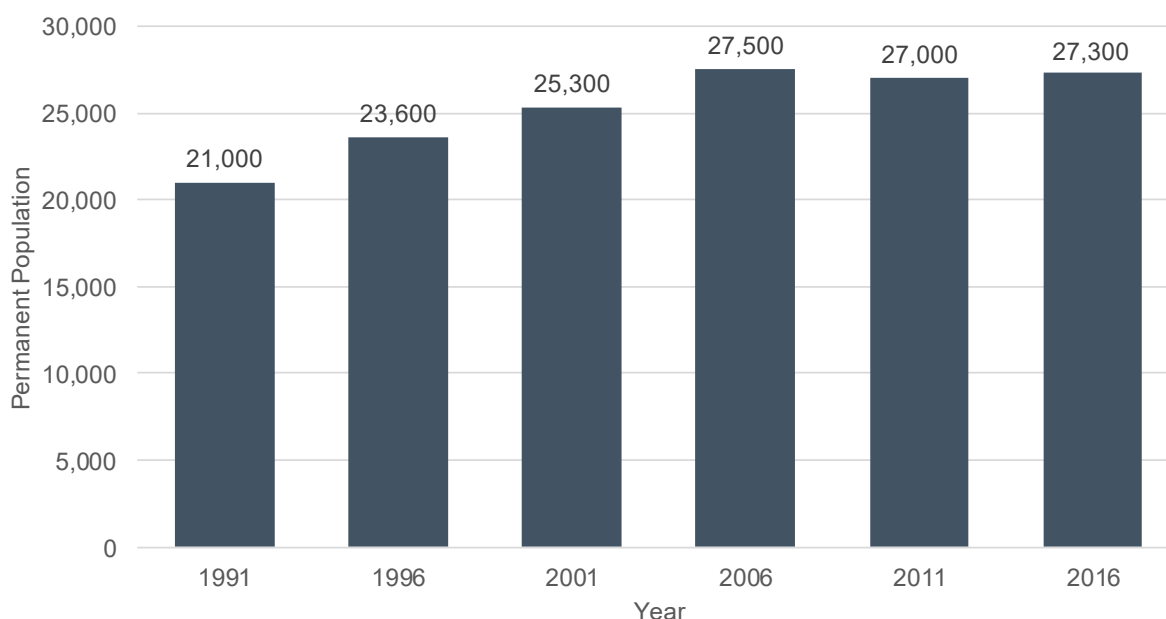
- The Frontenac County population base increased from 21,000 in 2001 to 27,300 in 2016;
- Total population in Frontenac County peaked in 2006 at 27,500, slightly declining to 27,300 in 2016;
- According to the most current Statistics Canada population estimates (2018) for the Kingston C.M.A. and recent residential building permit activity, the County's

¹ Statistics Canada defines non-permanent residents (NPRs) as persons who have been legally granted the right to live in Canada on a temporary basis under the authority of a temporary resident permit, along with members of their family living with them.



estimated population as of 2019 is approximately 28,000 (refer to Chapter 8 for further discussion regarding the forecast population growth trends).

Figure 4-3
Frontenac County
Historical Population, 1991 to 2016



Source: 1996 to 2016 Census Profiles, by Watson & Associates Economists Ltd., 2019.
Note: Population figures include the net census undercount.

4.2.1 Components of Population Growth, 2001 to 2016

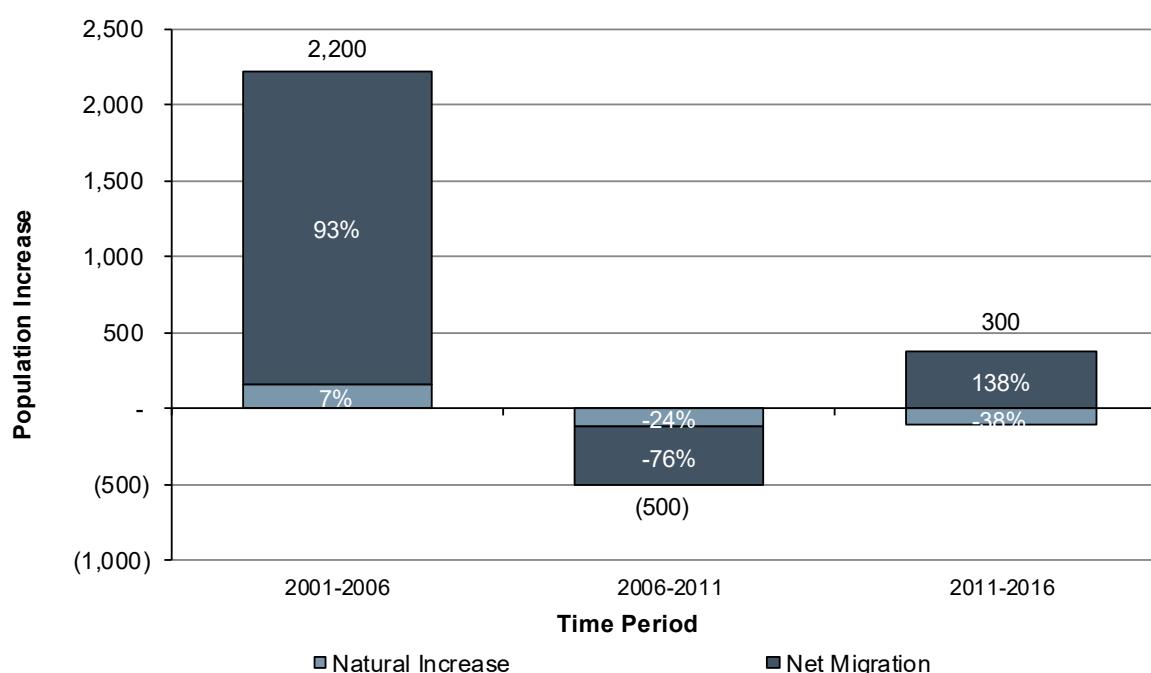
There are two primary components of population growth: natural increase (i.e. births less deaths); and net migration. Figure 4-4 summarizes historical trends regarding natural increase and net migration for Frontenac County. Key observations include the following:

- Between 2006 and 2016, population change associated with natural increase was negative, due to a higher amount of deaths than births across the County during this period;
- Overall, net migration to Frontenac County has been positive over the past 15 years. In other words, more people moved into the County than moved out of the County during this time period;



- The 2001 to 2006 period accounted for over 90% of total net migration in Frontenac County over the total 15-year period reviewed;¹ and
- As Frontenac County's population base continues to get older (largely driven by the aging of the County's Baby Boomers), population growth associated with natural increase is anticipated to steadily decline. As such, the County will be increasingly dependent on net migration as a source of population growth.

Figure 4-4
Frontenac County
Components of Population Growth, 2001 to 2016



Source: Derived from Statistics Canada, Demography Division. 2001-2016 estimated by Watson & Associates Economists Ltd., 2019.
Note: Includes Census undercount.

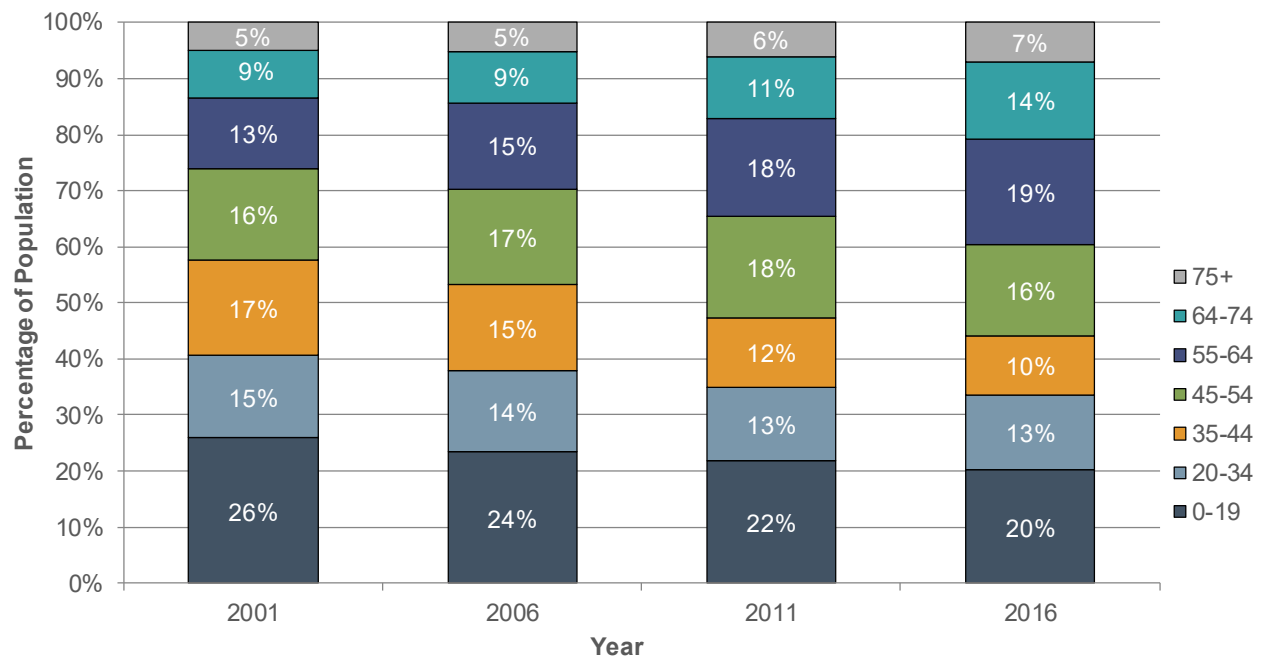
¹ Total migration consisting primarily of interprovincial (from outside Ontario) and intraprovincial migration (from inside another municipality in Ontario). The period of strong migration occurred between 1999 and 2004. The 1998 amalgamation does not impact the migration calculation between 2001 to 2006.



Figure 4-5 summarizes historical trends in population structure by age cohort over the 2001 to 2016 period. Key observations regarding Frontenac County's population by age include the following:

- In 2016, the 0-19 age cohort (youth population) in Frontenac County accounted for 20% of the total population. Proportionately, the population share of this age cohort has decreased from 26% since 2001;
- Young adult/adult population (20-34 years of age) has declined slightly throughout the past 15 years, comprising approximately 13% of the population in 2016;
- The share of the 35-44 age group moderately decreased from 17% in 2001 to 10% in 2016;
- Adults 45-54 years old accounted for 16% of the 2001 and 2016 population;
- The 55-74 age group (empty-nesters/younger seniors) experienced a steady increase between 2001 and 2016, from 21% to 33%; and
- The 75+ age group (older seniors) increased from 5% in 2001 to 7% in 2016.

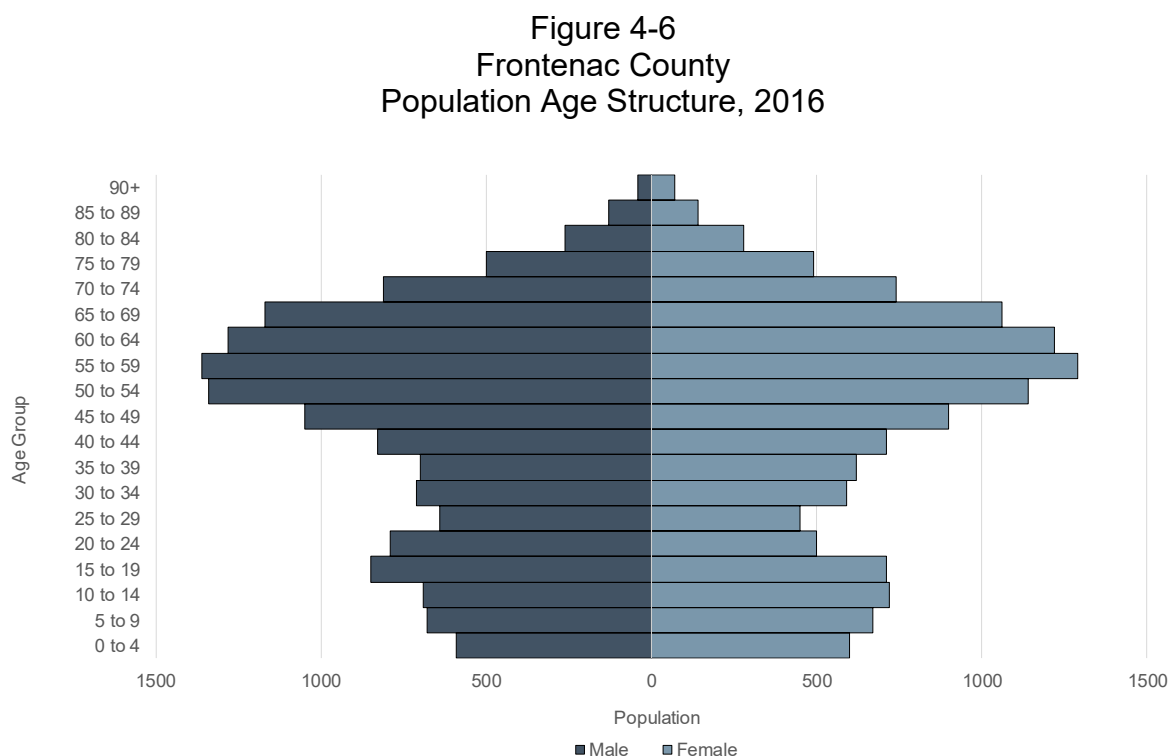
Figure 4-5
Frontenac County
Population by Age Cohort, 2001 to 2016



Source: Derived from 2001 to 2016 Statistics Canada census by Watson & Associates Economists Ltd., 2019.
Note: Population includes net Census undercount.



Figure 4-6 graphically illustrates the population age structure of Frontenac County by five-year age group based on 2016 Census data.



Source: Data from Statistics Canada 2016 Census, by Watson & Associates Economists Ltd., 2019.

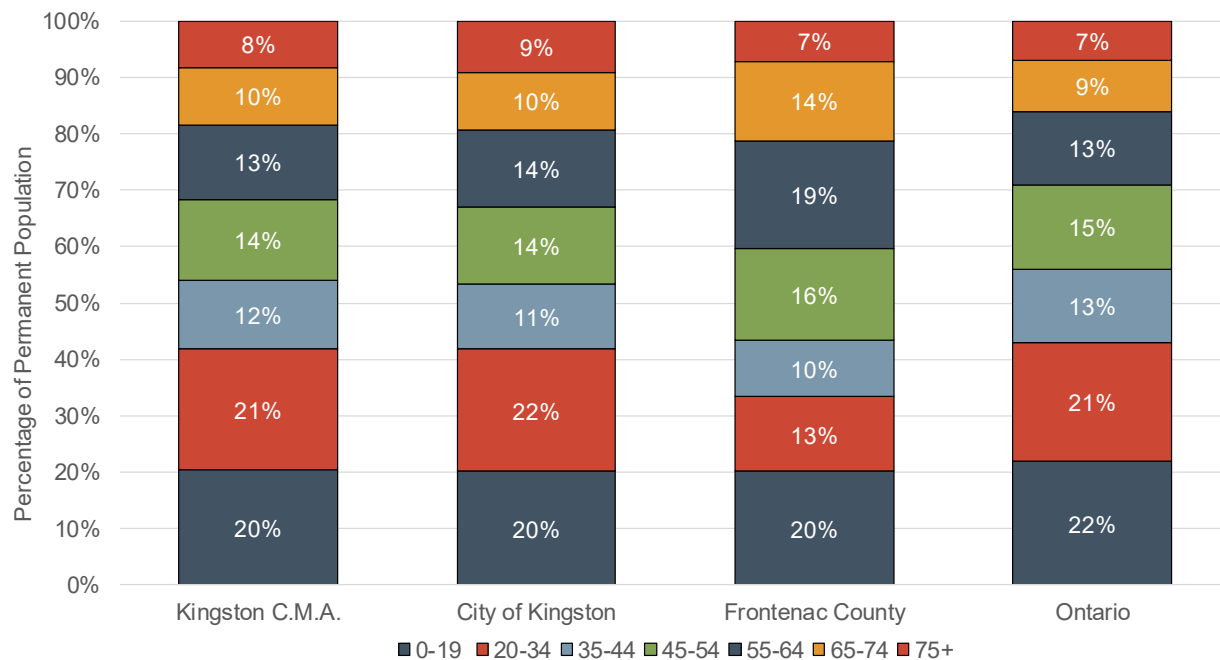
Figure 4-7 compares the City of Kingston, Kingston C.M.A., Frontenac County and provincial permanent population structure by age group in 2016. Key observations include:

- The Province of Ontario had the highest proportion of youth (0 to 19 years) than the geographies analyzed herein;
- Frontenac's share of young adult/adult population (20-34 years of age) is significantly lower than the surrounding geographies and the Province of Ontario. The County's 20 to 34 age group represented 13% of the total population in 2016, compared to roughly 21% to 22% across the Kingston C.M.A., City of Kingston and the Province of Ontario; and
- The share of population in the 55+ age group was relatively higher and will remain higher in the Frontenac County. In 2016, the 55+ population in Frontenac County accounted for 40% of the population, while the same age group



represents 30% of the Ontario permanent population and 33% of the Kingston C.M.A. total population.

Figure 4-7
Frontenac County
Population Age Structure Comparison, 2016



Source: Statistics Canada Census, Single Year of Age (2016), by Watson & Associates Economists Ltd., 2019.
Note: Population includes a net Census undercount.

Demographic trends strongly influence both housing needs and form (i.e. structure type and density). As previously mentioned, the average age of the population base in Frontenac County is getting older, due to the large concentration of Baby Boomers (born between 1946 and 1964) within the County. The first wave of this demographic group turned 73 years of age in 2019.

Not only is the Baby Boom age group large in population, but it is also diverse with respect to age, income, health, mobility and lifestyle/life stage. Accommodating seniors is a key planning issue across Ontario municipalities including Frontenac County, as this entire demographic group will reach 65+ years of age within the next 10 years. The aging of the County's population is anticipated to drive the need for seniors' housing and other housing forms geared to older adults (i.e. assisted living, affordable housing, adult lifestyle housing). Looking forward, the 75+ age group is anticipated to experience



the highest rate of permanent population growth within the County, largely driven by the aging of existing residents as opposed to net in-migration of residents within this age group into the County.

When planning for the needs of older adults, it is important to consider these diverse physical and socio-economic characteristics relative to younger population age groups. On average, seniors, particularly those in the 75+ age group have less mobility, less disposable income and typically have increased health issues compared to younger seniors (65-74 age group) and other segments of the younger working-age population.

Typically, these characteristics associated with the 75+ age group drive their demand for relatively higher density housing forms (e.g. apartments and seniors' homes) that are in proximity to settlement area amenities and other community services geared towards older seniors. While the aging of the population will continue to place downward pressure on County-wide population growth, this demographic trend is also anticipated to place increasing demand for housing, amenities and community services in the County's settlement areas from rural areas where such housing and services cannot be easily provided for.

Frontenac County is also anticipated to accommodate a growing share of young adults and families seeking competitively priced home ownership and rental opportunities. Access to local employment opportunities within Frontenac County and the surrounding commuter-shed represent the primary draw to young adults and families. This is discussed in further detail in Chapter 6.

4.2.2 Historical Population Growth by Local Municipality

Figure 4-8 summarizes historical population growth trends by local municipality within Frontenac County over the past 15 years. During this period, population growth has largely been accommodated within the Township of South Frontenac. Population growth in Frontenac Islands and North Frontenac has been relatively slow, with much of the growth occurring between 2001 to 2006. Despite stable employment growth, Central Frontenac was the only Township to experience negative population growth over the past 15 years.



Figure 4-8
Frontenac County
Historical Population, 2001 to 2016

Year	South Frontenac	Frontenac Islands	Central Frontenac	North Frontenac	Frontenac County
2001	17,070	1,700	4,740	1,870	25,380
2006	18,910	1,930	4,840	1,980	27,660
2011	18,670	1,920	4,700	1,900	27,190
2016	19,190	1,810	4,500	1,950	27,450
2001 to 2006	1,840	230	100	110	2,280
2006 to 2011	-240	-10	-140	-80	-470
2011 to 2016	520	-110	-200	50	260
Annual Population Growth Rate	0.78%	0.42%	-0.35%	0.28%	0.52%

Source: Statistics Canada Census, by Watson & Associates Economists Ltd., 2019.

Note: Population figures have been rounded and include the net Census undercount.

4.3 Frontenac County Historical Housing Trends

4.3.1 Historical Residential Building Permits Activity by Type, 2009 to 2018

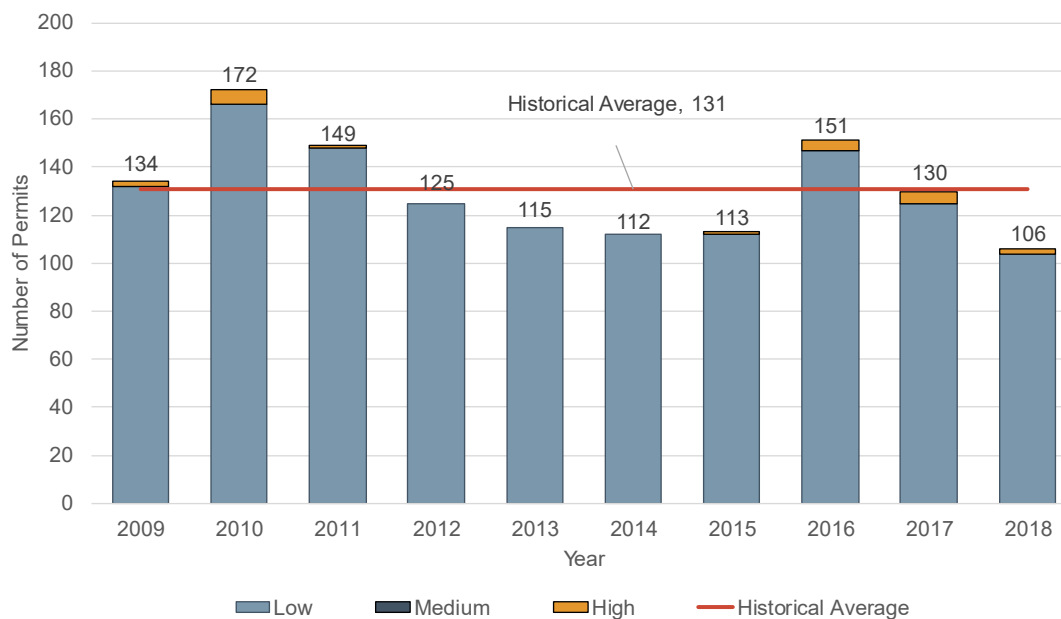
Figure 4-9 through Figure 4-14 summarize the number residential building permits¹ issued by unit type for new housing units from 2009 to 2018 with Frontenac County by local municipality. Key findings include:

- Over the 2009 through 2018 period, Frontenac County averaged 131 residential building permits per year;
- Of the total building permits issued for new dwellings during the past five years, approximately 61% were issued in South Frontenac; and
- During the last five years, development activity was largely dominated by low-density units, accounting for 98% of units, while high-density housing accounted for the remaining 2% of new units.

¹ Building permit figures do not account for demolitions.

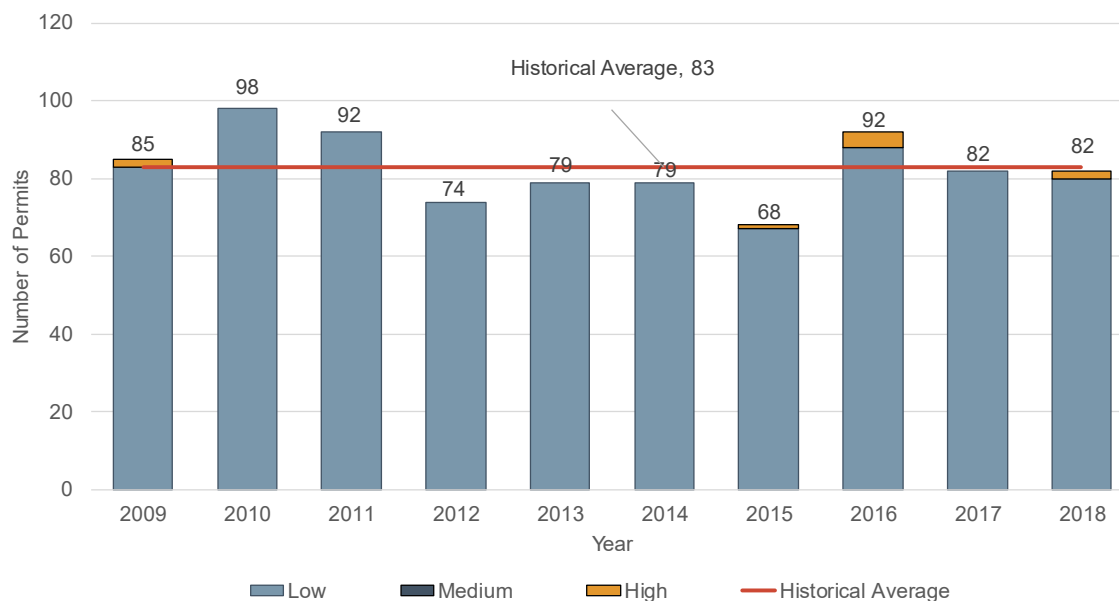


Figure 4-9
Frontenac County
Historical Residential Building Permits, 2009 to 2018



Source: Residential building permits from Statistics Canada, by Watson & Associates Economists Ltd., 2019.

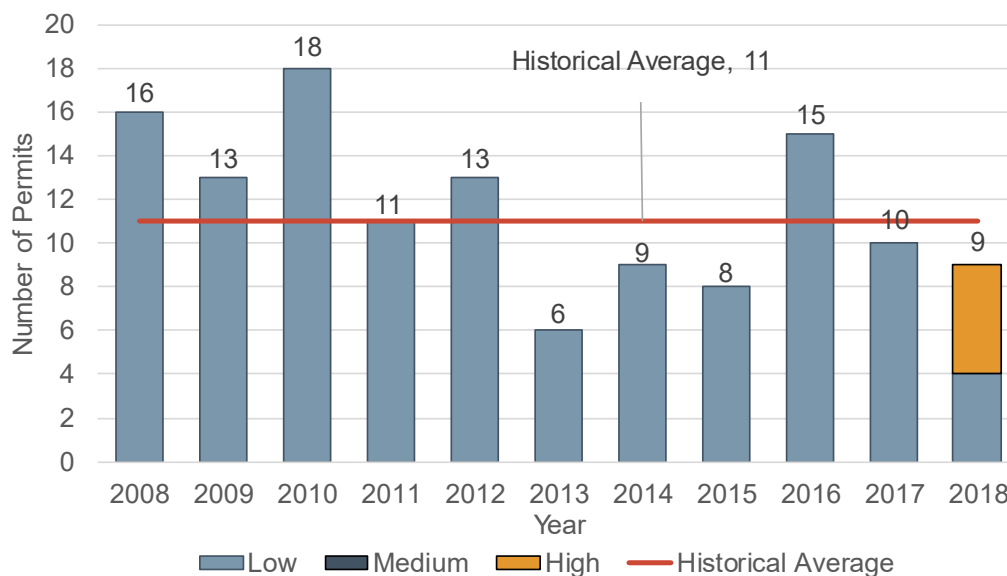
Figure 4-10
Township of South Frontenac
Residential Building Permits, 2009 to 2018



Source: Residential building permits from Statistics Canada, by Watson & Associates Economists Ltd., 2019.

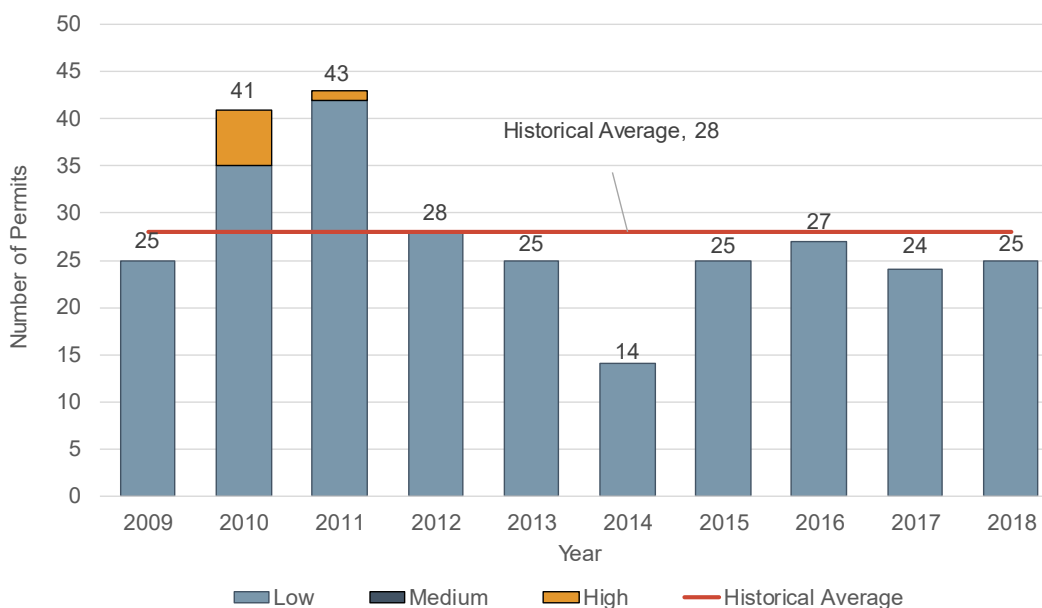


Figure 4-11
Township of Frontenac Islands
Residential Building Permits, 2009 to 2018



Source: Residential building permits from Statistics Canada, by Watson & Associates Economists Ltd., 2019.
Note: High density permits issued in 2018 represent a seniors' housing development on Wolfe Island.

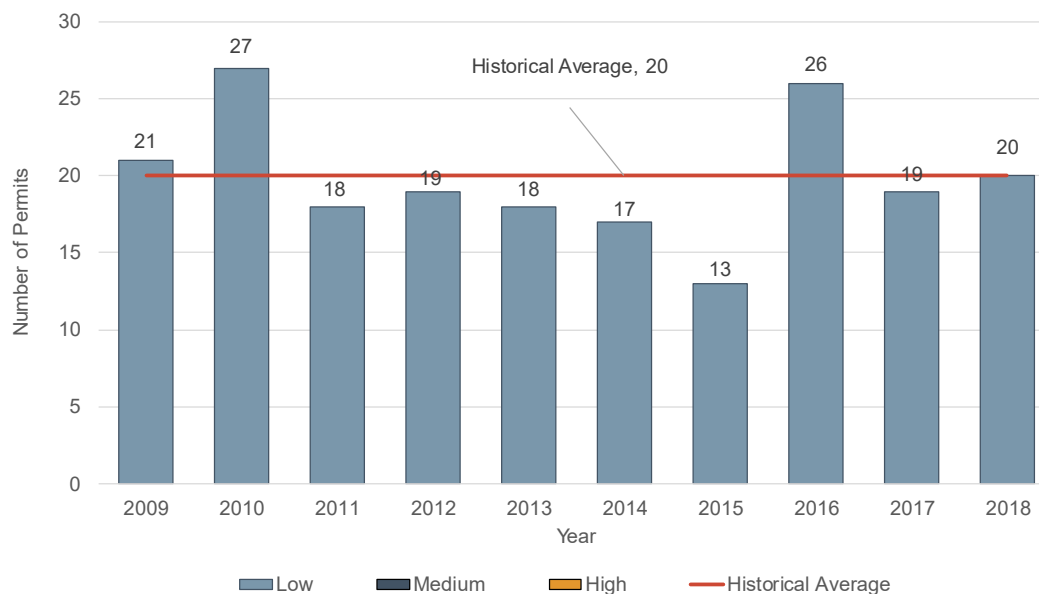
Figure 4-12
Township of Central Frontenac
Residential Building Permits, 2009 to 2018



Source: Residential building permits from Statistics Canada, by Watson & Associates Economists Ltd., 2019.

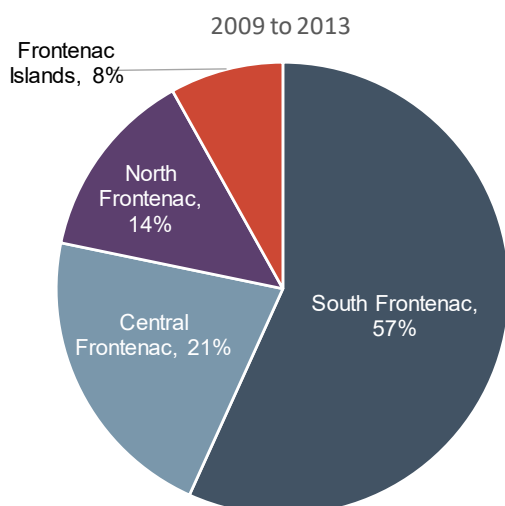


Figure 4-13
Township of North Frontenac
Residential Building Permits, 2009 to 2018

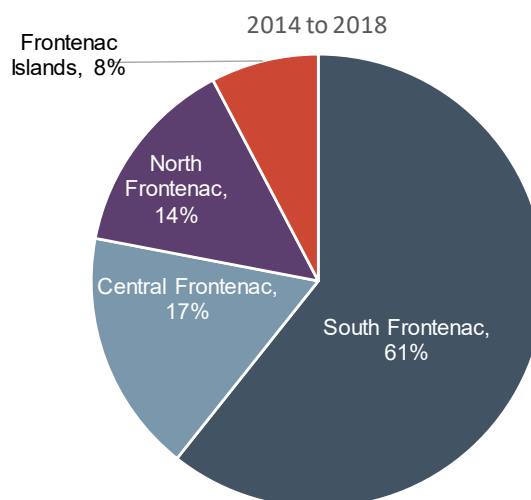


Source: Residential building permits from Statistics Canada, by Watson & Associates Economists Ltd., 2019.

Figure 4-14
Frontenac County
Historical Residential Building Permits, 2009 to 2018



Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019.



Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019.



4.3.2 Housing Headship Rates, 2001 to 2016

A headship rate is defined as the ratio of primary household maintainers, or heads of households, by major population age group (i.e. cohort). Between 2006 and 2016, the County's total headship rate increased slightly from 0.37 to 0.39. An understanding of historical headship rate trends is important because this information provides insights into household formation trends associated with population growth by age. While major fluctuations in headship rates are not common over time, the ratio of household maintainers per capita varies by population age group. For example, a municipality with a higher percentage of seniors will typically have a higher household maintainer ratio per capita (i.e. headship rate) compared to a municipality with a younger population. This is because households occupied by seniors typically have fewer children than households occupied by adults under 65 years of age. Accordingly, forecast trends in population age structure provide important insights into future headship rates and average housing occupancy trends for Frontenac County.

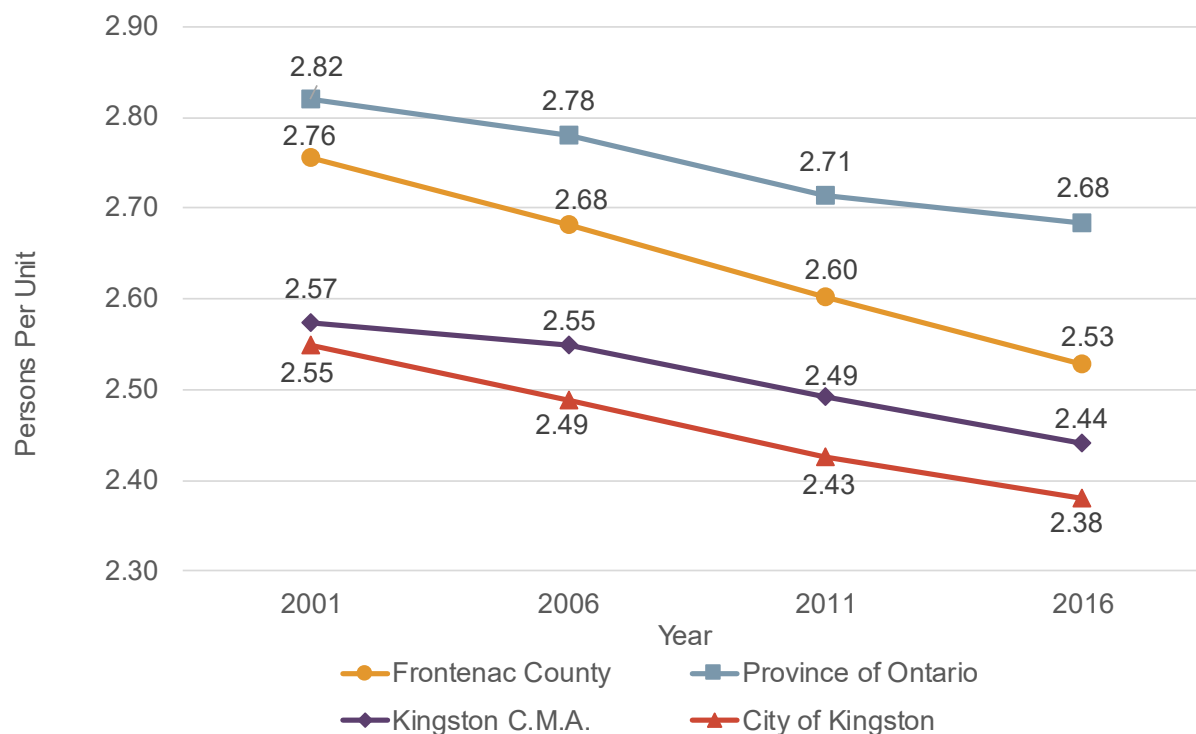
4.3.3 Persons Per Housing Unit, 2001 to 2016

Figure 3-13 summarizes average housing occupancy in Frontenac County relative to the City of Kingston, Kingston C.M.A. and the provincial average over the 2001 through 2016 period, expressed as an average persons per unit (P.P.U.) Key observations include the following:

- The average P.P.U. in Frontenac County has fallen since 2001, from 2.76 in 2001 to 2.53 in 2016. This P.P.U. decline is largely attributed to the aging of the population. This trend is anticipated to contribute to slower population growth and in some cases population decline over the next several decades in areas of the County that are experiencing limited new housing growth;
- On average, P.P.U. levels are relatively higher in Frontenac County compared to the City of Kingston and the Kingston C.M.A., but lower than the provincial average;
- Relative to the surrounding market area and the province as a whole, P.P.U. levels are declining at a slightly faster rate in Frontenac County.



Figure 4-15
Frontenac County
Historical P.P.U. Trends, 2001 to 2016



Source: Data from Statistics Canada Census 2001 to 2016, by Watson & Associates Economists Ltd., 2019.
Note: Population includes net Census undercount.

4.3.4 Housing Demand Trends by Structure Type

As previously mentioned, population age structure impacts several factors such as income/affordability, lifestyle, family size, lifestyle decisions, health and mobility. Over the next 30 years, housing demand within Frontenac County is anticipated to gradually shift from traditional low-density housing (i.e. single/semi-detached) to medium- and high-density housing forms (i.e. townhouses and low-rise apartments) largely driven by the County's aging population, but also from younger residents seeking competitively priced housing options.

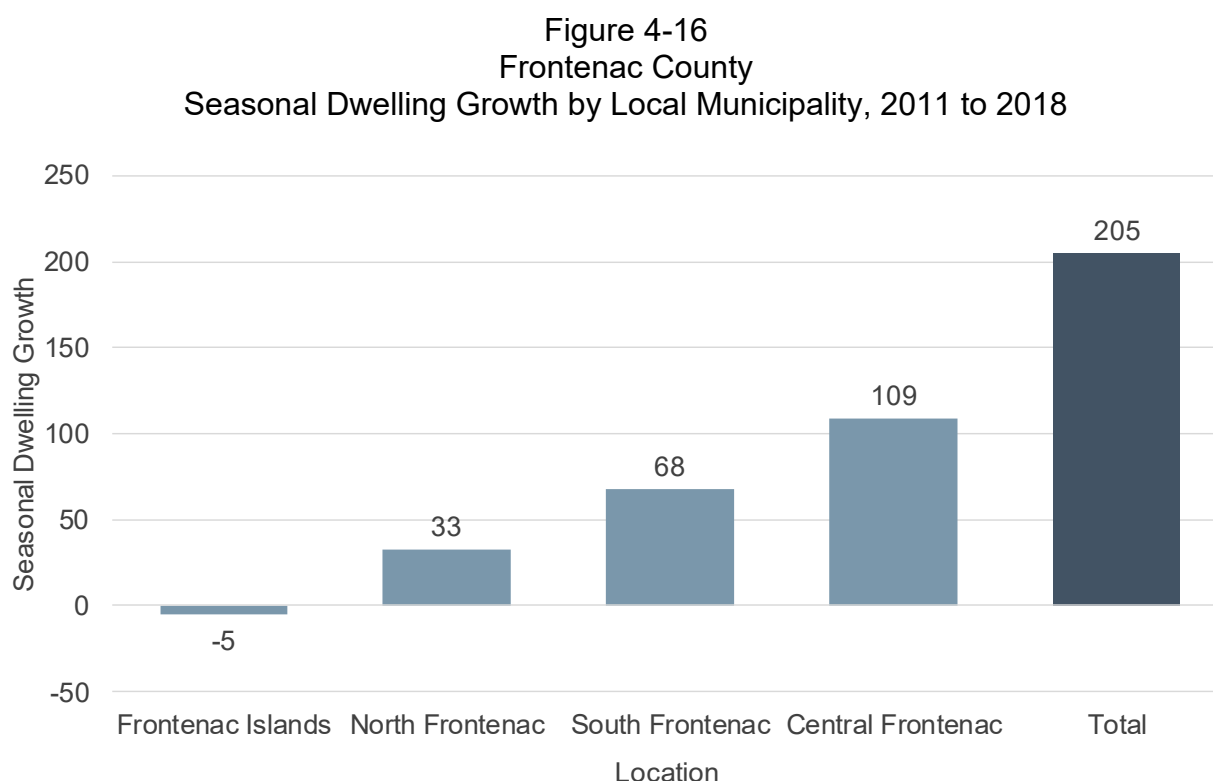
While outside the focus of this study, developments on communal services also have the capacity to drive medium density and high-density housing growth in the County's settlement areas. A further discussion regarding forecast housing trends by structure type is provided in Chapter 8.



4.4 Seasonal Housing Trends, 2011 to 2018

Figure 4-16 summarizes the share of seasonal dwelling growth¹ for each local municipality in Frontenac County. The following trends can be observed:

- The majority of recent new seasonal housing development in Frontenac County has occurred in Central Frontenac with a new increase of 109 seasonal dwellings between 2011 and 2018;
- South Frontenac and North Frontenac also experienced moderate new seasonal housing development during this time, with a net increase of 68 and 33 of seasonal dwellings respectively; and
- The total number of seasonal dwellings in Frontenac Islands decreased by five between 2011 and 2018.



Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019.

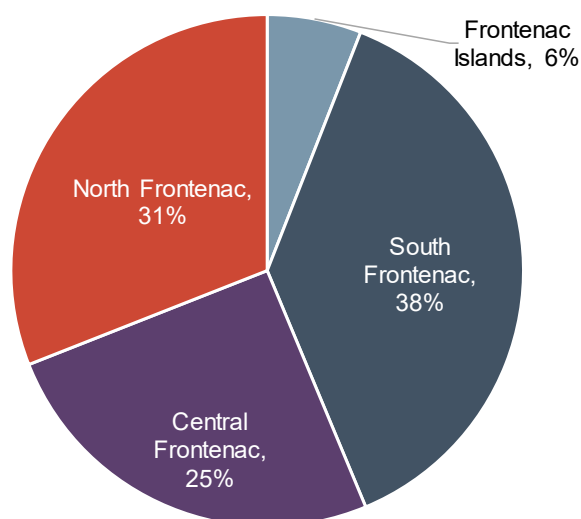
Note: Seasonal dwellings determined by MPAC unit classification of "RDU."

¹ Net of seasonal conversions to permanent occupancy.



Figure 4-17 summarizes the share of seasonal dwellings in Frontenac County as of 2018. Seasonal dwellings are relatively evenly distributed between South Frontenac, North Frontenac and Central Frontenac. Frontenac Islands has a considerable smaller share of seasonal dwellings compared to the rest of the County.

Figure 4-17
Frontenac County
Seasonal Housing Base by Local Municipality, 2018



Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Lt., 2019.

4.5 Observations

- At an annual population growth rate of 0.5%, Frontenac County has experienced a moderate population increase over the past 15 years.
- Strong 2018 postcensal estimates for the Kingston C.M.A. (Statistics Canada) combined with steady residential building permit activity across Frontenac County suggests that the rate of permanent population growth has increased in Frontenac County since 2016, relative to the 2011 to 2016 Statistics Canada Census period.
- Recent housing and growth in Frontenac County has been concentrated in the Township of South Frontenac, accounting for just under two-thirds of residential building permits issued for new dwellings over the last five years.



- Historically, housing demand within Frontenac County has been dominated by low-density housing forms (i.e. single-detached dwellings). As of 2016, 98% of the County's housing stock was comprised of single detached households.
- The County's population is aging. Between 2001 and 2016, the percentage of population within the 65+ age group (i.e. empty-nesters and seniors) has steadily increased from 21% to 35%. Over the next 20 years, the County's population of seniors (particularly older seniors in the 75+ age group) is anticipated to steadily increase, driven by the aging of the County's Baby Boom generation.
- The County's attractiveness to empty nesters/seniors (largely from the GTA, Greater Ottawa Region and City of Kingston) looking to retire in the County will also add to the population growth of older permanent residents. These demographic trends will have implications on the need for seniors' housing, affordable housing as well as the needs for community social services.
- The aging of the population has had an influence on average housing occupancy levels within the County. Between 2001 and 2016, average person per unit (P.P.U.) levels have steadily declined from 2.76 to 2.53. Over the forecast period, the average P.P.U. for the County is forecast to continue to gradually decline driven by the continued aging of the population.
- As of 2018, Central Frontenac has the third largest seasonal housing base but between 2011 to 2018 it has experienced the largest amount of growth with 53% of all seasonal dwellings. South Frontenac and North Frontenac have the largest seasonal housing bases and have both steady dwelling growth between 2011 to 2018. The seasonal housing base in Frontenac Islands is relatively small and has been experiencing a decline since 2011.



Chapter 5

Policy Context



5. Policy Context

Long term population, housing and employment forecasts form an important foundation for long range planning in Ontario. Decisions related to the provision of designated land, hard and soft services are all informed by growth projections. The following provides a brief overview of current provincial legislation and policies which are particularly relevant to long-term population and employment forecasting for Ontario municipalities. An overview of the relevant local O.P. policies and directions related to long term population, housing and employment forecasts is also provided herein.

5.1 Provincial Policy Context

5.1.1 Provincial Policy Statement (PPS)

The 2014 Provincial Policy Statement (PPS) was made effective April 30, 2014 and applies to all planning decisions made after that date. The *Planning Act* requires all planning decisions to be consistent with the PPS. The three pillars on which the PPS is based are strong communities, strong economies and a healthy natural environment. The PPS focuses growth within settlement areas, encouraging increases in density and intensification in order to minimize the need for settlement area boundary expansions and encroachments into natural heritage features and natural resource lands. The policies of the PPS apply throughout Ontario despite regional variations.

The entire PPS needs to be considered when planning how to manage growth in Frontenac, including policies focused on building strong communities, the management of resources and the protection of public health and safety. The following policies, however, require particular consideration in developing a strategy to manage future growth in Frontenac.

Settlement Areas

It is clear that the focus of the settlement area policies in the PPS is to direct the majority of growth to these areas in order to promote their vitality and regeneration. In order to ensure compact and efficient development that makes the most of existing and future planned infrastructure and minimizes encroachments into the surrounding natural areas, intensification and redevelopment is promoted. In this regard, targets for intensification and redevelopment are requirements that must be met before settlement



area boundary expansions can be considered. Settlement area boundary expansions may only be considered through a comprehensive review and where justified based on population and growth projections and integration with planning for infrastructure and public service facilities.

Policies of particular note are as follows:

- Section 1.1.2

“Sufficient land shall be made available through *intensification* and *redevelopment* and, if necessary, *designated growth areas*, to accommodate an appropriate range and mix of employment opportunities, housing and other land uses to meet projected needs for a time horizon of up to 20 year. However, where an alternative time period has been established for specific areas of the Province as a result of a provincial planning exercise or a *provincial plan*, the time frame may be used for municipalities within the area.”

- Section 1.1.3.1

“*Settlement areas*¹ shall be the focus of growth and their vitality and regeneration shall be promoted.”

- Section 1.1.3.5

“Planning authorities shall establish and implement minimum targets for intensification and *redevelopment* within built up areas. However, where provincial targets are established through *provincial plans*, the provincial target shall represent the minimum target for the affected areas.”

- Section 1.1.3.7

“Planning authorities shall establish and implement phasing policies to ensure that specified targets for *intensification* and *redevelopment* are achieved prior to, or concurrent with, new development in *designated growth areas*.”

- Section 1.1.3.7

¹ Section 6, Definitions, of the PPS, defines settlement areas as urban areas and rural settlement areas within municipalities (such as cities, towns, villages and hamlets) that are:

- a) built up areas where development is concentrated and which have a mix of land uses; and,
- b) lands which have been designated in an official plan for development over the long-term planning horizon provided for in policy 1.1.2. In cases where land in *designated growth areas* is not available, the *settlement area* may no larger than the area where development is concentrated.



“Planning authorities shall establish and implement phasing policies to ensure the orderly progression of development within *designated growth areas* and the timely provision of the *infrastructure* and *public service facilities* required to meet current and projected needs.”

- Section 1.1.3.8

“A planning authority may identify a *settlement area* or allow the expansion of a *settlement area* boundary only at the time of a *comprehensive review* and only where it has been demonstrated that:”

- a) sufficient opportunities for growth are not available through *intensification*, *redevelopment* and *designated growth areas* to accommodate the projected needs over the identified planning horizon;
- b) the infrastructure and *public service facilities* which are planned or available are suitable for the development over the long term and protect public health and safety;
- c) in *prime agricultural areas*:
 - 1. the lands do not comprise *specialty crop areas*;
 - 2. alternative locations have been evaluated, and
 - (i) there are no reasonable alternatives which avoid *prime agricultural areas*; and,
 - (ii) there are no reasonable alternatives on lower priority agricultural lands in *prime agricultural areas*; and
- d) impacts from new and expanding *settlement areas* on agricultural operations which are adjacent or close to the *settlement area* are mitigated to the extent feasible.

“In determining the appropriate direction for expansions to boundaries of *settlement areas* or the identification of a settlement area by a planning authority, a planning authority shall apply the policies of Section 2: Wise Use and Management of Resources and Section 3: Protecting Public Health and Safety.”

Rural Areas

Growth in rural areas is limited by the PPS to those uses which relate to the management or use of resources or which promote recreational, tourism or other economic opportunities and which are compatible with the rural landscape and can be sustained by rural service levels. Considerable discretion is left to municipalities to



determine appropriate growth depending on individual circumstances. The relevant policy is as follows:

- Section 1.1.4.1

"Healthy, integrated and viable *rural* areas should be supported by:

- a. Building upon rural character, and leveraging rural amenities and assets;
- b. Promoting regeneration, including the redevelopment of *brownfield sites*;
- c. Accommodating an appropriate range and mix of housing in rural *settlement areas*;
- d. Encouraging the conservation and *redevelopment* of existing rural housing stock on *rural lands*;
- e. Using rural *infrastructure* and *public service facilities* efficiently;
- f. Promoting diversification of the economic base and employment opportunities through goods and services, including value-added products and the sustainable management or use of resources;
- g. Providing opportunities for sustainable and diversified tourism, including leveraging historical, cultural, and natural assets;
- h. Conserving biodiversity and considering the ecological benefits provided by nature; and
- i. Providing opportunities for economic activities in prime agricultural areas, in accordance with policy 2.3."

It should be noted that Frontenac County's waterfront development constitutes rural, resource-based recreational development in the context of the PPS.

Coordination

The PPS requires upper tier municipalities to take a significant role in coordinating growth within its jurisdictional boundaries, including the identification, coordination and allocation of population, housing and employment projections, and the identification of targets for intensification and redevelopment before settlement area boundaries can be expanded. Policy 1.2.4 is of particular relevance:



"Where planning is conducted by an upper-tier municipality, the upper-tier municipality in consultation with lower-tier municipalities shall:

- a. identify, coordinate and allocate population, housing and employment projections for lower-tier municipalities. Allocations and projections by upper-tier municipalities shall be based on and reflect *provincial plans* where these exist;
- b. identify areas where growth will be directed, including the identification of nodes and the corridors linking these nodes;
- c. identify targets for *intensification* and *redevelopment* within all or any of the lower-tier municipalities, including minimum targets that should be met before expansion of the boundaries of *settlement areas* is permitted in accordance with policy 1.1.3.8;
- d. where transit corridors exist or are to be developed, identify density targets for areas adjacent or in proximity to these corridors, including minimum targets that should be met before expansion of the boundaries of *settlement areas* is permitted in accordance with policy 1.1.3.8; and
- e. identify and provide policy direction for the lower-tier municipalities on matters that cross municipal boundaries."

In the past, decisions related to population and employment projections throughout Frontenac County have been left, to a large degree, to the Area Municipalities. Frontenac needs to coordinate population projections and undertake a process whereby projected growth is allocated to the Area Municipalities.

Employment Areas

The PPS promotes economic development by encouraging a mix of employment uses, including industrial, commercial and institutional uses and by enabling a municipality to define and designate "employment areas," which may only be redesignated as part of a comprehensive review. Employment lands are defined in the PPS as "...including but not limited to, manufacturing, warehousing, office and associated retail and ancillary facilities." Policy 1.3.2.2 is as follows:

"Planning authorities may permit conversion of lands within *employment areas* to non-employment uses through a *comprehensive review*, only where it has been demonstrated that the land is not required for employment purposes over the long term and that there is a need for the conversion."



In Frontenac, employment is strongly linked to the tourism, service and resource sectors. Accordingly, policies related to employment growth and non-residential land uses must be made with this in mind.

Housing

The PPS requires that planning authorities maintain the ability to accommodate residential growth for a minimum of 10 years through residential intensification, redevelopment and other designated and available lands within a regional market area. In addition, affordable housing targets for the regional market area are required to be established by the upper tier municipality.

The term "regional market area" is defined as "...an area, generally broader than a lower tier municipality, that has a high degree of social and economic interaction. In southern Ontario, the upper or single-tier municipality will normally serve as the regional market area..."

Excerpts from Policies 1.4.1, 1.4.2 and 1.4.3 are contained below.

- 1.4.1

"To provide for an appropriate range and mix of housing types and densities required to meet projected requirements of current and future residents of the *regional market area*, planning authorities shall:

- a. maintain at all times the ability to accommodate residential growth for a minimum of 10 years through *residential intensification* and *redevelopment* and, if necessary, lands which are *designated and available* for residential development; and
- b. maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a 3 year supply of residential units available through lands suitably zoned to facilitate *residential intensification* and *redevelopment*, and land in draft approved and registered plans."

- 1.4.2

"Where planning is conducted by an upper-tier municipality:



- a. the land and unit supply maintained by the lower-tier municipality identified in policy 1.4.1 shall be based on and reflect the allocation of population and units by the upper-tier municipality; and
- b. the allocation of population and units by the upper-tier municipality shall be based on and reflect *provincial plans* where these exist."

- 1.4.3

"Planning authorities shall provide for an appropriate range of housing types and densities to meet projected requirements of current and future residents of the *regional market area* by:

- a. establishing and implementing minimum targets for the provision of housing which is *affordable to low and moderate income households*. However, where planning is conducted by an upper-tier municipality, the upper-tier municipality in consultation with the lower-tier municipalities may identify a higher target(s) which shall represent the minimum target(s) for these lower-tier municipalities...."

For Frontenac County, the term "regional market area" needs to be examined and defined in consideration of Frontenac's context. In this regard, it would not be reasonable to place Marysville and Plevna in one regional market area, as the two communities are located well over 100 kms from one another and are separated by a driving/ferry time of approximately 1.5 hours. As a result, there is little to no social or economic interaction between these two communities.

Servicing – Sewage and Water

The 2014 PPS clarifies a sewage and water servicing hierarchy which needs to be considered when accommodating development within the County's settlement areas. According to the 2014 PPS, Section 1.6.6.2 identifies that:

"Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas. Intensification and redevelopment within settlement areas on existing municipal sewage services and municipal water services should be promoted, wherever feasible."

With the exception of Sydenham, which has water servicing, the County's settlement areas are not municipally serviced. Given the limited population base, tax assessment base and forecast growth rates, providing full municipal servicing to the County's



settlement areas is likely cost prohibitive and not anticipated for the foreseeable future. Having regard for this local context, the PPS identifies in Section 1.6.6.3:

“Where municipal sewage services and municipal water services are not provided, municipalities may allow the use of private communal sewage services and private communal water services.”

In the absence of municipal or private communal servicing, Section 1.6.6.4 addresses the use of private individual servicing:

“Where municipal sewage services and municipal water services or private communal sewage services and private communal water services are not provided, individual on-site sewage services and individual on-site water services may be used provided that site conditions are suitable for the long-term provision of such services with no negative impacts. In settlement areas, these services may only be used for infilling and minor rounding out of existing development.”

The new 2014 PPS allows for infill and minor “rounding out” in settlement areas on septic tanks and wells where sewer and water services are not provided but it does need to be demonstrated that the development on private servicing will not negatively impact surface and ground water. The PPS does not define minor “rounding out” but for lower growth communities in the County, accommodating new residential growth on private servicing is likely appropriate under the requirements of the PPS. For larger-scale developments, local municipalities will need to assess the need to provide municipal servicing or require private communal servicing to be provided.

Other PPS Matters

Overall, the fact that the PPS is based on traditional growth assumptions and permanent population growth, largely based on experiences in southwestern Ontario needs to be recognized. In this regard, further analysis, which is beyond the scope of this study, needs to explore, whether the PPS (and the proposed PPS) asks the most relevant and important questions related to growth management, especially when dealing with rural, seasonal and retirement related growth in Frontenac County that does not fit into the traditional permanent population growth scenario of settlement areas.



5.1.2 Proposed Provincial Policy Statement (2019)

On July 22, 2019, a proposed P.P.S. was released by the Province for public review and comment. Its purpose was to update the 2014 P.P.S. so that it worked together with changes to the provincial land-use planning system that occurred around the same time. This includes changes to the Planning Act through Bill 108, More Homes, More Choice Act (2019) and an update to the Growth Plan for the Greater Golden Horseshoe (2017) which became A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019). Additional reasons for the update largely relate to the need to increase settlement area housing supply, support the economy and job creation, and reduce barriers and costs to the land-use planning system in order to provide greater predictability.

At the time of preparing these growth projections, the 2019 P.P.S. is proposed; however, it is still important to describe the types and magnitude of proposed changes that could affect managing growth and planning for infrastructure in the future. For example, policy 1.1.2 in the 2014 P.P.S. required municipalities to have enough supply to meet projected needs for a planning horizon of 20 years and did not limit planning for infrastructure beyond that planning horizon. The proposed 2019 P.P.S. suggests changes to this planning horizon to 30 years and includes Employment Areas as areas that could be planned for beyond that horizon. Proposed changes would also require the ability to maintain housing land supply to be increased to a minimum of 12 years, from the previous minimum of 10. These proposed changes largely relate to the goal of the proposed 2019 P.P.S. to support the economy and job creation, in addition to providing greater predictability to the land-use planning system.

Through a change in policy language from “shall” to “should,” the 2019 P.P.S. suggests a more encouraging rather than directive approach to ensuring new development in designated growth areas take a compact form (policy 1.1.3.6). This similar sentiment is expressed in proposed changes to phasing policies – phasing policies are encouraged to be used to manage intensification, redevelopment, and new development in designated growth areas (policy 1.1.3.7).

Although the 2019 P.P.S. is proposed at the time of conducting this growth analysis study for Frontenac County, it is important to be aware of the proposed policies, especially how they emphasize the need for municipalities to use a market-based approach for overall growth management and the provision of housing and employment



supply across the Province. Furthermore, in anticipation of the planning horizon changing from 20 to 25 years, the forecast horizon as per this M.C.R. update has been extended to 2046.

The proposed changes were open to public comment until October 21, 2019. If the Province enacts the proposed changes to the P.P.S. before the finalization of this report, they will be addressed at that time.

5.2 Frontenac County Policy Context

5.2.1 County of Frontenac Official Plan, 2016

Approved by the Ministry of Municipal Affairs and Housing in January 2016, the County of Frontenac Official Plan (O.P.) is the first regional plan for Frontenac. The County Official Plan creates the framework for guiding land use changes in the County to 2034 by protecting and managing the natural environment, directing and influencing growth patterns and facilitating the vision of the County as expressed through its residents. The Plan is focused on the six themes of economic sustainability, growth management, community building, housing and social services, heritage and culture, and environmental sustainability.

The smaller population and the large geographic area of Frontenac County result in a low population density that is scattered across the four Townships being Frontenac Islands, South Frontenac, Central Frontenac and North Frontenac. Section 3 of the O.P. - Growth Management - sets out the policies that are intended to guide growth including residential and non-residential development across Frontenac County. The policies in the Plan are intended to manage change from a regional level. Section 3.1 - Growth Projections for Frontenac County - contains the 2014 *Population, Housing, and Employment Projections for the Frontenacs* including a share of the projected population and household unit growth to 2034 for each Township. It is the intent of Frontenac County to amend the O.P. to update this section with the projections completed as part of this study.

Consistent with the 2014 P.P.S, the County O.P. directs growth to the settlement areas while recognizing that the lack of water and wastewater servicing will constrain development. The Plan also identifies requirement to meet long-term County land needs by providing a mix and range of employment opportunities and an adequate



housing supply. The Plan sets out objectives and policies for directing growth within settlement areas and promoting mixed use development including residential, commercial, institutional, parks and employment areas. The Plan further recognizes that rural lands, including waterfront areas, are an alternative for persons preferring a rural lifestyle and provide a location for commercial and industrial uses requiring a location in the rural area.

5.2.2 County of Frontenac Communal Services Study, 2019

In June 2019, the Council for the Corporation of the County of Frontenac approved the Communal Services Study completed by WSP Consulting¹. Communal services are systems that provide water and wastewater treatment to clusters of residences or businesses. The study demonstrated that engineering, finance, risk management, and planning were perceived obstacles and equipped Frontenac with the tools necessary to enable redevelopment and new development on the basis of communal servicing. The study found that communal servicing has the potential to support more compact, land efficient development than is possible with private servicing, at a lower cost than is possible with centralized municipal services and enable revitalization of Frontenac's communities.

Historically, housing has been dominated by low-density forms across the County as predominately single-detached dwellings. The prospect of communal servicing has the potential to support a broader range of housing density types. The County is undergoing the second phase of the communal services study that will evaluate ownership models for the system and the potential for a utility fund to support development. An O.P. amendment will be undertaken to the County O.P. and lower-tier plans will be required to come into conformity with the policies. It is anticipated that a future update to the *Population, Housing, and Employment Projections for the Frontenacs* may project a greater increase in medium-density and high-density housing mix as a result of this work.

5.3 Area Municipalities

As previously mentioned, there are four lower-tier Townships in Frontenac County: the Township of Frontenac Islands, Township of South Frontenac, Township of Central

¹ Frontenac County Communal Services Study, June 2019.



Frontenac and Township of North Frontenac. Each lower-tier Township has an O.P. that compliments the County O.P. by providing detailed strategies, policies and land use designations for planning and development at the local level.

5.3.1 The Township of South Frontenac

The Township of South Frontenac is undergoing an O.P. review that is anticipated to be completed in 2021. Currently, the Township is undergoing a visioning exercise with residents on the 20-year future vision for the Township. Population projections and allocations from this work will form the basis for the Township's growth management policies including waterfront development, settlement area and rural consent policies.

The Township of South Frontenac O.P. does not provide explicit direction regarding long-term population and employment growth trends. However, it does provide policy direction regarding settlement patterns and land use. The relevant policies are briefly summarized below.

Residential Policies

Section 5.6 of the South Frontenac O.P. directs the majority of new growth in the municipality to existing settlement areas where growth can be supported by appropriate servicing. The Settlement Areas designation recognizes the areas of population concentrated in and around Sydenham, Harrowsmith, Verona, Inverary, Sunbury, Battersea, Hartington, Bellrock, Petworth, Perth Road, Railton, Wilmer and Spaffordton.

It is the municipality's intention that new lot development in Settlement Areas will generally occur by plan of subdivision. However, a maximum of three severances may be permitted from a lot of record existing on the day of adoption of the O.P. by Council where it is demonstrated that a plan of subdivision is not necessary for the orderly development of land and will not limit such development by plan of subdivision.

Rural Area

Section 5.7 of the O.P. sets out the policies within South Frontenac with respect to rural development. Generally, the amount and type of development in the rural area shall be consistent with maintaining its rural, natural heritage and cultural landscape.

Commercial Policies



Section 5.6.3 of the O.P. sets out the policies related to commercial development within South Frontenac. New commercial uses shall be encouraged to locate in proximity to existing commercial establishments to foster the development of commercial cores.

Industrial Policies

Sections 5.6.4 and 5.7.6 set out the policies related to industrial and rural industrial development within South Frontenac. Industrial uses generally shall be located on major arterial or collector roads, although Council may give consideration to the use of other public roads where they are satisfied that not suitable alternative locations are available.

5.3.2 Township of Central Frontenac

The Township of Central Frontenac is nearing completion of a new Plan that is expected to be adopted in early 2020. The O.P. will refine the settlement area policies for the Township and proposes a special policy area for Sharbot Lake titled “Destination Sharbot Lake” that provide objectives for new development and redevelopment within the settlement area. There are new growth policies proposed that may attribute to more recreational commercial development and growth in commercial and industrial sectors across the Township.

The Township of Central Frontenac O.P. was approved on June 18, 2008. The planning period for the O.P. is intended to be approximately 20 years (2000-2020). Over this time period, the Plan projects a potential population increase of 1,687 based on a projected growth rate of 1.5% per year. This translates to a permanent population base of 6,584 by 2020, excluding seasonal population.

Settlement Patterns

As set out in Section 7.5 of the O.P., future growth will occur primary through waterfront residential development. Within this rural setting there are several settlement areas. The Plan establishes two categories of settlement areas:

1. Village Hamlet and Cross Road Settlement Areas; and
2. Rural Area.

Of the Village Hamlet areas, Sharbot Lake (village) is the largest and offers the most extensive scope and mix of land uses and public services. Parham, Mountain Grove



and Arden are hamlets which provide a more limited range of services to surrounding inhabitants. There are a number of predominantly residential cross road communities which round out the settlement pattern (Tichborne, Piccadilly, Henderson, Elm Tree, Crow Lake). The role of these settlement areas will be to provide a basic level of commercial and public service uses which caters to local residents and the tourist industry.

Within Village Hamlet and Cross Road Settlement Areas plans of subdivision will be utilized as the primary method for new residential development. Development by means of consent (no limit) may be permitted where this is deemed to be an appropriate and efficient means of development.

Rural Area

Within the Rural Area, the Plan provides for a supply of land for rural residential and recreational oriented land uses. Rural residential includes both permanent and seasonal land uses. As previously identified, a major focus of development in the rural area will be on lake front residential development in the many lakes and water bodies within the Township. The Plan also provides for development in other parts of the rural area as well.

Commercial and Industrial

Section 3.5.2 of the Central Frontenac O.P. sets out land use policies and principles related to commercial uses. Sharbot Lake is designated as a commercial district with a range of commercial uses such as retail stores and personal service uses. Section 3.5.3 further establishes land use policies and principles for the Township's Employment Districts. The Employment District is intended to be developed as an economic hub where a cluster of employment uses is encouraged. These uses may include a mix and a range of commercial, industrial and institutional uses and associated ancillary uses which are designed to meet the long-term employment needs of the community and to encourage tourism.



5.3.3 Township of North Frontenac

The Township of North Frontenac's O.P. was approved in September 2017. The O.P. conforms to the Frontenac County O.P. and is consistent with the 2014 P.P.S. The purpose of the Plan is to

“...guide and direct future growth in a logical and orderly manner, to protect existing development from the adverse effects which may arise from incompatible development and redevelopment, and to ensure healthy and sustainable growth while encouraging economic development that will benefit all residents of the Township.”

Objectives of the Plan are to provide for a range of housing types and densities, which meet the existing and future needs of a largely rural demographic, as well as an aging population. It is the intent of Township Council to monitor population, employment and housing development with regard to trends across the County and their impact on growth management strategy in North Frontenac.

With respect to existing economic conditions, the O.P. identifies that the economic base of the Township has shifted from a resource-based economy to a service-based economy. There is virtually no industrial activity and the commercial/industrial assessment base is less than 5% of the total assessment value of properties within the Township. Future economic growth potential within the Township is largely centred around eco-tourism, destination travel, and small business development (i.e. telecommuting information industries). Council recognizes that home-based businesses are an important component of the economic base of the community and are the genesis of job creation and the provision of goods and services to local and regional markets. As such, it is the

“...intent of Council is to strengthen the economic base by building on the assets that a remote and pristine area has to offer. This will take the form of encouraging residential development that is environmentally sustainable, by encouraging home based and small businesses, by fostering the expansion of the service industry sector and by conserving areas of renewable and non-renewable resources for their economic benefit.”

Settlement Area Land Use Policies

The Plan encourages infill residential development within its five Hamlet Settlement Areas, namely, Ardoch, Cloyne, Harlowe, Ompah, Plevna, and Snow Road Station.



Within these Hamlet Settlement Areas, commercial uses which service the needs of residents and the traveling public and tourism industry are permitted. Light and medium service type industries which provide services and/or products for the immediate area are also permitted within Hamlet Settlement Areas.

Rural Area

Within the Rural area, the Plan provides for a supply of land for a diversity of traditional and evolving rural uses. The goal of this Plan is to establish policies that will help the Township deliver a sustainable, living, working rural area that supports existing and future residents who wish to live and work in North Frontenac.

5.3.4 Township of Frontenac Islands

The Township of Frontenac Islands is undergoing a secondary plan exercise for Marysville, the only settlement area in the Township to determine where future residential and commercial growth can be allocated. The findings of the secondary plan will be incorporated through an official plan amendment to the local O.P., with an update to the Official Plan projected for 2021. The settlement area for Marysville has been identified as a location that could support communal services with the potential for an increase in the housing mix.

The Township of Frontenac Islands' most recent five-year O.P. review (Official Plan Amendment #3) was approved by the Ministry of Municipal Affairs and Housing on May 28, 2013, with proposed changes to the Rural designation and private roads policies still being subject to an ongoing appeal. The policies and maps contained in the O.P. cover the planning period to the year 2020. As set out in Section 1.3 of the Plan, the general purpose of this Plan is to:

“provide a comprehensive document to guide and direct the use of land in the Township of Frontenac Islands throughout the planning period.”

The plan is intended to undergo a comprehensive review every five years.

The Township's vision embraces the concept of sustainable development through land use decisions that integrate human needs with the natural and built environment. To fulfil this vision, future development will be encouraged within existing settlement areas which is contiguous to existing development.



The Township's two main islands have displayed markedly different growth patterns. Howe Island has shown rapid growth in permanent residential population. Much of this growth appears to be through conversion of existing cottages to permanent occupancy. The O.P. review document identifies that to sustain this growth new development areas will be required on Howe Island. On the other hand, Wolfe Island has had very little population growth during the same period, which is believed to be largely due to its lack of accessibility in comparison to Howe Island.

The O.P. review states that population growth on Frontenac Islands will depend on employment generation elsewhere in the surrounding market area coupled with lifestyle choices of people who are currently employed in the greater Kingston area but who choose to live on the Islands.

With respect to housing form, the range of housing types and densities is limited on the Islands. The predominance of low density single detached dwellings, however, is expected to continue. The O.P. review recommends the following housing mix over the planning period:

- Low Density (singles, two-unit housing, converted) – 70-80%;
- Medium Density (triplexes and row or town housing) – 10-15%;
- High Density (Apartments) – 5-10%.

In terms of the location of growth, the O.P. review identifies that most of the new residential growth will occur in waterfront areas. There will also be considerable construction of existing lots of record that are currently vacant in rural areas of the waterfront.

The improvement of Ferry Service to both Islands has dominated municipal discussions. A decision regarding the improvement to the Ferry Service for Wolfe Island will depend on an environmental assessment undertaken by the Ministry of Transportation designed to examine and quantify current operational characteristics of the ferry service to determine future transportation needs.

Settlement Areas

The largest settlement area in the Municipality is Marysville on Wolfe Island. Current sewer and water services rely on individual, private services. The dominant form of development has been shoreline related. Much of the most suitable shoreline has been



developed. The O.P. review recommends that future development should be by means of plans of subdivision and should be directed to the extension of existing clusters. Growth in permanent residential development has been and will likely continue on the basis of either conversion of existing cottages, development of exiting vacant lots and severances in the Rural area.

Rural Areas

Agriculture is recognized as an important component of the economic base, a source of employment and the basis for a rural way of life. Therefore, it is the intent of this Plan to protect land suitable for agricultural production from scattered development and land uses which are unrelated to agriculture. The Township will direct limited non-farm growth to the Rural Areas provided it will not interfere with or limit existing farm activity in the Rural designation. The development of land in the Rural Areas will be primarily by consent to a land severance.

Commercial Development

The O.P. review for the Township of Frontenac Islands requires that all new commercial uses and the expansion of existing commercial uses shall proceed subject to the approval of a zoning by-law amendment and to site plan control, in order to establish the arrangement and density of development.

Home-Based Businesses

Home occupations-based businesses will be encouraged as a means to strengthen the economic base of the community and shall be permitted in all designations that permit residential uses. Home based businesses centered on art galleries and studios are considered to be a defining element of the Municipality's character. A branding feature of the municipality is its reputation as an artist friendly community. Home occupations-based businesses shall be permitted provided compatibility with surrounding uses is ensured. Specific regulations for home occupations-based businesses may be included in the implementing Zoning By-law or through controls under the *Municipal Act* (e.g. number and types of businesses, floor space, signage, parking, hours of operation, storage).



5.4 Conclusions

The directions of both provincial and local planning policy are aimed at building economically strong, complete communities which are well balanced between population and employment, but also support a healthy and sustainable natural environment. At both the provincial and local level, growth is directed to settlement areas which are serviced with municipal infrastructure.

Looking forward, there are a number of economic indicators which suggest that growth pressures will continue throughout Frontenac County, given the County's proximity to the City of Kingston and the attractiveness of its rural and recreational areas to a broad range of demographic groups (i.e. families, empty nesters, seniors). On the other hand, the County and its Area Municipalities face a number of challenges regarding their ability to influence and direct the amount, type and location of future development.

Looking ahead, without considerable investment in settlement area infrastructure services, it appears unlikely that future development patterns (i.e. settlement area vs. rural location, density) will change significantly over the next 25 years as a result of policy direction. The prospective of communal servicing, however, has the potential to support a broader range of housing density types. The County is undergoing the second phase of the communal services project that will evaluate ownership models for the system and the potential for a utility fund to support development.



Chapter 6

Regional and Local Growth Drivers



6. Regional and Local Growth Drivers

This chapter provides an investigation of population and employment growth drivers for Frontenac County from a regional and local perspective. A broad range of considerations related to demographics, economics, socio-economic and infrastructure are anticipated to drive future growth throughout Frontenac County over the 2016 through 2046 planning period. Local housing opportunities and residential/non-residential land supply opportunities will be explored in detail in Chapter 7 (supply analysis). This analysis provides additional insights with respect to rate, density, built form and magnitude of residential and non-residential growth development, as well as the allocation of local population and employment growth by settlement area and rural area.

6.1 Regional Growth Drivers

6.1.1 The Kingston C.M.A. Economy has Recently Exhibited Increasing Strength in Both Goods Producing and Service Providing Sectors

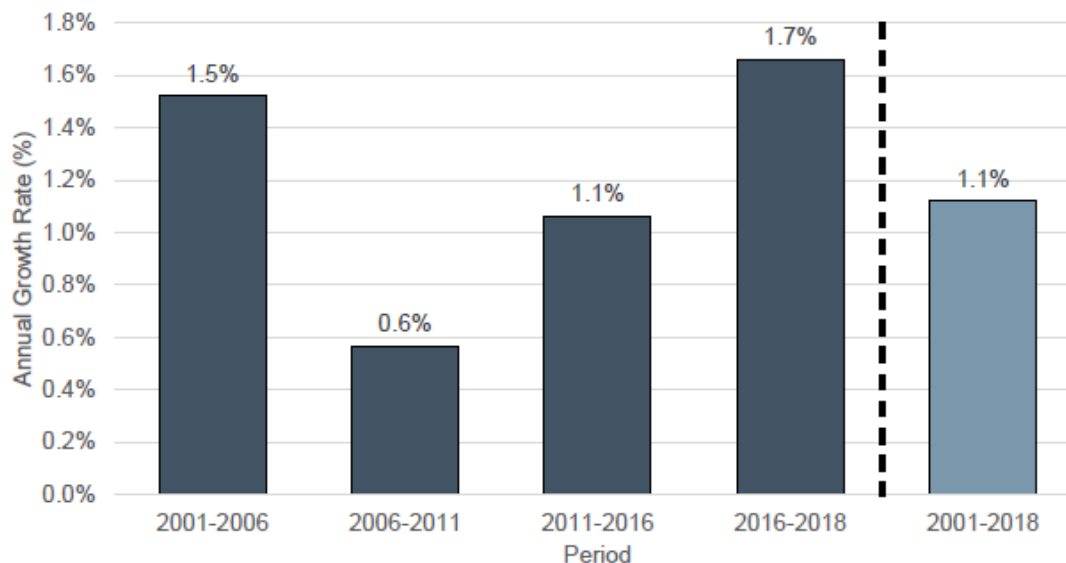
Forecast population growth potential within the Kingston C.M.A. is directly tied to the economic outlook and competitive position of Ontario and beyond. Future provincial economic growth potential directly influences the number of intra-provincial and inter-provincial migrants and international migrants, who are attracted to Ontario for employment opportunities.

Figure 6-1 through 6-3 summarizes labour force growth trends over the past 18 years (2001-2018) for the Kingston C.M.A.¹ Over this historical period the Kingston C.M.A. has experienced steady labour force growth with an annual average growth rate of 1.1%. Labour forecast growth rates have steadily increased since 2006, with post-2016 labour forecast growth notably stronger across the broader goods producing sectors (i.e. industrial) and servicing providing sectors. Historically, average unemployment rates across the Kingston C.M.A. rates have been below or comparable to the provincial average since 2001 and were most recently reported at 5.6% in 2018.

¹ As previously noted, the Kingston CMA includes the City of Kingston, Township of Frontenac Islands, Loyalist Township and South Frontenac Township.

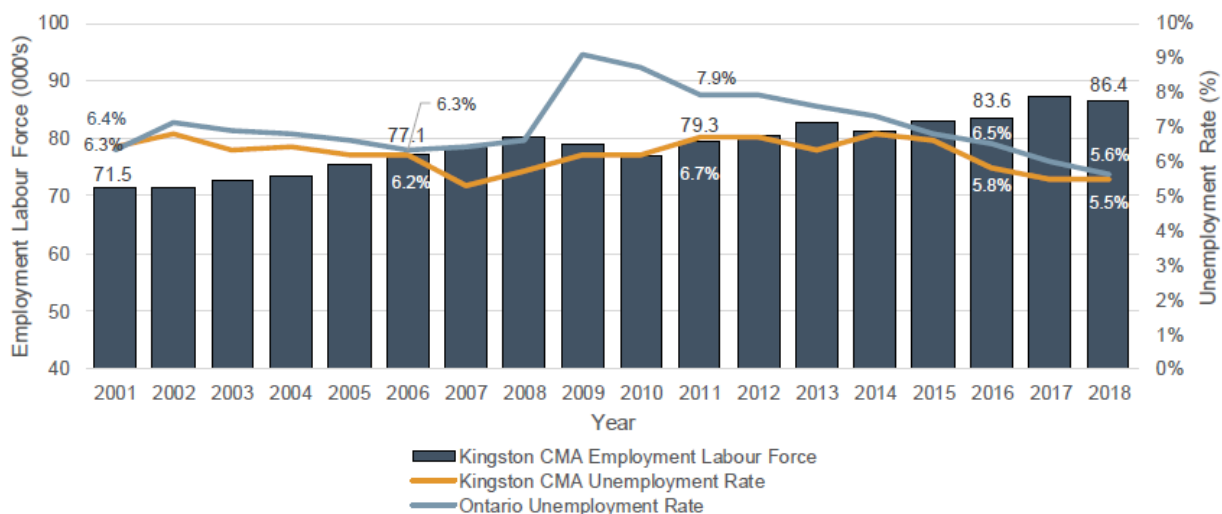


Figure 6-1
Kingston C.M.A.
Labour Force Trends, 2001 to 2018



Source: Derived from Statistics Canada Table 14-10-0098-01, Employment by Industry, Annual, Census Metropolitan Areas, by Watson & Associates Economists Ltd., 2019.

Figure 6-2
Kingston C.M.A.
Labour Force Trends, 2001 to 2018



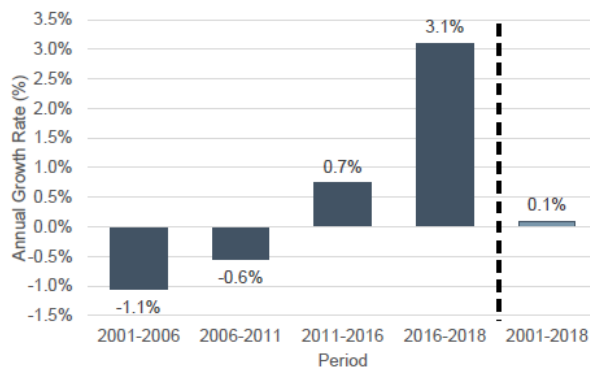
Note: Statistics Canada Labour Force Survey and Census labour force statistics may differ.
Source: Kingston CMA employed labour force from Statistics Canada Table 14-10-0098-01 and unemployment rate from Table 14-10-0096-01. Province of Ontario unemployment rate from Statistics Canada Table 14-10-0090-01. By Watson & Associates Economists Ltd., 2019.



As the provincial economy continues to shift from traditional “goods producing” sectors to “service producing” sectors, an increasing share of employment growth (and associated economic output) within the Kingston C.M.A. is anticipated to occur across the service sector, including the retail sector and an increasing concentration of “knowledge-based” employment clusters. Examples of such knowledge-based employment clusters include health sciences, professional and scientific services, business services and education. In turn, the continued expansion of the Kingston area employment market is expected to be a major draw for commuting opportunities and new housing development within Frontenac County.

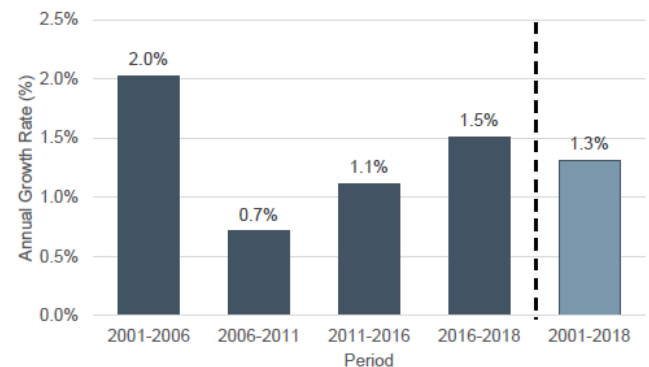
Figure 6-3
Kingston C.M.A.
Labour Force Growth by Major Sector, 2001 to 2018

Goods Producing Sectors



Source: Derived from Statistics Canada Table 14-10-0098-01, Employment by Industry, Annual, Census Metropolitan Areas, by Watson & Associates Economists Ltd., 2019.

Service Producing Sectors



Source: Derived from Statistics Canada Table 14-10-0098-01, Employment by Industry, Annual, Census Metropolitan Areas, by Watson & Associates Economists Ltd., 2019.

6.1.2 Commuting Patterns in Frontenac County, 2001 and 2016

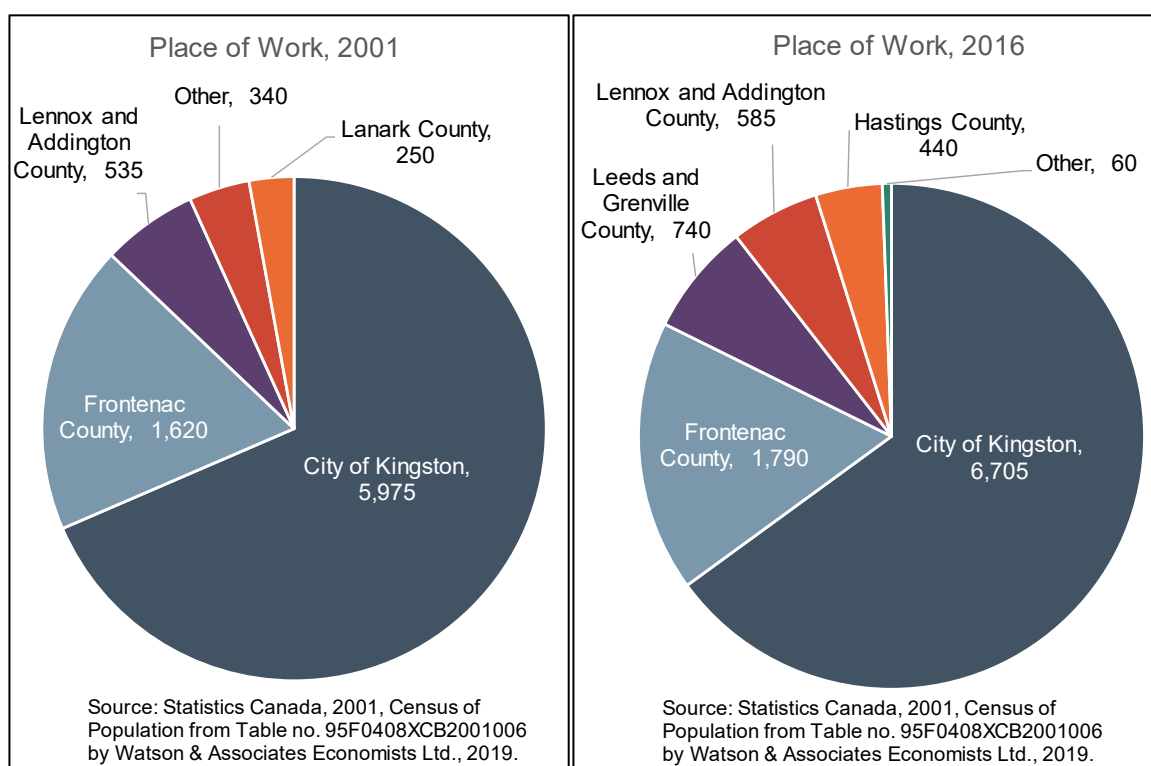
The proximity to the Kingston area employment market will not only be a key driver regarding the magnitude of population growth, it will also strongly influence the location of permanent population and housing growth at the local municipal level. Accordingly, local municipalities such as the Township of South Frontenac and the Township of Frontenac Islands have historically experienced the highest rates of permanent population growth. Subject to potential settlement area/rural housing supply opportunities and infrastructure capacity (i.e. municipal water and/or wastewater, provincial roads, ferry service, etc.) these local municipalities are expected to continue to experience the highest permanent population growth rates moving forward over the



next 30 years. Figure 6-4 summarizes the commuting patterns of Frontenac County residents in 2001 and 2016. The following trends can be observed:

- While the share of Frontenac County residents working in the City of Kingston has slightly declined between 2001 and 2016, the City still employs roughly two-thirds of the County's working population;
- The percentage of Frontenac residents working within the County has also slightly decreased from 19% to 17%, however, the total number of live/work residents has increased by 200; and
- Between 2001 and 2016, a growing share of Frontenac County residents are travelling to Leeds and Grenville County and Hastings County (including Belleville) for employment.

Figure 6-4
Frontenac County
Where Frontenac County Residents Work, 2001 and 2016





6.1.3 Continued Demand for Steady Seasonal Dwelling Growth from the G.G.H. and Greater Ottawa

Frontenac County has a large seasonal housing base, which is forecast to steadily increase over the next 30 years. Within Frontenac County, the municipalities of North and South Frontenac have the largest seasonal population base, while Central Frontenac has been experiencing the fastest levels of seasonal growth between 2011 and 2018.¹

Travelling by car, Frontenac County is located approximately one and a half to four hours east of the fastest growing Cities/Regions in North America, known as the Greater Golden Horseshoe (G.G.H.). This region comprises the municipalities that make up the Greater Toronto Hamilton Area (G.T.H.A.), as well as the surrounding Regions/Counties within Central Ontario, known as the G.G.H. “Outer Ring,” which extends from Haldimand County in the southwest to Simcoe County in the north, to Peterborough County in the northeast. Population in the G.G.H. is expected to grow by roughly 4 million persons between 2016 and 2041.

Demand for seasonal housing will also be generated from residents in the Ottawa C.M.A. The Ottawa C.M.A. has grown at an annual rate of 1.2% over the last 15 years and continued strong population growth in this area will continue to generate demand for seasonal housing opportunities in Frontenac County. Over the next several decades steady demand for seasonal housing is expected from these two major regional urban centres, largely driven by both Baby Boomers and Millennials. This demographic trend is also anticipated to drive the potential for the conversion of seasonal dwellings to permanent households.

6.1.4 Conversions of Seasonal Dwellings to Permanent Housing

Demand for seasonal housing in Frontenac County generates unique impacts on the County and its local municipalities, which are typically not experienced in municipalities where seasonal housing is not predominate. First, it places increasing demands on local/regional services and amenities (i.e. roads, recreation facilities, libraries, marinas, retail, etc.) during the peak summer season as the seasonal population continues to grow. Secondly, it adds to the permanent population growth rate over time as a portion

¹ According to Municipal Property Assessment Corporation (MPAC) data for Frontenac County.



of seasonal residents choose to live permanently at the “cottage” for an extended or indefinite period of time. The result is that the permanent population growth rates continue to be inflated between Census periods as members of the seasonal population base choose to become permanent residents. Over the next 30 years, the conversion of seasonal dwellings to permanent housing units is anticipated to contribute to permanent population and housing growth in Frontenac County. Recent conversion data suggests that this trend will be more pronounced over the next several decades than previously anticipated in the 2014 Growth Projections Study.

6.2 Local Growth Drivers

6.2.1 Population Growth of the 55+ Age Group

It is important to recognize that the population base of Frontenac County is older on average and aging at a slightly faster rate relative to the Province as a whole. The County’s 55+ age group has grown considerably over the past 30 years and is expected to increase in both percentage and absolute terms over the next several decades, largely due to the aging of the County’s Baby Boom population. The aging of the County’s population base is anticipated to place downward pressure on the rate of population and labour force growth within the County given declining population growth resulting from natural increase (i.e. births less deaths) combined with downward pressure on the regional labour force participation rate.¹

Similar to the Province as a whole, the County will increasingly become more reliant on net migration as a source of population growth as a result of these demographic conditions. It is important to recognize these demographic trends, as they are anticipated to constrain the rate of population and economic growth expected across the County over the next several decades. It is also important to recognize that forecast population growth rates are not anticipated to be homogenous across the County’s settlement areas and rural areas.

Throughout the County’s rural areas population growth is anticipated to be slow and in some cases negative, over the next several decades in areas that are experiencing limited new housing development. Population growth may also be slow in smaller

¹ The labour force participation rate is calculated by dividing the total labour force by the population 15 years and older.



communities (i.e. villages and hamlets) that are accommodating moderate new housing development due to declining housing occupancy levels associated with an aging population.

In certain cases, the aging population base is also anticipated to place increasing development pressures on some of the County's larger settlement areas. For example, the aging of the County's population is anticipated to drive the need for seniors' housing and other housing forms geared to older adults (e.g. assisted living, affordable housing, adult lifestyle housing), that are not available, or cannot be provided for, in smaller hamlets and the surrounding rural area.

Given the diversity of the 55-74 and 75+ population age groups, forecast housing demand across Frontenac County within this broad 55+ demographic group is anticipated to vary considerably. Within the 55+ age group, housing demand within the 55-74 age group is anticipated to be relatively strong for ground-oriented housing forms (i.e. single detached, semi-detached and townhouses) provided in locations which offer proximity to settlement area amenities, municipal services and community infrastructure. With respect to the 75+ age group, the physical and socio-economic characteristics of this age group (on average) are considerably different from those of younger seniors, empty-nesters and working adults with respect to income, mobility and health. Typically, these characteristics represent a key driver behind the increased propensity of the 75+ population age group for medium- and high-density housing forms (including seniors' housing) that are in proximity to municipal and community services (e.g. health care services) as well as other community facilities which typically attract this age group.

6.2.2 Wolfe Island Ferry

The Ministry of Transportation (MTO) announced an expansion to the existing ferry service to Wolfe Island with the addition of a new ferry capable of carrying of 75 vehicles (399 passengers). The new ferry has an expected operation date of 2021 and it will run year-round with full service to Marysville. It has yet to be confirmed whether the existing ferry service will run alongside the new ferry during peak months. This improved ferry capacity is expected to generate increased residential market demand on Wolfe Island, as well as potentially create increased pressure to convert seasonal households to permanent occupancy, driven by the increased accessibility of Marysville during the winter months. To varying levels, the population and employment forecast



scenarios provided herein (Chapter 8) reflect this anticipated increase in residential demand on Wolfe Island.

6.2.3 Quality of Life

Quality of life is a key factor influencing the residential location decisions of individuals and their families. It is also a factor considered by companies regarding location decisions. Typically, quality of life encompasses several sub-factors such as employment opportunities, cost of living, housing affordability, crime levels, quality of schools, transportation, recreational opportunities, climate, arts and culture, entertainment, amenities and population diversity. The importance of such factors, however, will vary considerably depending on life stage and individual preferences. As previously identified, the urban and rural character of Frontenac County offers a high quality of life which is expected to drive net migration from a broad range of demographic groups, including first time home buyers, families, empty nesters and seniors.



Chapter 7

Future Housing Supply on Vacant Lands in Frontenac County



7. Future Housing Supply on Vacant Lands in Frontenac County

7.1 Introduction

This chapter summarizes potential new housing opportunities in active development plans as well as the potential supply of vacant developable designated residential lands within settlement areas across Frontenac County. A detailed analysis of the County's future housing supply potential on underutilized residentially designated lands (i.e. intensification) has not been prepared as part of this study. The County's future housing supply potential has been summarized by development status for each Area Municipality. The County also has a large supply of rural lands located on vacant rural lots of record. In addition, new rural lots are anticipated to be generated over the growth forecast period through consent (refer to Section 7.4).

7.2 Summary of Applications for Plans of Subdivision/Condominium

Figure 7-1 provides a summary of potential housing developments within proposed plans of subdivision/condominium across Frontenac County. Map 7-1 geographically illustrates the location of the proposed plans in South Frontenac while Figure 7-1 provides additional details of the plans of subdivision/condominium regarding their address, development type and number of units available. Key observations include:

- A total of 187 proposed housing units are potentially available on vacant lots within plans which are proposed, draft approved or approved throughout the County;
- The County's entire active housing supply is in low-density housing forms (i.e. single detached);
- Approximately 86% of the County's active housing supply in the development approvals process is located within the Township of South Frontenac; and
- Two of the 11 planned/proposed residential developments are available within designated settlement areas. The remaining development applications are located outside designated settlement areas.



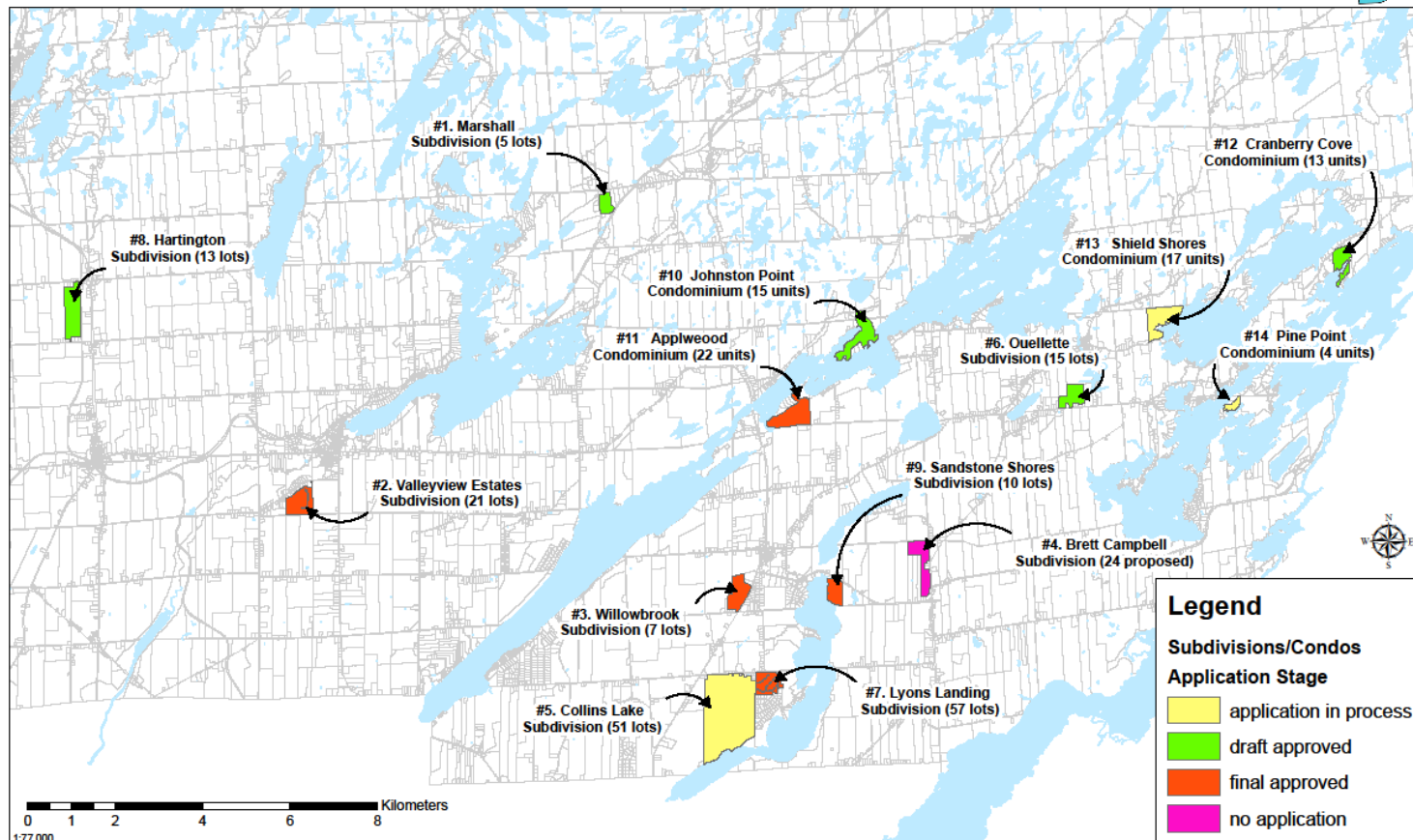
Figure 7-1
Frontenac County
Potential Housing Supply in Plans of Subdivision/Condominium

Subdivision/Condominium	Proposed Number of Housing Units				Development Status	Inside Settlement Area
	Dwelling Type					
	Low-Density	Medium-Density	High-Density	Total Housing		
South Frontenac						
Brett Cambell Subdivision	24	0	0	24	Pre-Applications	Sunbury
Collins Lake Subdivision	53	0	0	53	Application Review	Outside Settlement Area
Pine Point Condominium	4	0	0	4	Application Review	Outside Settlement Area
Shield Shores Condominium	18	0	0	18	Draft Approval	Outside Settlement Area
Oullette Subdivision	15	0	0	15	Draft Approval	Outside Settlement Area
Cranberry Cove Condominium	13	0	0	13	Draft Approval	Outside Settlement Area
Hartington Subdivision	13	0	0	13	Draft Approval	Outside Settlement Area
Johnston Point Condominium	15	0	0	15	Draft Approval	Outside Settlement Area
McFadden	5	0	0	5	Final Approval	Wilmer
North Frontenac						
Ardoch Lake Subdivision	23	0	0	23	Application Review	Outside Settlement Area
Frontenac Islands						
Nokomis Lodge	4	0	0	4	Pre-Applications	Outside Settlement Area
Total Housing Supply Potential	187	0	0	187		

Source: Supply data provided by Frontenac County, as of July 2019.



Map 7-1
Frontenac County
Currently Active Subdivisions and Condominiums (March 2019)



Source: Frontenac County, March 2019.

¹ Map provided by Frontenac County and displays all active developments in South Frontenac.



7.3 Vacant Residential Lands within Designated Settlement Areas

As previously identified in Chapter 5, it is a policy goal of each local O.P. to encourage new residential development in designated settlement areas of the County. Further, the PPS also directs new residential development to settlement areas. While it is beyond the scope of this assignment to provide a detailed supply analysis for each of the designated settlement areas within Frontenac County, a high-level review of vacant residential lands within designated settlement areas was provided based on GIS data supplied by the County. This analysis does not include designated vacant farmland.

This review indicates that the County had a total inventory of 354 gross Ha (875 gross acres) of vacant residential lands within settlement areas as defined in each of the local Township O.P.s. As summarized in Figure 7-2, approximately 88% of these lands are in South and North Frontenac. The supply of designated vacant land within settlement areas is relatively limited in the Township of Frontenac Islands and Central Frontenac.

Figure 7-2
Frontenac County
Summary of Vacant Designated Land with Settlement Areas

Township	Total Vacant Designated Residential Lands in Settlement Areas (Hectares)	Percentage of Total Vacant Residential Land in Settlement Areas
South Frontenac	156.3	44%
Frontenac Islands	8.7	2%
Central Frontenac	32.2	9%
North Frontenac	156.6	44%
Total	353.8	100%

Source: Watson & Associates Economists Ltd., 2019.

7.4 Rural Lot Supply

Based on a review of proposed plans of subdivision within the rural area, historical trends regarding building permit (new units only), consent activity and discussions with Frontenac County, it appears that the County's supply of vacant rural lots are not constrained within any Area Municipalities of Frontenac. As such, a significant share of future housing development can potentially be accommodated within rural areas.



Chapter 8

Population, Housing and Employment Forecast, 2016 to 2046



8. Population, Housing and Employment Forecast, 2016 to 2046

8.1 Introduction

In accordance with recent demographic, economic and socio-economic trends, as well as the growth drivers identified for the County, a long-term population, housing and employment forecast has been prepared and summarized below. In developing the County's long-term population forecast, consideration has also been given to the most recent long-term population, housing and employment forecast for the Kingston C.M.A. and eastern Ontario.

8.2 Kingston C.M.A. Employment Forecast, 2016 to 2046

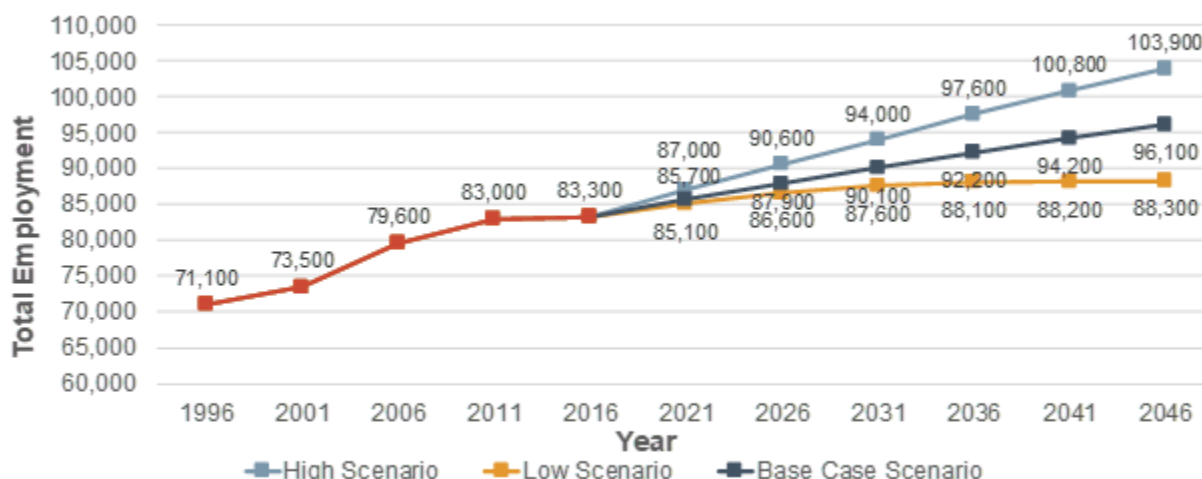
Figure 8-1 graphically compares three long-term population growth forecast scenarios for the Kingston C.M.A. (i.e. “high,” “base” and “low” growth scenarios) recently prepared as part of the City of Kingston Population, Household and Employment Forecast.¹ Based on a review of recent Statistics Canada population estimates and labour force trends for the broader regional market area, it has been assumed for the purpose of this study that the “high scenario” is the most likely long-term growth scenario for the Kingston C.M.A. for the purpose of this study.² Accordingly, the long-term population and employment potential for Frontenac County has been considered within this broader regional context. Under the High Scenario, the Kingston C.M.A. employment base is forecast to grow at an average annual rate of 0.7% per year or approximately 690 jobs annually.

¹ City of Kingston Population, Housing and Employment Growth Forecast, 2016 to 2046.

² Between 2016 and 2018, employment in the C.M.A., has increased from 83,600 to 86,400 respectively.²



Figure 8-1
Kingston C.M.A.
Long-term Forecast Employment Scenarios, 2016 to 2046



Source: 1996 to 2016 data from a custom order Place of Work data by Statistics Canada. 2016 to 2046 forecast prepared by Watson & Associates Economists Ltd., 2019.
Note: Employment figures include work at home and no fixed place of work. Forecast employment numbers have been rounded.

Kingston C.M.A. Total Employment Growth					
	2016	2046	2016-2046	Annual Growth	Annual Growth Rate
High Scenario		103,900	20,585	686	0.7%
Base Case Scenario	83,315	96,100	12,785	426	0.5%
Low Scenario		88,300	4,985	166	0.2%

Source: 2016 data from a custom order for Place of Work data by Statistics Canada. 2046 estimated by Watson & Associates Economists Ltd., 2019.

Note: Total employment reflects the total number of jobs within the Kingston C.M.A., including employment by usual place of work, work at home, and no fixed place of work (N.F.P.O.W.). Figures have been rounded.

8.3 Frontenac County Employment Growth Scenarios

Similar to the employment growth forecast for the Kingston C.M.A., three long-term employment growth scenarios have been developed for Frontenac County including a Low Scenario, Medium and High Scenario as summarized in Figure 8-2.

Low Employment Scenario

The Low Scenario assumes that Frontenac County employment will grow at an average annual growth rate of 0.6% per year. Under the Low Scenario, the Frontenac County employment base is forecast to increase modestly between 2016 and 2046 by approximately 1,000 jobs from 5,400 to 6,400.



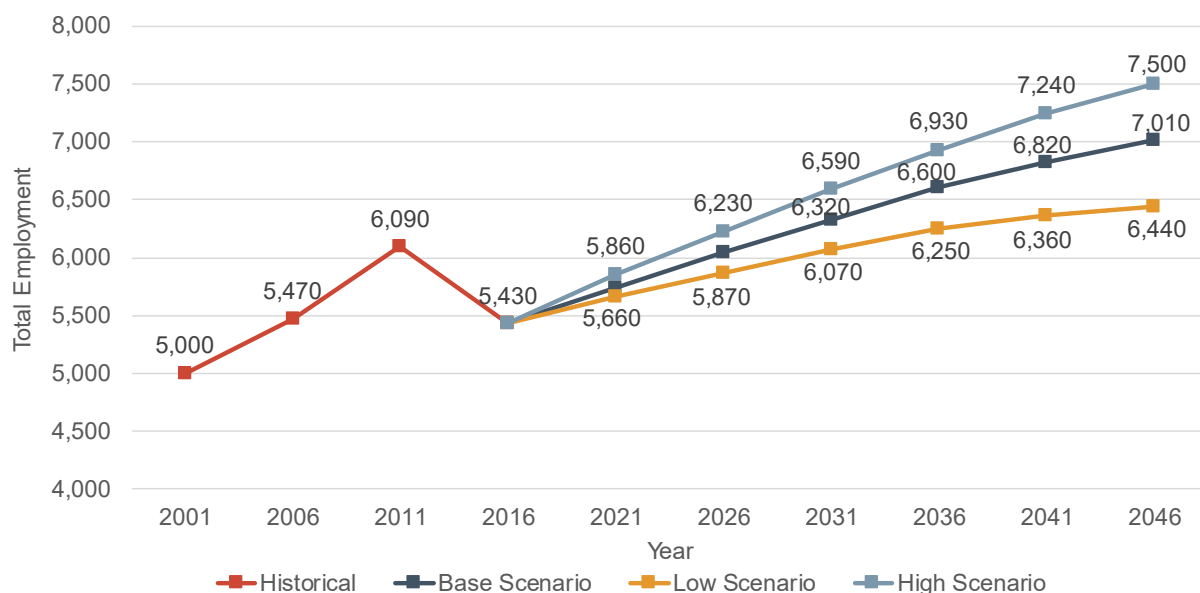
Medium (Base Case) Employment Scenario

The Base Case Scenario assumes an annual growth rate of approximately 0.9% for Frontenac County between 2016 and 2046. This represents an average annual growth rate which is higher than the most recent 15-year historical period growth rate of 0.6% annually. Under the Base Case Scenario, the Frontenac County employment base is expected to increase by approximately 1,600 jobs by 2046.

High Employment Scenario

Under the High Scenario, Frontenac County employment is forecast to grow at an average annual rate of roughly 1.1% per year. Under the High Scenario, Frontenac County is anticipated to add approximately 2,100 jobs, increasing from 5,400 in 2016 to 7,500 by 2046.

Figure 8-2
Frontenac County
Long-Term Total Employment Forecast Scenarios, 2016 to 2046



Source: 2001 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

Note: Employment figures include work at home and no fixed place of work.

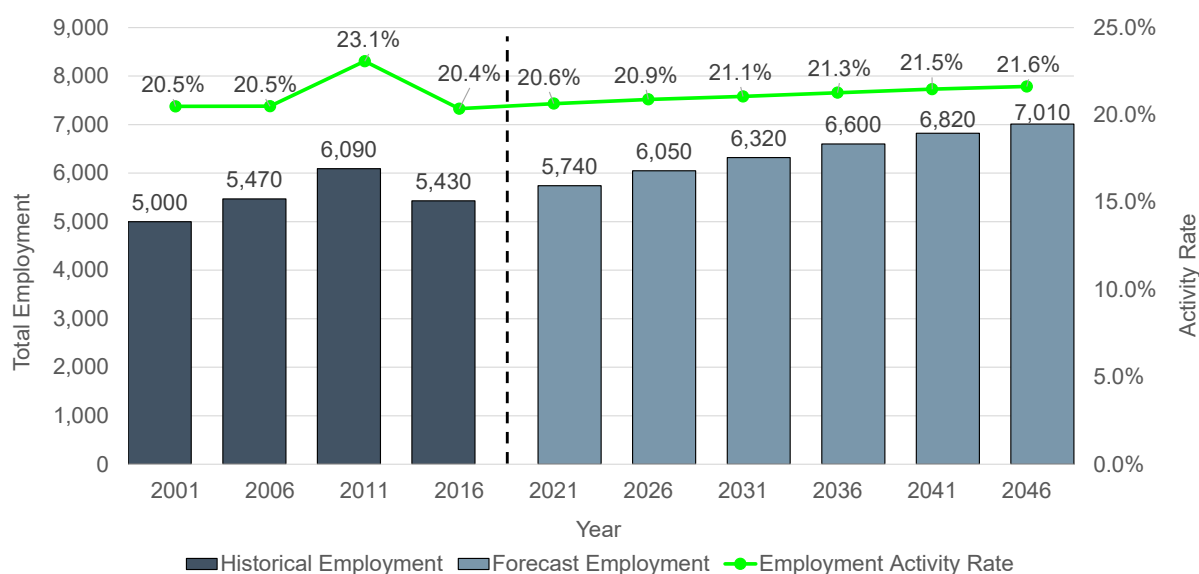
Frontenac County Total Employment Growth					
	2016	2046	2016 to 2046	Annual Growth	Annual Growth Rate
High Scenario		7,500	2,070	69	1.08%
Base Case Scenario	5,430	7,010	1,580	53	0.85%
Low Scenario		6,440	1,010	34	0.57%



8.4 Frontenac County Preferred Employment Forecast (Base Case Scenario), 2016 to 2046

In accordance with historical employment and labour force growth trends as well as forecast labour force growth potential for the Kingston C.M.A., the Base Case Scenario represents the preferred employment growth scenario for Frontenac County. With the exception of 2011, the County's employment activity rate (ratio of jobs to population) has remained relatively stable across the past 15 years. Over the long-term the County's employment activity rate is anticipated to slowly increase from approximately 20% in 2016 to 22% by 2046 (refer to Figure 8-3). This moderate increase is anticipated to be largely driven by local employment opportunities within the County's export-based employment sectors (e.g. transportation, wholesale trade, construction, small-scale manufacturing and agri-business) as well as population-related employment sectors such as retail, accommodation and food, professional, scientific and technical scientific services and health care. A large percentage of forecast job growth is anticipated to be accommodated through home occupations, home-based businesses and off-site employment.

Figure 8-3
Frontenac County
Historical and Forecast Employment Forecast, 2001 to 2046



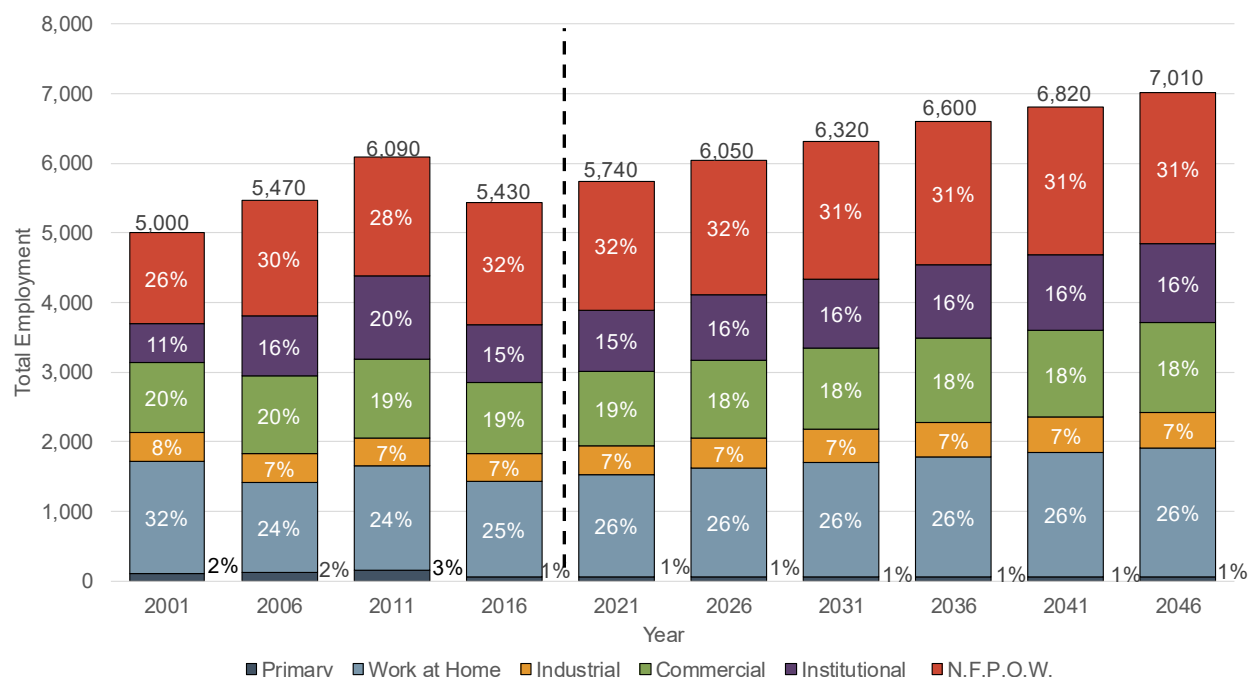
Source: 2001 to 2016 from Statistics Canada place of work data including work at home and no fixed place of work. Forecast by Watson & Associates Economists Ltd., 2019.

Note: Numbers have been rounded.



Figure 8-4 summarizes the incremental employment forecast in five-year increments by major sector in comparison to historical trends (2001 to 2016). As previously mentioned, a large share of the County's employment is comprised of workers who have no fixed place of work or work from home. Looking forward, the share of "at home" and "no fixed place of work" employment is anticipated to gradually increase. Work at home employment is defined as those whose job is located in the same building as their place of residence. No fixed place of work is defined as those that do not go to the same workplace location each shift, such as contractors or truck drivers.

Figure 8-4
Frontenac County
Incremental Employment Growth, 2001 to 2046



Source: Historical Employment from Statistics Canada 2001 to 2016. Forecast is estimated by Watson & Associates Economists Ltd., 2019.
Note: Statistics Canada defines no fixed place of work (N.F.P.O.W.) as "persons who do not go from home to the same work place location at the beginning of each shift."

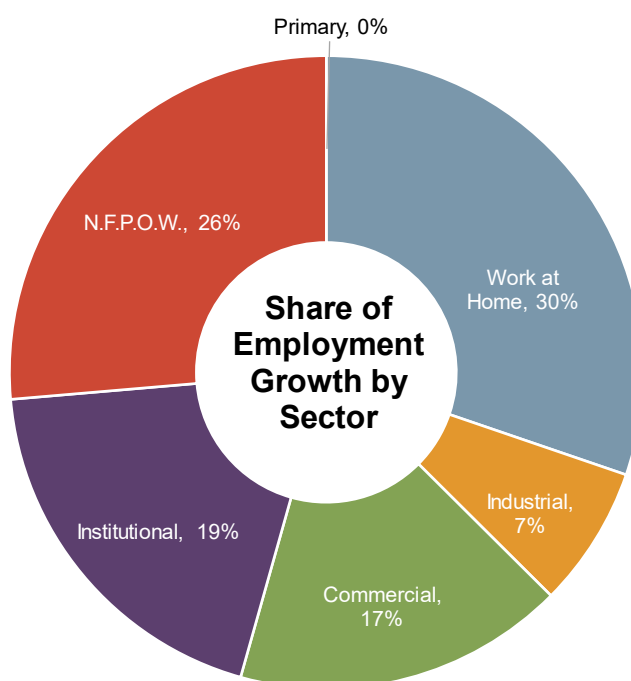
8.4.1 Forecast Employment Growth by Major Sector, 2016 to 2046

Moderate employment growth within Frontenac County is expected across a range of sectors driven by the continued development of the regional and local economic base and local population growth. Figure 8-5 summarizes the 2016 to 2046 employment growth forecast by major employment sector for Frontenac County. As summarized, the majority of employment growth in the County is anticipated in the work at home and



no fixed place of work employment categories. These two sectors are expected to account for 56% of job growth between 2016 and 2046.

Figure 8-5
Frontenac County
Share of Employment Growth by Sector, 2016 to 2046



Source: Forecast is estimated by Watson & Associates Economists Ltd., 2019.

With respect to employment growth by major employment sector, the following observations have been made:

- **Primary Employment** – Primary industries (i.e. agriculture and other resource-based employment) comprise a minor component of the Frontenac County employment base (approximately 1% in 2016). Looking forward, there is potential for expanded economic activity within the primary employment sector over the next several decades across Frontenac County. However, this employment sector is not anticipated to experience net employment growth over the 2016 to 2046 forecast period.
- **Industrial Employment** – The County's industrial sector is anticipated to increase by approximately 110 jobs over the 2016 to 2046 period, accounting for 7% of total County-wide employment growth. Industrial employment growth is



anticipated to be concentrated in sectors related to small/medium-scale manufacturing, construction, wholesale trade and transportation and warehousing.

- **Commercial Employment** – Commercial/population-related employment (which includes the office and retail sectors) represents the County's third largest major sector with respect to total employment. This sector is largely driven by demand generated from the local population base, including seasonal residents. Commercial employment growth is forecast to increase by approximately 270 jobs over the 2016 to 2046 period, accounting for 17% of total employment growth.
- **Institutional Employment** – Frontenac County is anticipated to add approximately 310 jobs to its institutional employment sector over the next 30 years, representing jobs (19% of total employment growth). This includes employment growth in education, health and social services and other institutional facilities (i.e. cultural, religious). The County is expected to see an increase in seniors' health facilities/services, including retirement homes and assisted living facilities, as well as other institutional-related development due to a growing, but aging population base.
- **Work at Home** – In 2016, work at home employment was the second largest sector in the County, with approximately 25% of total employment. As the County's population and labour force continues to age, it is likely that an increased number of working and semi-retired residents will be seeking lifestyles that will allow them to work from home on a full-time or part-time basis. Over the forecast period, work at home employment in the County is expected to expand by approximately 480 jobs (30%), largely driven by forecast growth related to diversified on-farm uses, as well as service sector employment, including knowledge-based occupations further enabled by improved telecommunications technology.
- **No Fixed Place of Work (N.F.P.O.W.)** – Off-site employment accounted for the largest share of jobs in 2016, at roughly 32% of total employment. This employment category is expected to continue to steadily grow within the County over the long term, largely driven by labour force demands in the construction and transportation, warehousing and business services sectors. Over the

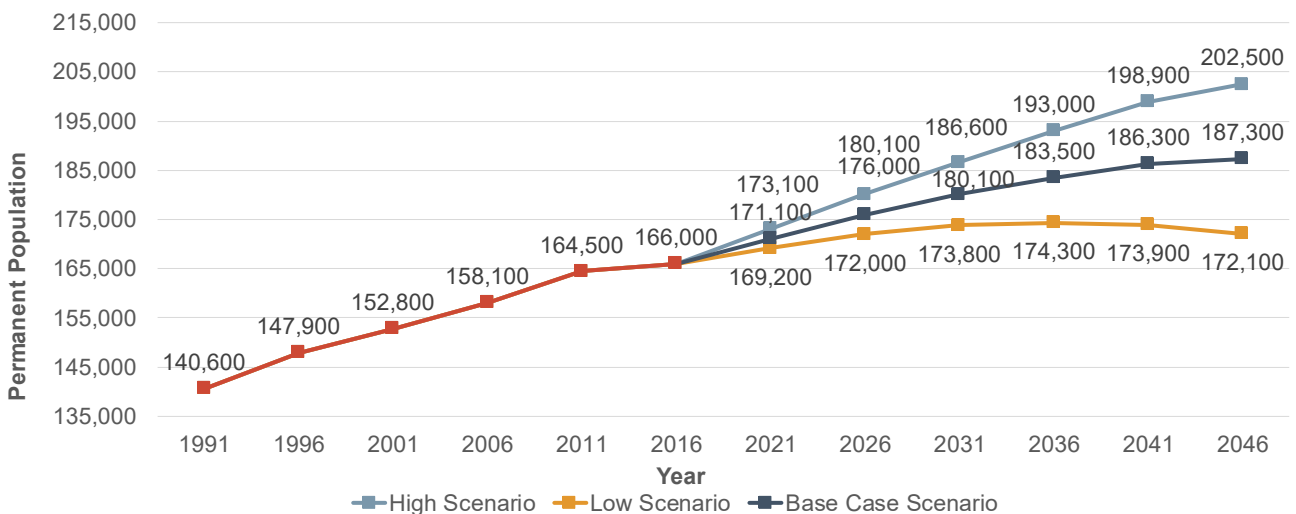


forecast period, N.F.P.O.W. employment is expected to expand by approximately 420 jobs, 26% of the County's total employment forecast.

8.5 Kingston C.M.A. Population Forecast, 2016 to 2046

Figure 8-1 graphically compares the three long-term population growth forecast scenarios for the C.M.A. (i.e. the “high,” “base” and “low” case). Similar to employment, population growth for Frontenac County is forecast within the context of the “high scenario” for the Kingston C.M.A. Recent population trends for the Kingston C.M.A., suggest that this high scenario is realistic, as post-2016 housing completions have remained strong and population growth has been increasing at a faster rate than the previous 5-year period. Under the High Scenario, the Kingston C.M.A. population base is forecast to grow at an annual rate of 0.7% or approximately 1,220 persons annually.

Figure 8-6
Kingston C.M.A.
Long-term Forecast Population Scenarios, 2016 to 2046



Source: Data derived from a custom order from Statistics Canada Demography Division (Catalogue no. 91C0005). 2016 to 2046 forecast prepared by Watson & Associates Economists Ltd., 2019.

Note: Population includes a net Census undercount estimated at approximately 3.1%. Population figures have been rounded.

Kingston C.M.A. Population Growth					
	2016	2046	2016-2046	Annual Growth	Annual Growth Rate
High Scenario		202,500	36,493	1,216	0.7%
Base Case Scenario	166,007	187,300	21,293	710	0.4%
Low Scenario		172,100	6,093	203	0.1%

Source: 2016 data from Statistics Canada Demography Division (Catalogue no. 91C0005). 2046 estimated by Watson & Associates Economists Ltd., 2019.

Note: Net population undercount estimated at approximately 3.1%. Forecast population figure has been rounded.



8.6 Frontenac County Long-Term Permanent Population Growth Scenarios, 2016 to 2046

Building on the demographic and economic analysis provided in Chapter 3, a total of three long-term permanent population and housing forecasts have been prepared for Frontenac County, including: 1) Base Case Scenario; 2) Low Scenario; and 3) High Scenario. A range of forecast population has been generated from these respective scenarios largely based on varying assumptions regarding annual net migration. Figure 8-7 graphically compares the two alternative long-term population growth forecasts for the County (i.e. the “high” and “low” cases) against the Base Case Scenario. It is noted that the long-term population growth scenarios include an upward adjustment of approximately 3.1% to account for the net Census undercount.¹

Low Scenario

Under the Low Scenario it is assumed that the Frontenac County permanent population base will grow at an average annual growth rate of 0.4% per year. This scenario assumes that average forecast net migration will decline relative to historical trends. Under the Low Scenario, Frontenac County permanent population is forecast to increase modestly between 2016 and 2046 by 3,200 from 27,300 to 30,500 respectively.

Medium (Base Case Scenario)

Frontenac County's permanent population is forecast to grow at an annual rate of approximately 0.7% under the Base Case Scenario. This represents an average annual growth rate which is higher than the historical growth rate of 0.5% achieved within Frontenac County from 2001 to 2016. Population is expected to reach a 2046 total of 33,200, increasing by approximately 5,900 from 2016. Under this scenario, the rate of forecast population growth is forecast to slow slightly in the latter half of the forecast period due to the aging of the County's population base.

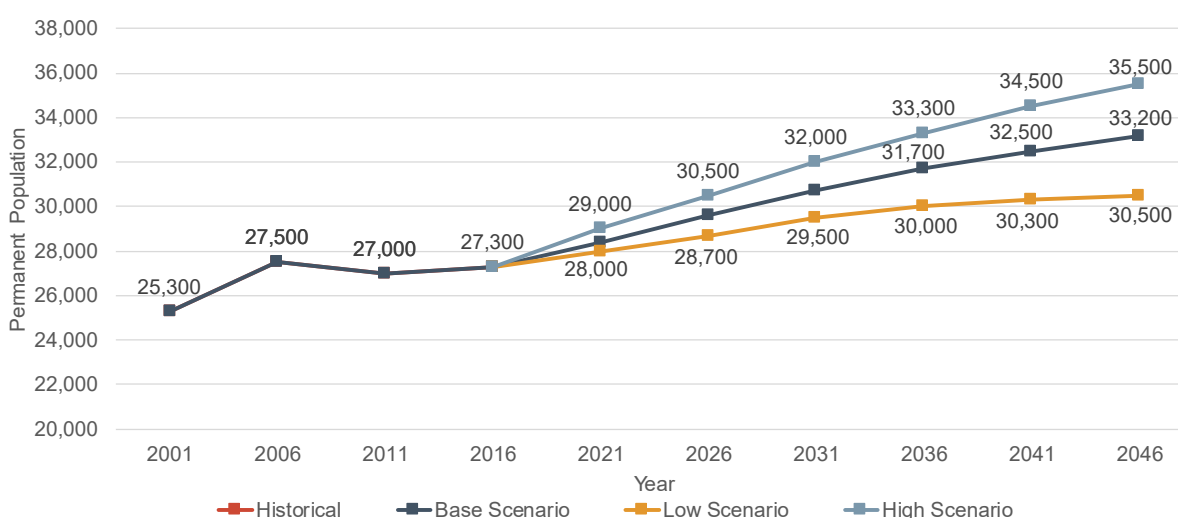
¹ The Census undercount represents the net number of permanent residents who are missed (i.e. over-coverage less under-coverage) during Census enumeration in accordance with Statistics Canada. All provincial population forecasts prepared by the Ministry of Finance (M.O.F.) and Ministry of Municipal Affairs and Housing (M.M.A.H.) include an upward adjustment for the net Census undercount.



High Scenario

Under the High Scenario, the County's permanent population is forecast to grow at an average annual rate of 0.9% per year. Frontenac County population is anticipated to add 8,200 persons to its population base, increasing from 27,300 in 2016 to 35,500 by 2046.

Figure 8-7
Frontenac County
Long-term Forecast Population Scenarios (Permanent Population), 2016 to 2046



Source: 2001 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

Note: Population figures include the net Census undercount estimated at 2.3%.

Frontenac County Total Permanent Population Growth					
	2016	2046	2016 to 2046	Annual Growth	Annual Growth Rate
High Scenario		35,500	8,200	273	0.88%
Base Case Scenario	27,300	33,200	5,900	197	0.65%
Low Scenario		30,500	3,200	107	0.37%

8.7 Preferred Permanent Population and Housing Growth Scenario

8.7.1 Preferred Permanent Population Forecast

Each Growth Scenario described above is based on a range of assumptions related to total net migration, net migration by age, births and deaths. As previously discussed, forecast net migration is largely driven by growth in the local and regional economy, as



well as the County's attractiveness to empty-nesters and seniors. In turn, population growth creates demand for new housing across the County, which is then allocated by local municipality (refer to Chapter 9). The growth forecast model adopted herein allows these various growth inputs to be adjusted to test the sensitivity of inputs and the reasonableness of the outputs against historical growth trends and the identified growth drivers.

The permanent population scenarios explored in Section 8.6 represent the potential range of future growth which can be anticipated for the County over the next 30 years. Based on our review, the Base Case (Medium) Scenario represents the most reasonable growth forecast scenario for Frontenac County for the following reasons:

1. It represents a reasonable future ratio of population relative to the City of Kingston in comparison to historical and forecast trends;
2. The level of population growth in the 15-64 population age is reasonable given forecast job growth in the local and regional economy;
3. Forecast net migration levels are relatively comparable to historical trends over the past 15 years. Forecast net migration trends are reflective of steady growth in the local and regional economy plus the attractiveness of the County to empty-nesters and young seniors as a retirement/semi-retirement destination; and
4. The forecast level of annual housing growth required to accommodate the Base Case Growth Scenario are reasonable in relation to historical trends observed based on residential building permit data, Statistics Canada Census data and M.P.A.C. data.

Figure 8-8 summarizes the preferred population growth forecast for Frontenac County from 2016 to 2046 in five-year increments.



Figure 8-8
Frontenac County
Population Growth Forecast, 2016 to 2046

Year		Population (Including Census Undercount) ¹	Population (Excluding Census Undercount)
Historical	Mid-2001	25,300	24,400
	Mid-2006	27,500	26,700
	Mid-2011	27,000	26,400
	Mid-2016	27,300	26,700
	Mid-2019	28,000	27,400
Forecast	Mid-2021	28,400	27,800
	Mid-2026	29,600	28,900
	Mid-2031	30,700	30,000
	Mid-2036	31,700	31,000
	Mid-2041	32,500	31,700
	Mid-2046	33,200	32,400
Incremental	Mid-2001 to Mid-2016	2,000	2,300
	Mid-2001 to Mid-2006	2,200	2,300
	Mid-2006 to Mid-2011	-500	-300
	Mid-2011 to Mid-2016	300	300
	Mid-2016 to Mid-2019	700	700
	Mid-2016 to Mid-2021	1,200	1,100
	Mid-2016 to Mid-2026	2,300	2,300
	Mid-2016 to Mid-2031	3,400	3,400
	Mid-2016 to Mid-2036	4,500	4,400
	Mid-2016 to Mid-2041	5,200	5,100
	Mid-2016 to Mid-2046	5,900	5,700

Source: Population from 2001 to 2016 from Statistics Canada Census.

Forecast by Watson & Associates Economists Ltd., 2019.

Note: Population figures have been rounded and include the net Census undercount estimated at 2.3%

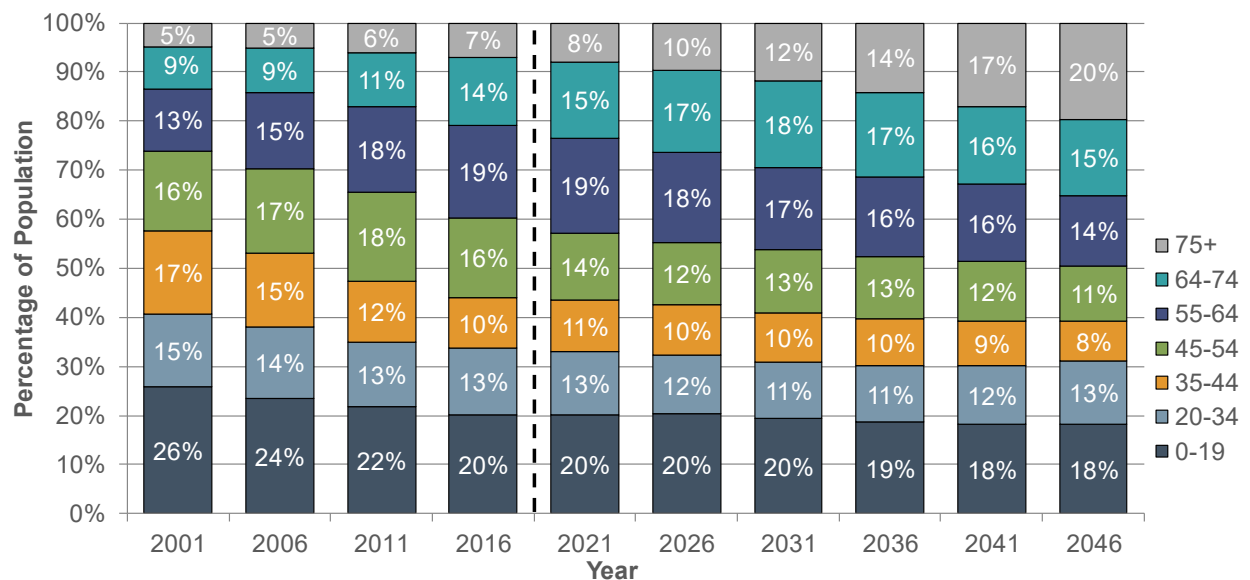


8.7.2 Permanent Population Forecast by Age Cohort

Figure 8-9 and Figure 8-10 summarize the population growth forecast by major age group over the 2016 to 2046 period for Frontenac County. Key observations are as follows:

- The percentage of population in the 0-19 age cohort (youth population) is forecast to gradually decline from 20% in 2016 to 18% in 2046;
- Frontenac's population 20-54 years of age is the largest age cohort group, and is forecast to decline from 39% in 2016 to 32% in 2046;
- The 55-74 age group (empty-nesters/younger seniors) is forecast to increase from 23% in 2016 to 29% in 2046; and
- The percentage of the population in the 75+ age group (older seniors) is forecast to more than double over the 25-year period, from 7% in 2016 to 20% in 2046.

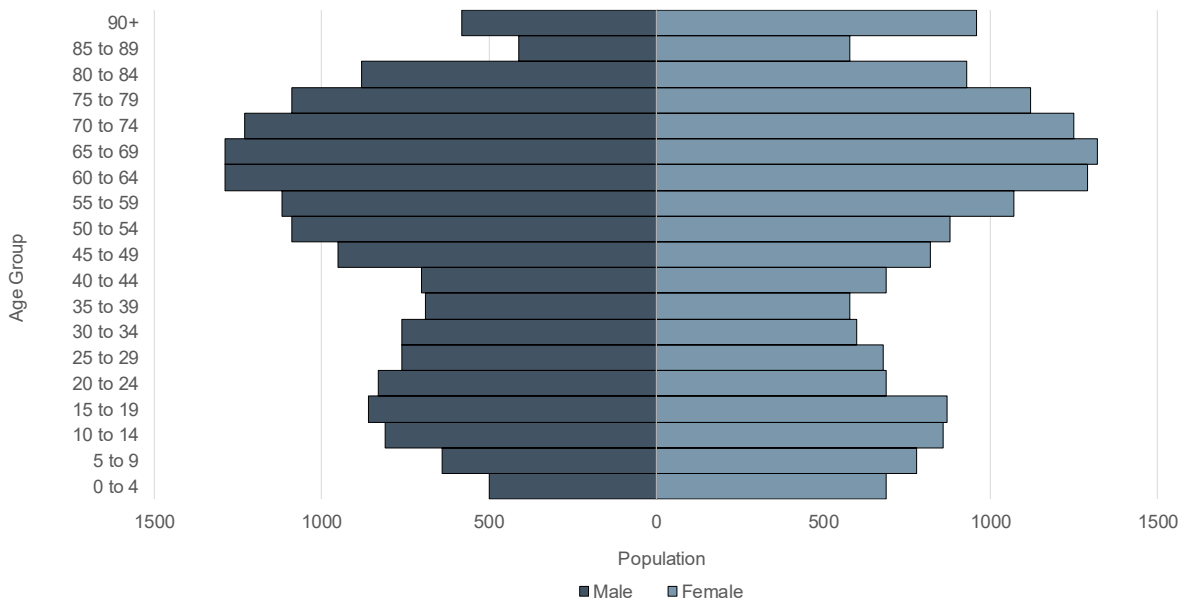
Figure 8-9
Frontenac County
Population by Age Forecast, 2016 to 2046



Source: Historical data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.
Note: Population includes net Census undercount.



Figure 8-10
Frontenac County
Population Age Structure, 2046



Source: Data from Statistics Canada 2016 Census, by Watson & Associates Economists Ltd., 2019.

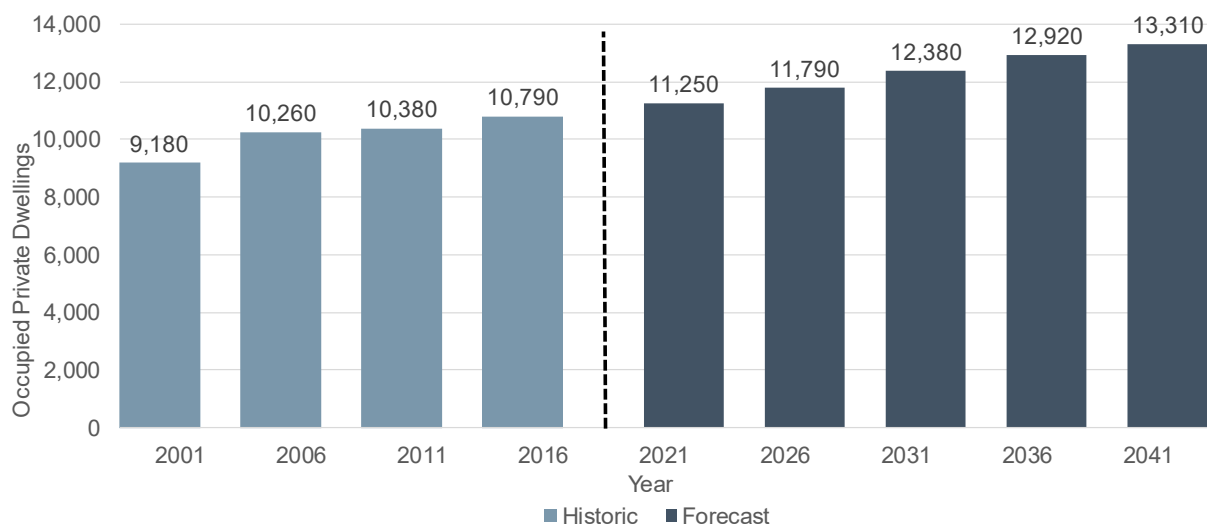
8.8 Frontenac County Housing Forecast, 2016 to 2046

Figure 8-11 summarizes the Frontenac County permanent household forecast from 2016 to 2046. Housing trends between 2001 and 2016 are also provided for historical context. By 2046 the County's permanent housing base is forecast to increase to 13,300 households from 10,800 in 2016. This represents an increase of approximately 2,500 households or an annual housing growth rate of 0.7% per year. Comparatively, this rate of forecast housing growth is moderately below the historical 15-year (2001 to 2016) annual average housing growth rate of 1.1%.¹

¹ According to Statistics Canada Census data.



Figure 8-11
Frontenac County
Historical and Forecast Households, 2001 to 2046



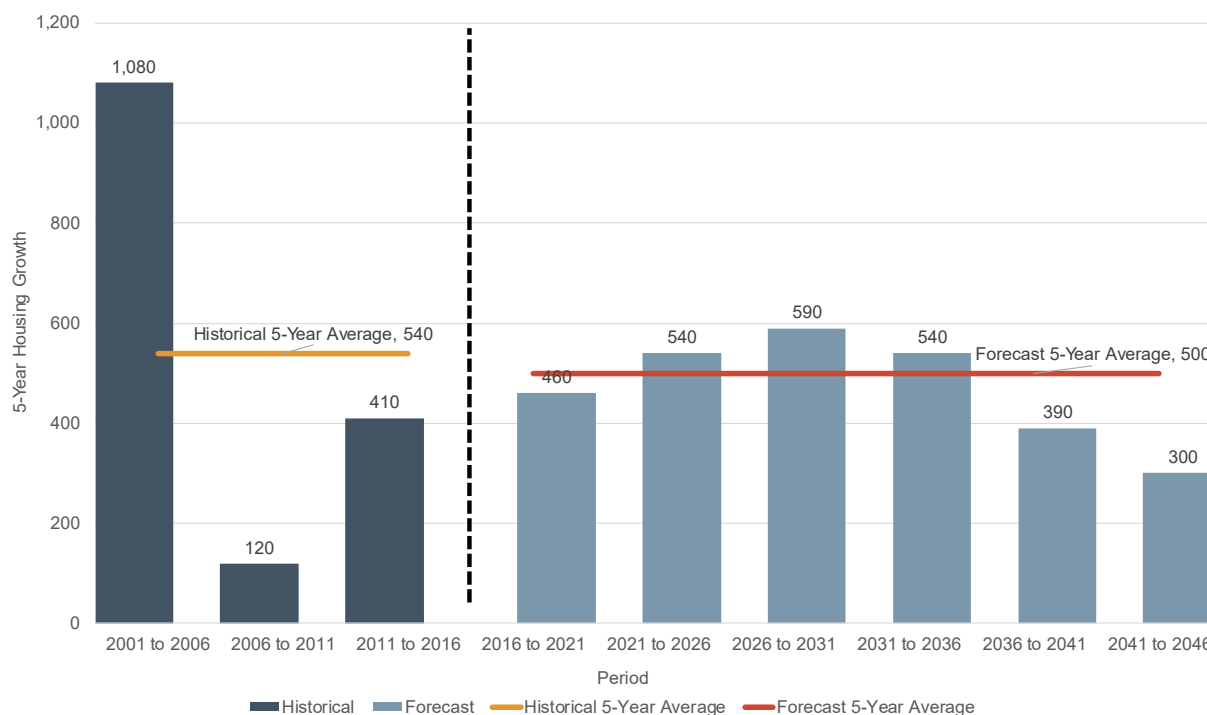
Source: Historic data from Statistics Canada Census Profiles, 2001 to 2016. Forecast (2016 to 2046) by Watson & Associates Economists Ltd., 2019.

Figure 8-12 summarizes historical and forecast housing growth for the County in five-year increments from 2001 to 2046. The following trends can be observed:

- From 2001 to 2016, the historical housing development averaged 108 households annually;
- Based on a review of recent residential building permits issued for new dwellings between 2016 to 2018, projected housing annual housing development during the 2016 to 2021 projection period is anticipated to average slightly higher than historical trends observed over the past five years;
- Between 2016 to 2046, forecast housing development is expected to average 100 units annually; and
- Consistent with projected population trends over the longer term, the rate of future housing growth is expected to steadily slow over the forecast period.



Figure 8-12
Frontenac County
Five-Year Incremental Housing Growth – Historical and Forecast, 1991 to 2046



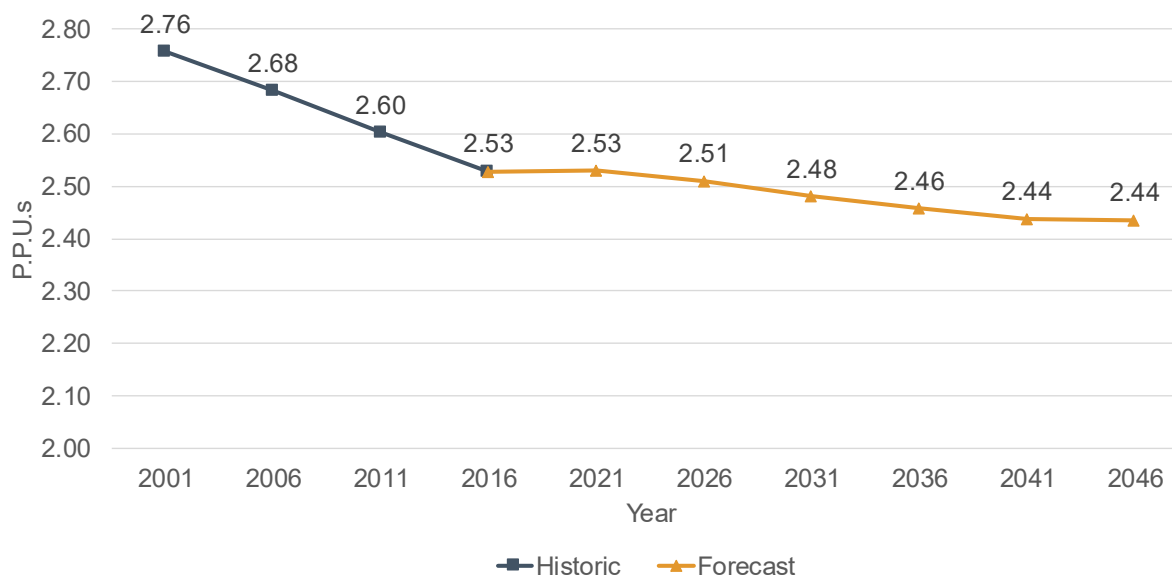
Source: Statistics Canada Census Profiles, 2001 to 2016. Forecast by Watson & Associates Economists Ltd., 2019.

Figure 8-13 summarizes anticipated trends in long-term housing occupancy, or average persons per unit, for Frontenac County from 2016 to 2046. Key observations include:

- Between 2001 and 2016, the average persons per unit (P.P.U.) for Frontenac County declined from 2.76 to 2.53;
- Over the forecast period, the average P.P.U. for Frontenac County is anticipated to continue to gradually decline from 2.53 in 2016 to 2.44 in 2046, largely as a result of the aging of the County's population and a gradual shift towards medium- and high-density forms of housing.



Figure 8-13
Frontenac County
Historical and Forecast Persons Per Unit, 2001 to 2046



Source: Statistics Canada Census and Demography Division, 1991 to 2016. Forecast (2021 to 2041) estimated by Watson & Associates Economists Ltd., 2019.
Note: Figure includes net Census undercount estimated at 2.3%.

8.8.1 Forecast Households by Dwelling Type, 2016 to 2046

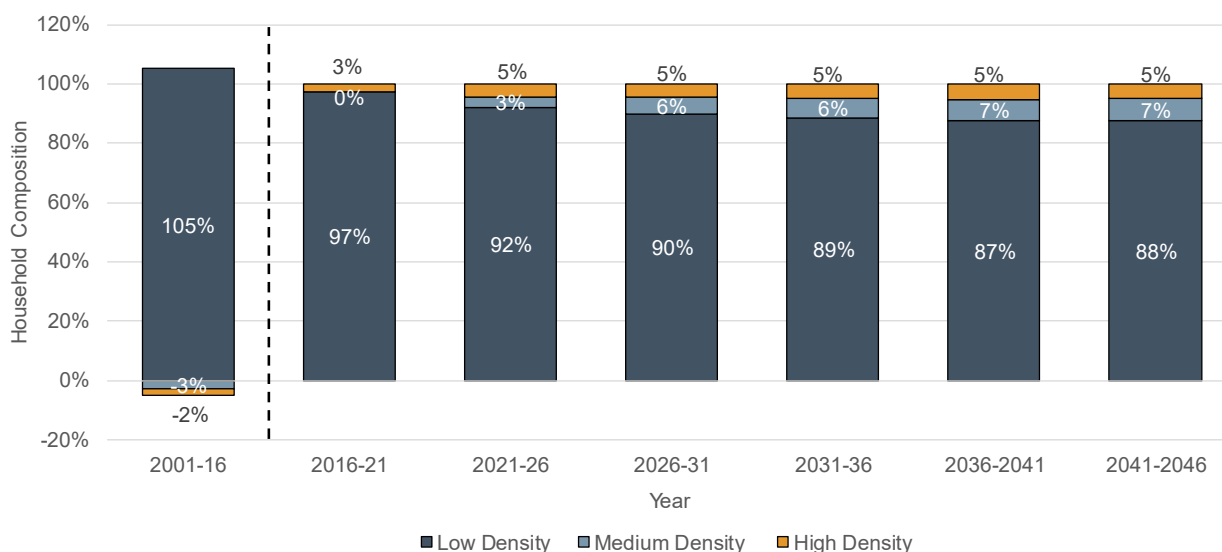
Figure 8-14 summarizes the Frontenac County housing forecast by structure type (i.e. low-density, medium-density and high-density) over the 2016 to 2046 forecast period in five-year growth increments. Key observations include:

- New residential development within Frontenac County will continue to be concentrated in low-density housing forms, largely driven by demand from new families and empty-nesters;
- Between 2001 to 2016, the share of medium- and high-density housing growth was negative 5%. This trend is not expected to continue into the short-term forecast period, as medium- and high-density housing are forecast to slowly trend positive across the forecast period.
- Over the 2016 to 2046 projection period, new housing is forecast to be comprised of 91% low-density (singles and semi-detached), 5% medium-density (townhouses) and 4% high-density (apartments) units. A modest increase in the share of medium and high-density housing forms is anticipated, largely driven by



the aging of the population, potential opportunities in some settlement areas for communal serving and continued upward pressure on local housing prices.

Figure 8-14
Frontenac County
Incremental Historical and Forecast Households by Structure Type (Permanent Households), 2001 to 2046



Low density is comprised of singles and semi-detached.

Medium density is comprised of townhouses.

High density is comprised of apartments.

Source: Statistics Canada Census, 2001 to 2016. Forecast by Watson & Associates Economists Ltd., 2019.

8.9 Seasonal Population and Housing Growth

According to MPAC data, seasonal housing represents a significant component of the County's total housing base, accounting for approximately 41% (7,490) of total dwelling units as of 2016. The County's proximity to the Greater Golden Horseshoe (G.G.H.), the Greater Ottawa Region and the City of Kingston continues to be a major driver of seasonal population growth.

Over the next 30 years, just over 30 new seasonal housing units are forecast to be developed annually, totalling just over 1,000 new seasonal units across the County. Notwithstanding relatively strong demand for new seasonal housing construction over the next 30 years, Frontenac County's seasonal housing and population base is anticipated to increase moderately due to the conversion of existing seasonal housing units to permanent dwellings. This trend in seasonal housing and population is



consistent with recent trends experienced in Frontenac County, as well as other municipalities in Ontario's "cottage country."

Over the past decade, the Ontario economy has experienced a steady rebound in economic activity since the 2008/2009 financial. As previously mentioned, Provincial G.D.P. levels have sharply rebounded since 2013 and are expected to moderate into 2020 but remain slightly above historical Provincial averages over the past decade. In light of macro-economic trends, it is anticipated that the number of net conversions of seasonal units to permanent use will gradually remain steady over the next two decades. During the post-2031 period, the number of seasonal conversions is forecast to gradually decline as the aging of the population results in a growing number of housing conversions back to their former seasonal use.

Figure 8-15 and Figure 8-16 summarize total housing forecast for Frontenac County (permanent + seasonal) over the 2016 to 2046 forecast period. Annual housing growth has been compared against historical M.P.A.C. data. Key observations include:

Seasonal Population and Housing Growth

- On average, just over 10 existing seasonal housing units are forecast to be converted to permanent housing units every year across the County between 2016 and 2046; and
- Over the 30-year forecast period, the seasonal housing base is forecast to increase from approximately 7,500 in 2016 to 8,100 in 2046.

Permanent + Seasonal Population and Housing Growth

- Permanent and seasonal housing growth for Frontenac County is forecast to average approximately 130 units per year;
- Demand for both permanent and seasonal housing is anticipated to be strongest during the 2016-2031 period, followed by a gradual reduction in demand during the post 2031 period;
- Comparatively, MPAC data indicates that the County added just over 120 new permanent and seasonal housing units annually to its housing base between 2011 and 2018.



Figure 8-15
Frontenac County
Permanent + Seasonal Growth Forecast, 2016 to 2046

	Year	Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U.) with undercount
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	27,020	53,790	9,965	-	135	175	105	10,380	7,315	17,695	3.04
	Mid-2016	27,290	54,680	10,415	-	80	160	135	10,790	7,485	18,275	2.99
Forecast	Mid-2019	28,000	55,700	10,695	45	80	165	135	11,120	7,570	18,685	2.98
	Mid-2021	28,440	56,280	10,860	70	80	170	135	11,315	7,605	18,920	2.97
	Mid-2026	29,600	57,880	11,365	145	100	195	135	11,940	7,725	19,665	2.94
	Mid-2031	30,710	59,470	11,895	225	130	225	135	12,610	7,855	20,465	2.91
	Mid-2036	31,750	60,940	12,370	300	165	250	135	13,220	7,975	21,195	2.88
	Mid-2041	32,470	61,990	12,715	355	195	270	135	13,670	8,065	21,735	2.85
	Mid-2046	33,150	62,910	12,975	395	215	285	135	14,005	8,130	22,135	2.84
Incremental	Mid-2011 to Mid-2016	270	890	450	-	-55	-15	30	410	170	580	
	Mid-2016 to Mid-2019	710	1,020	280	45	0	5	0	330	85	410	
	Mid-2016 to Mid-2021	1,150	1,600	445	70	0	10	0	525	120	645	
	Mid-2016 to Mid-2026	2,310	3,200	950	145	20	35	0	1,150	240	1,390	
	Mid-2016 to Mid-2031	3,420	4,790	1,480	225	50	65	0	1,820	370	2,190	
	Mid-2016 to Mid-2036	4,460	6,260	1,955	300	85	90	0	2,430	490	2,920	
	Mid-2016 to Mid-2041	5,180	7,310	2,300	355	115	110	0	2,880	580	3,460	
	Mid-2016 - Mid-2046	5,860	8,230	2,560	395	135	125	0	3,215	645	3,860	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

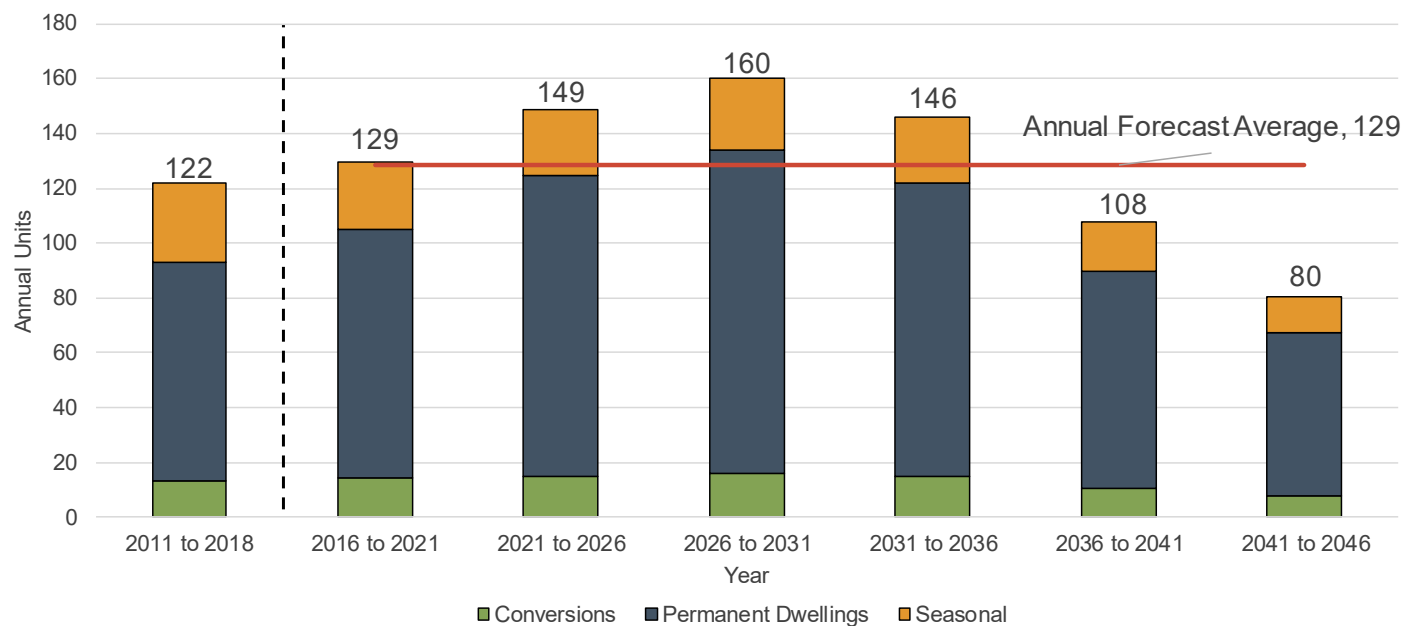
¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure 8-16
Frontenac County
Permanent + Seasonal Unit Forecast, 2016 to 2046



Low density is comprised of singles and semi-detached.

Medium density is comprised of townhouses.

High density is comprised of apartments.

Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019. Forecast (2021 to 2046) estimated by Watson & Associates Economists Ltd., 2019.



Chapter 9

Allocation of County-Wide Housing and Population Forecasts



9. Allocation of County-Wide Housing and Population Forecasts

9.1 Introduction

The following Chapter summarizes the allocation of forecast population and housing growth within Frontenac County by Area Municipality, in accordance with the Preferred Growth Scenario. Similar to the County-wide growth forecast, the allocation of population and housing growth within Frontenac County is anticipated to be driven by the following key growth drivers:

- Future employment opportunities within the City of Kingston and surrounding area for Frontenac commuters;
- Live-work potential within Frontenac County;
- The County's attractiveness to empty-nesters and young seniors; and
- Future demand for seasonal housing.

Each of the above growth drivers is expected to influence the amount, type and location of future population growth throughout the County, as discussed in greater detail below. Average annual permanent and seasonal housing growth associated with the population forecast for each Area Municipality is summarized in Appendix D.

While future growth trends are expected to vary considerably amongst each of the area municipalities within Frontenac County, each share a number of relatively common attributes with respect to growth drivers and long-term development trends. These include:

Population and Households

- All municipalities are anticipated to experience positive population growth;
- The rate of annual population growth and housing construction (permanent and seasonal) is forecast to peak during the 2016-2031 period and then gradually moderate as the County population continues to age;
- Future housing growth will be dominated by low-density housing forms;



- The average P.P.U. for permanent households is forecast to decline from 2016 to 2046. Both the rate and type of housing growth (i.e. families vs. retirees) will have a significant influence on projected P.P.U. levels;
- P.P.U. levels for seasonal households are historically higher than permanent households and are anticipated to remain steady at approximately 3.7;¹
- New seasonal dwelling construction is forecast in each Area Municipality.

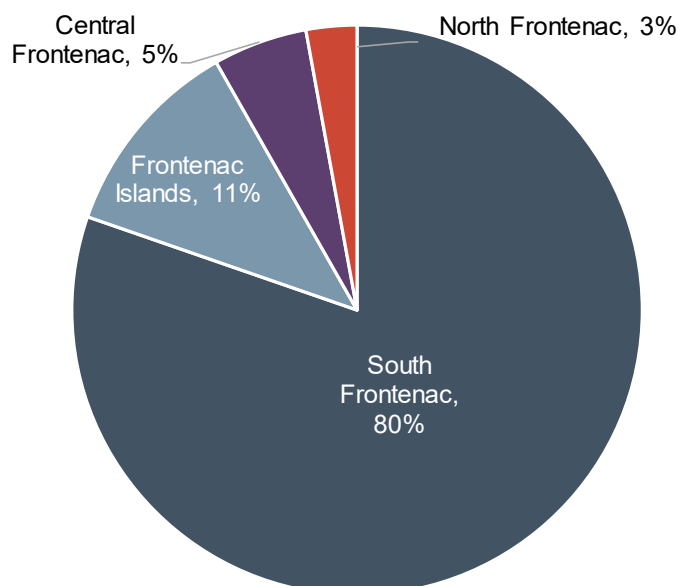
The distribution of forecast population and housing growth varies considerably by local municipality within Frontenac County. Figure 9-1 through Figure 9-3 summarize the allocation of permanent, seasonal and total population growth for each of the County's Area Municipalities. The following trends can be observed:

- The largest share of permanent population (approximately 80%) is forecast in South Frontenac;
- Permanent population in Frontenac Islands is forecast to account for 11% of the County's growth;
- Central and North Frontenac are forecast to comprise approximately 5% and 3% of permanent dwelling growth, respectively. Alternatively, Central and North Frontenac are forecast to contain 38% and 35% of seasonal growth, respectively.
- As a share of both permanent and seasonal dwelling growth, South Frontenac is expected to accommodate the majority of new dwellings with 66%.

¹ Seasonal P.P.U. estimate provided by Watson & Associates based on Muskoka District 2009 and 2013 Growth Strategies.



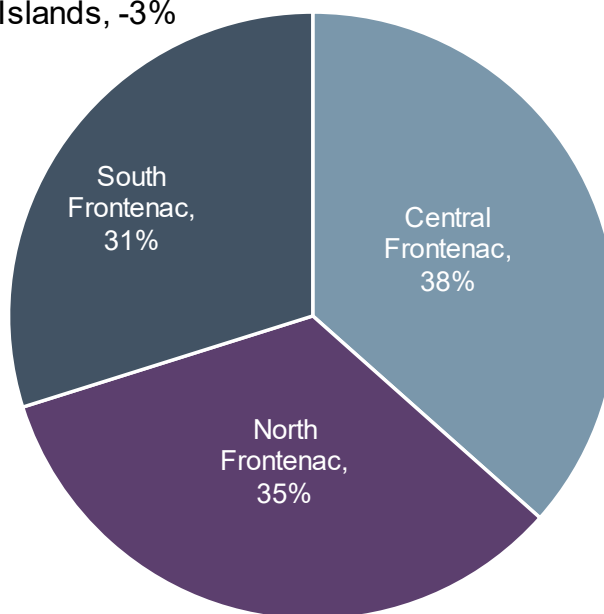
Figure 9-1
Frontenac County
Allocation of Permanent Population Growth by Township, 2016 to 2046



Source: Watson & Associates Economists Ltd., 2019.

Figure 9-2
Frontenac County
Allocation of Seasonal Population Growth by Township, 2016 to 2046

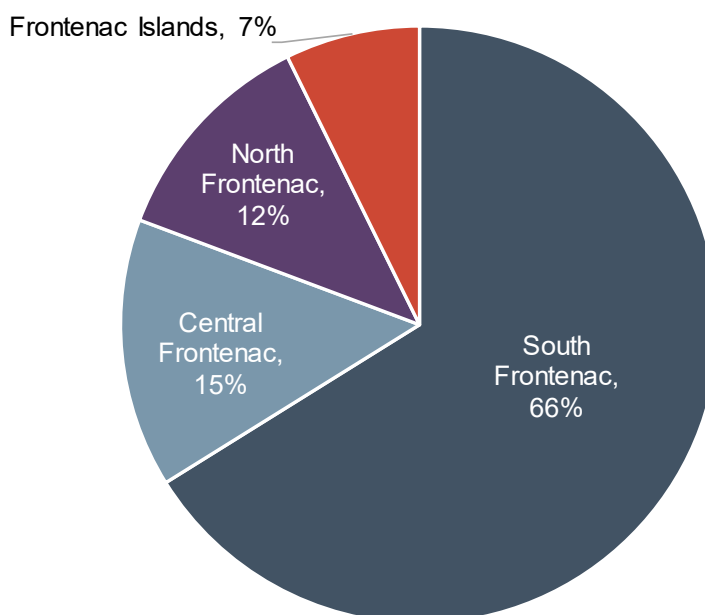
Frontenac Islands, -3%



Source: Watson & Associates Economists Ltd., 2019.



Figure 9-3
Frontenac County
Allocation of Permanent + Seasonal Population Growth by Township, 2016 to 2046



Source: Watson & Associates Economists Ltd., 2019.

9.2 Population and Housing Growth Outlook for Area Municipalities

The following explores the long-term growth outlook for each of the County's Area Municipalities. Additional details are provided in Appendix D.

9.2.1 Township of South Frontenac

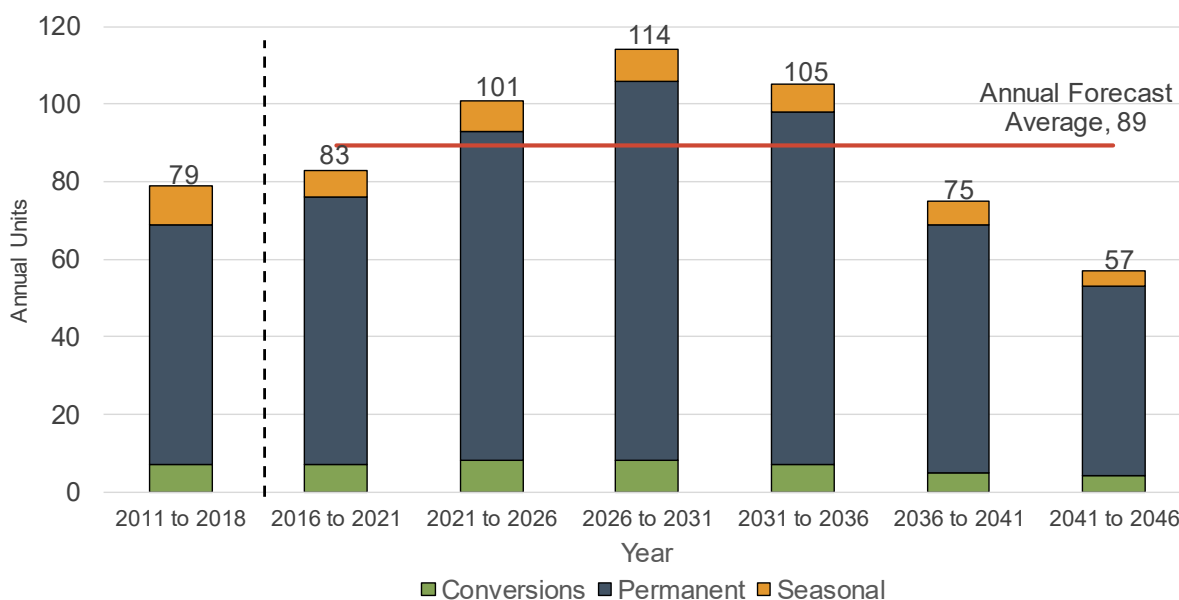
The Township of South Frontenac will continue to attract a large proportion of County-wide permanent population growth largely due to its proximity to the City of Kingston, employment opportunities for commuters and continued local employment growth opportunities. Key observations include:

- South Frontenac's total permanent population is forecast to reach approximately 23,800 persons by 2046, an increase of 4,700 persons from 2016 to 2046;
- The average annual permanent population growth rate for South Frontenac over the 2016-2046 forecast period is projected at 0.7%;



- Over the 30-year forecast period, South Frontenac is forecast to average just over 80 new housing units per year, of which approximately 90% are anticipated to be low-density housing forms (i.e. single-detached);
- Approximately 40% of new permanent housing development is expected to occur in rural areas outside of designated settlement areas;
- Demand for new seasonal housing development is expected to be relatively low in South Frontenac, averaging approximately 7 new units per year;
- The potential for seasonal housing conversions to permanent use in South Frontenac is anticipated to be fairly strong, averaging approximately 7 net conversions per year (roughly 50% of the County's total conversions); and
- Including the seasonal population base, South Frontenac's total population is forecast to reach approximately 34,800.

Figure 9-4
Township of South Frontenac
Permanent + Seasonal Housing Growth, 2016 to 2046



Low density is comprised of singles and semi-detached.

Medium density is comprised of townhouses.

High density is comprised of apartments.

Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019.
Forecast (2021 to 2046) estimated by Watson & Associates Economists Ltd., 2019.

9.2.2 Township of Frontenac Islands

Given its proximity to the City of Kingston via the Wolfe Island and Howe Island ferries, the Township of Frontenac Islands will continue to attract a balance of working families

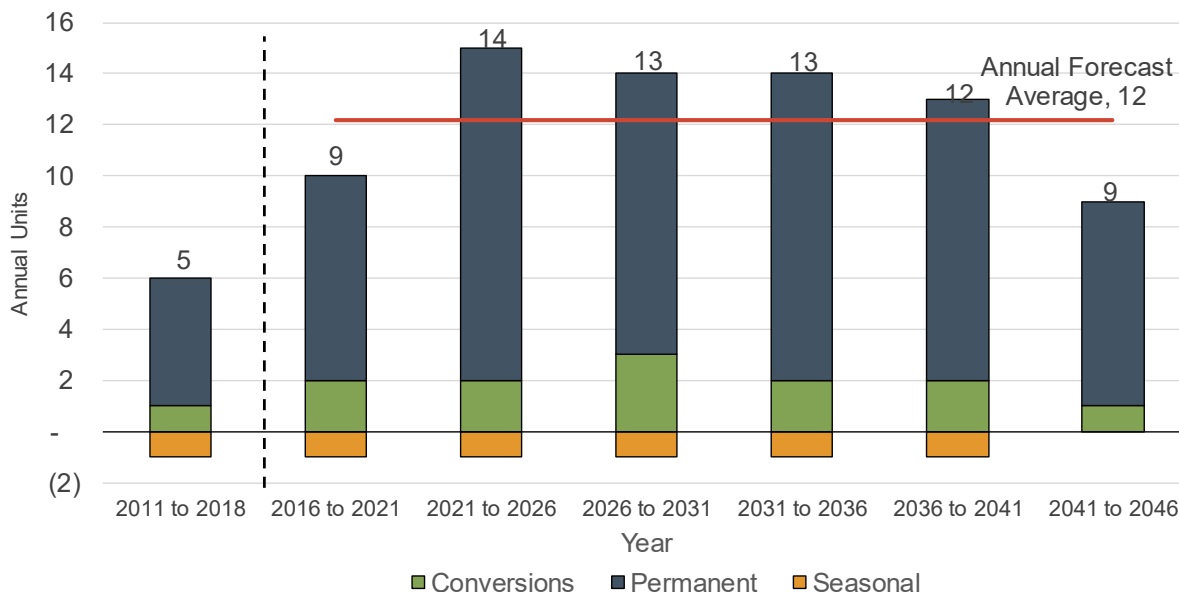


(i.e. commuters to the City of Kingston) and empty-nesters/young seniors. The new Wolfe Island ferry docking in closer proximity to Marysville is expected to, in part, generate increased housing demand on the Island, leading to more seasonal housing conversions to permanent occupancy. The current forecast reflects this anticipated increase in residential demand on Wolfe Island. Key observations for the Township of Frontenac Islands include:

- The total permanent population for Frontenac Islands is forecast to reach approximately 2,470 persons by 2046, an increase of 670 persons from 2016 to 2046;
- The average annual permanent population growth rate for Frontenac Islands over the 2016-2046 forecast period is projected at 1.1%;
- Over the 30-year forecast period, Frontenac Islands is forecast to average just over 10 new housing units per year, of which 95% are anticipated to be low-density housing forms (i.e. single-detached);
- Approximately 50% of new permanent housing development is expected to occur in rural areas outside of designated settlement areas;
- With respect to the allocation of permanent housing growth, approximately 76% of forecast new housing construction is anticipated to occur on Wolfe Island; the remaining 24% of new housing growth is expected to occur on Howe Island;
- Demand for new seasonal housing development is expected to be relatively minimal; and
- Including the seasonal population base, Frontenac Islands total population is forecast to reach just over 4,000 by 2046, an increase of approximately 600 persons.



Figure 9-5
Township of Frontenac Islands
Permanent + Seasonal Housing Growth, 2016 to 2046



Low density is comprised of singles and semi-detached.
Medium density is comprised of townhouses.
High density is comprised of apartments.

Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019.
Forecast (2021 to 2046) estimated by Watson & Associates Economists Ltd., 2019.

9.2.3 Township of Central Frontenac

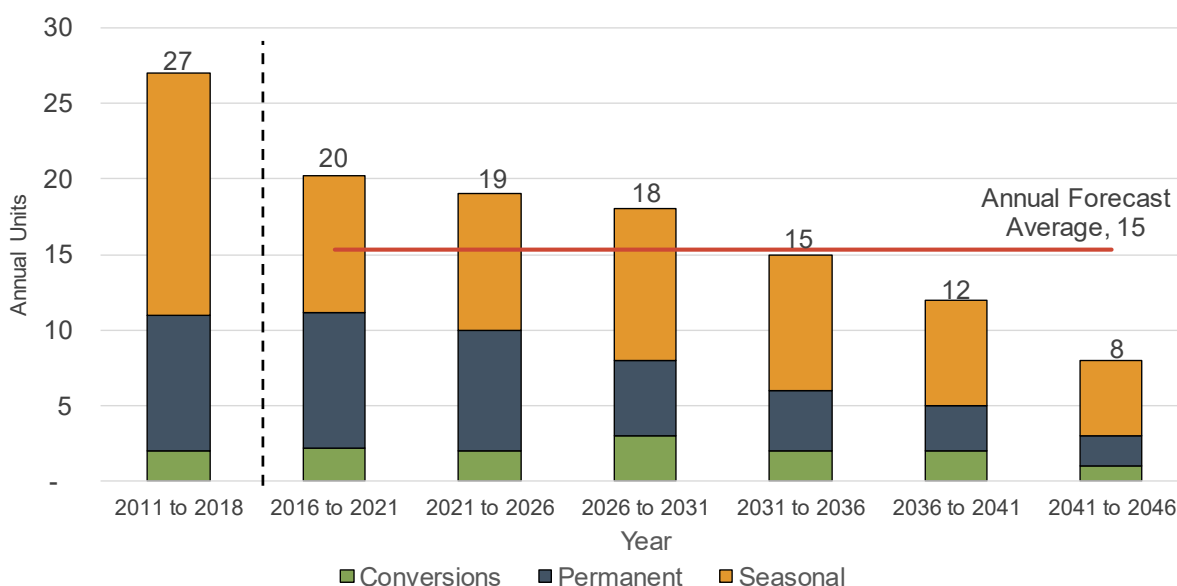
The Township of Central Frontenac will continue to attract a balance of working families, empty-nesters and seniors. Central Frontenac also offers potential for new seasonal housing construction through its numerous waterfront development opportunities. Key observations include:

- Central Frontenac's total permanent population is forecast to reach approximately 4,800 persons by 2046, an increase of approximately 300 persons from 2016 to 2046;
- The average annual permanent population growth rate for Central Frontenac over the 2016-2046 forecast period is projected at 0.2%;
- Over the 30-year forecast period, Central Frontenac is forecast to average just under 10 new housing units per year, of which 71% are anticipated to be low-density housing forms (i.e. single-detached);
- Approximately 80% of new permanent housing development is expected to occur in the rural area outside of designated settlement areas;



- Demand for new seasonal housing development is expected to be steady in Central Frontenac, averaging just under 10 new units per year;
- The potential for seasonal housing conversions to permanent use in Central Frontenac is anticipated to be relatively minimal; and
- Including the seasonal population base, Central Frontenac's combined permanent and season population is forecast to reach approximately 12,600 in 2046 from 11,400 in 2016.

Figure 9-6
Township of Central Frontenac
Permanent + Seasonal Housing Growth, 2016 to 2046



Low density is comprised of singles and semi-detached.

Medium density is comprised of townhouses.

High density is comprised of apartments.

Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019. Forecast (2021 to 2046) estimated by Watson & Associates Economists Ltd., 2019.

9.2.4 Township of North Frontenac

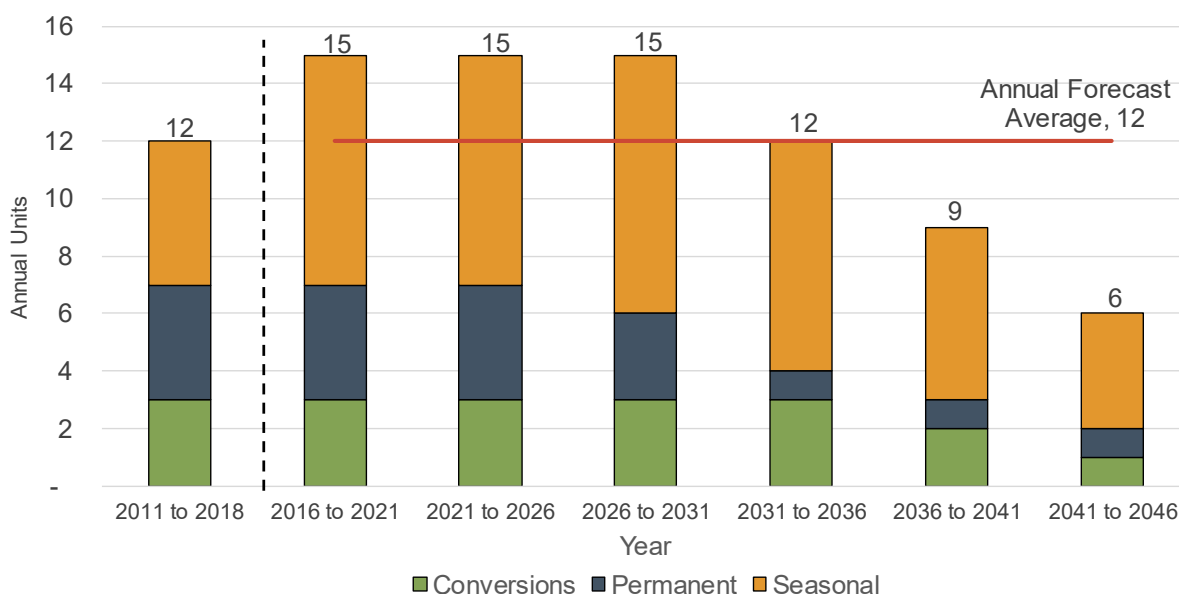
Permanent housing demand in North Frontenac will be largely oriented towards empty-nesters and seniors. In addition, North Frontenac is forecast to experience steady growth in its seasonal housing and population base. Key observations include:

- North Frontenac's total permanent population is forecast to reach approximately 2,100 persons by 2046, a moderate increase of just under 200 persons from 2016 to 2046;



- The average annual permanent population growth rate for North Frontenac over the 2016-2046 forecast period is projected at 0.3%;
- Over the 30-year forecast period, North Frontenac is forecast to average approximately 150 new permanent housing units to its base, of which 100% are anticipated to be low-density housing forms (i.e. single-detached);
- Approximately 90% of new permanent housing development is expected to occur in the rural area outside of designated settlement areas;
- Demand for new seasonal housing development is expected to be steady in North Frontenac, averaging approximately 8 new units per year;
- Including the seasonal population base, North Frontenac's combined permanent and season population is forecast to reach approximately 11,500 in 2046 from 10,500 in 2016.

Figure 9-7
Township of North Frontenac
Permanent + Seasonal Housing Growth, 2016 to 2046



Low density is comprised of singles and semi-detached.

Medium density is comprised of townhouses.

High density is comprised of apartments.

Source: Source: Data from Municipal Property Assessment Corporation (MPAC), derived by Watson & Associates Economists Ltd., 2019. Forecast (2021 to 2046) estimated by Watson & Associates Economists Ltd., 2019.



9.3 Observations

Market demand for future housing within each of Frontenac County's four Area Municipalities varies considerably given the expansive geographic area covered by the County. In turn, this impacts the amount and rate of forecast permanent and seasonal population growth by local municipality. For the Townships of South Frontenac and, to a lesser extent, Frontenac Islands, population growth and housing demand is anticipated to be largely driven by the potential for commuters, given the proximity of these municipalities to the City of Kingston. In contrast, permanent housing demand in Central and North Frontenac is anticipated to be relatively modest and more dependent on the potential draw of these municipalities to older working adults, empty-nesters and young seniors. Lastly, forecast seasonal housing demand will continue to be weighted towards both North Frontenac and Central Frontenac.



Chapter 10

Conclusions



10. Conclusions

Forecasting residential and non-residential development trends in Frontenac County is a rather difficult task given the complex nature of the County's permanent/seasonal population, housing and employment base. Furthermore, potential uncertainty exists regarding global economic trends and identified regional growth drivers which are expected to influence forecast population and employment trends across the County over the long-term. The following provides a summary of the key findings of this report with respect to forecast population, housing and employment trends for Frontenac County.

Preferred Residential Growth Forecast

- **Frontenac County's permanent population base is forecast to increase over the next 30 years, from approximately 27,300 in 2016 to 33,200 in 2046.¹ This represents an annual growth rate of approximately 0.7%.**

Comparatively, this represents a slightly higher forecast annual population growth rate to the City of Kingston Base Case Scenario, but lower than the Province as a whole.^{2,3} Two alternative Growth Scenarios were also explored for the County which consider varying levels of forecast net migration for the County. The Low Growth Scenario forecasts that Frontenac County will reach a 2046 permanent population of 30,500, while the High Growth Scenario projects a County-wide permanent population of 35,500 by 2046.

- **The County's population is older and aging slightly more rapidly than the Province of Ontario as a whole.** From 2016 to 2046, the percentage of the Frontenac County population aged 65+ will increase from 21% to 35%. This trend poses implications regarding future housing needs for across the County, including seniors' housing and affordable housing options.
- **The rate of permanent population growth for Frontenac County is forecast to gradually decline over the next 30 years, largely due to the aging of the population.** This aging trend is anticipated to result in a reduced average

¹ Population figures include an upward adjustment of approximately 2.3% to account for the net Census undercount.

² City of Kingston and Kingston CMA, Population, Housing and Employment Projections.

³ Ministry of Finance Summer 2019 Ontario Population Projections, 2018-2046.



housing occupancy. As a result of this demographic trend, each of the County's settlement areas will require a modest level of new housing development to maintain stable population levels.

- **Over the long-term planning horizon, approximately 80% of forecast permanent population growth is anticipated to occur within the Township of South Frontenac.** The Township of South Frontenac will continue to attract a large proportion of County-wide permanent population growth due to its proximity to the City of Kingston, employment opportunities for commuters and continued local employment growth opportunities.
- **An increasing share of permanent population and housing growth is anticipated to be accommodated in the County's settlement areas.** While this report provides a foundation for future growth management, further planning direction will be required at the County and local level through its Comprehensive Review / Official Plan Review process to ensure that appropriate policies, infrastructure and tools are provided to effectively direct new development in a sustainable manner.
- **Seasonal housing accounts for a significant component of the County's total population base, accounting for 50% of total base population as of 2016 (41% of the total 2016 housing base).** As outlined in Chapter 6, the County's proximity to the G.G.H., the Greater Ottawa Region and the City of Kingston continues to be a major source of demand for seasonal population growth in Frontenac.
- **Including the County's seasonal population base, the total permanent + seasonal population for Frontenac is forecast to reach a total of 62,900 persons by 2046.** This represents a total increase of approximately 8,200 persons from 2016 to 2046.
- **In spite of forecast new seasonal housing development, Frontenac County's seasonal housing and population base is forecast to increase modestly over the next 30 years, due to the net conversion of existing seasonal housing units to permanent dwellings.** This trend in seasonal housing and population is consistent with many other municipalities across Ontario's "cottage country."



Preferred Employment Growth Forecast

- **It is expected that job growth within Frontenac County will be steady over the next 30 years, with employment growth in retail and tourism services to serve the growing permanent and seasonal population base.** Local job growth within the County is expected to be in response to permanent and seasonal population growth within the County and surrounding area.
- **The number of residents within the County who work from home or have no fixed place of work are expected to steadily increase.** This increase is anticipated to be primarily driven by the transition of the economy towards the service sector and “knowledge-based” economy, combined with continued improvements to telecommunications and communication technology.
- **The County is expected to experience modest employment growth in the industrial sector.** Potential industrial sectors include utilities and construction, small scale manufacturing and energy.
- **Over the 2016-2046 period, the County’s employment base is forecast to increase from approximately 5,400 in 2016 to 7,000 by 2046.** This represents an increase of approximately 1,600 employees from 2016 to 2046, of which almost 56% of job growth is forecast in the “work at home” and “no fixed place of work” employment categories. Remaining County job growth (approximately 700 employees) is forecast within the commercial sector and, to a lesser extent, the industrial and institutional sectors.



Appendices



Appendix A

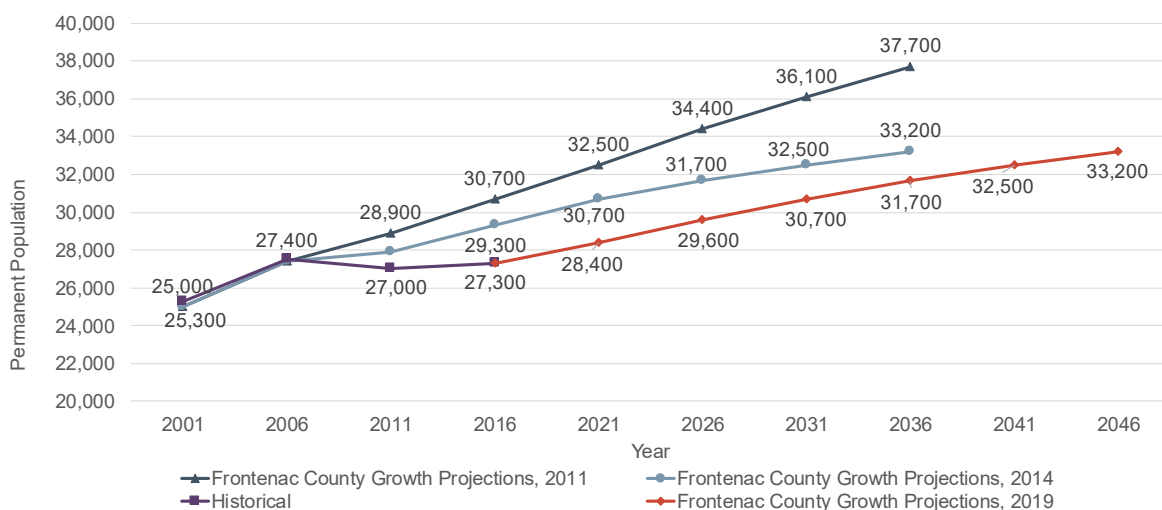
Frontenac County Population, Housing and Employment Projection Comparison



Appendix A: Frontenac County Population, Housing and Employment Projection Comparison¹

Figures A-1 and A-2 compare the permanent population and employment in Frontenac County, respectively, from the 2011 and 2014 projections studies to the current Base Case Scenario presented in this report. The previous 2014 study projected that the County would achieve a population of 29,300 by 2016, however, the 2016 population for Frontenac County is reported at 27,300, a difference of 2,000 people.

Figure A-1
Frontenac County
Population Forecast Comparison



Source: 2001 to 2016 population derived from Statistics Canada Census, by Watson & Associates Economists Ltd., 2019. 2016 to 2046 for ecast prepared by Watson & Associates Economists Ltd., 2019.
Note: Population includes the net Census undercount estimated at 2.3%.

Growth Rate Comparison		
Study	Period	Annual Growth Rate
Frontenac County Growth Projections, 2011	2011 to 2036	1.07%
Frontenac County Growth Projections, 2014	2011 to 2036	0.70%
Frontenac County Growth Projections, 2019	2016 to 2046	0.65%

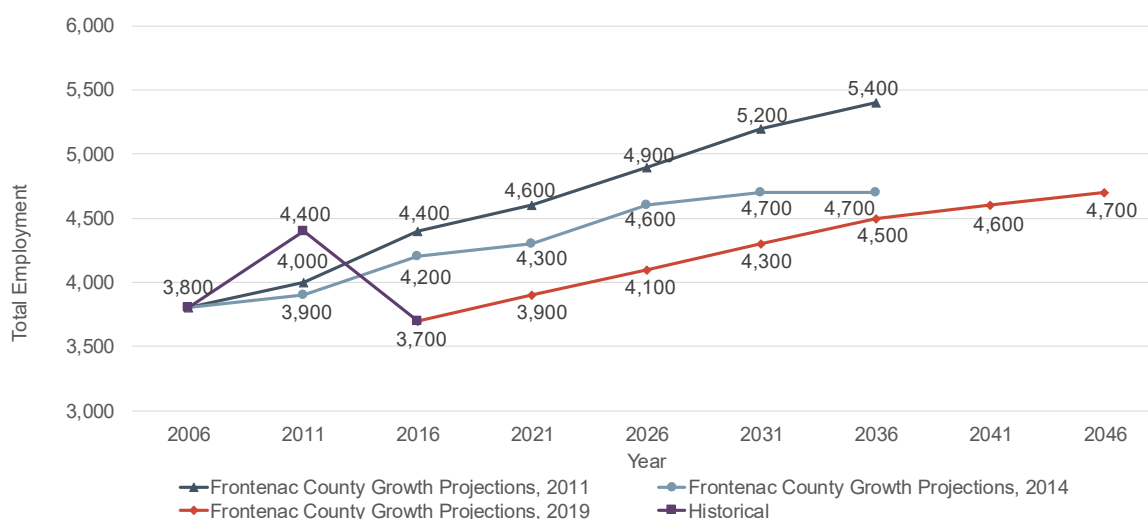
¹ Population, Housing and Employment Projections for the Frontenacs, 2011; and Population, Housing and Employment Projections for the Frontenacs, 2014.



The lower than anticipated 2016 Census population figure has resulted in a lower growth forecast than provided in the 2014 study. Rather than reaching a permanent population of 33,200 by 2036, growth has been prolonged in this study, reaching a population of 33,200 in 2046. Prolonging growth to 2046 is largely informed by this lower than expected 2016 Census population, as well as a lower forecast annual population growth rate that the previous study.

Figure A-2 presents the total employment forecast from the 2011 and 2014 projections studies compared to the Base Case Scenario. Total employment in 2016 fell short of the 2014 estimates largely due to employment decline in the manufacturing, educational and public administration sectors between 2011 and 2016. In total, the previous 2014 employment projections study exceeded the 2016 Census actuals by approximately 500 jobs. Similar to population, the current employment Base Case Scenario is expected to reach the previous study's 2036 estimate of 4,700 jobs by 2046.

Figure A-2
Frontenac County
Total Employment Forecast Comparison



Source: 2001 to 2016 employment derived from Statistics Canada Census, by Watson & Associates Economists Ltd., 2019. 2016 to 2046 forecast prepared by Watson & Associates Economists Ltd., 2019.

Note: Employment figures include work at home, but exclude no fixed place of work (N.F.P.O.W.)

Growth Rate Comparison		
Study	Period	Annual Growth Rate
Frontenac County Growth Projections, 2011	2011 to 2036	0.65%
Frontenac County Growth Projections, 2014	2011 to 2036	0.75%
Frontenac County Growth Projections, 2019	2016 to 2046	0.80%



Appendix B

Additional Details Regarding Growth Forecast Approach and Methodology



Appendix B: Additional Details Regarding Growth Forecast Approach and Methodology

B.1 Approach and Methodology

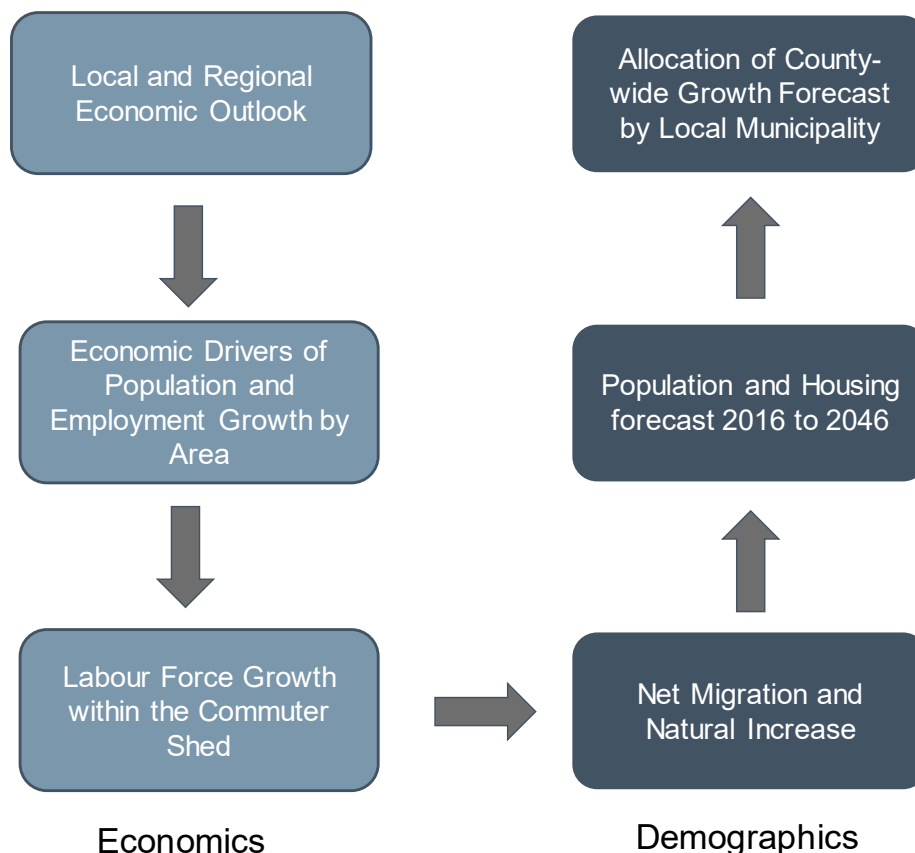
Figure B-1 (below) summarizes the approach used in developing the long-term growth forecast model for Frontenac County. This approach models the macro-economic and regional demographic/socio-economic trends that are anticipated to influence the employment and population structure of the County and its respective Townships within the context of provincial, national and global trends.

There are also a number of local factors that are anticipated to influence the amount, type and location of development throughout the County. Such factors include: the Townships' competitive position relative to surrounding municipalities within the regional market area, the supply of municipally serviced land in settlement areas, availability of future lands for settlement area boundary expansion, local real-estate market conditions and forecast trends in housing affordability, to name a few. Lastly, provincial and local planning policy can also influence the location, built-form/density and rate of residential and non-residential development activity.

In accordance with the macro and local factors that are anticipated to influence future growth within Frontenac County, the population, household and employment forecast methodology adopted for this study utilizes a combined forecasting approach, which incorporates both the traditional “top-down” cohort-survival forecast methodology (i.e. population by age-cohort) and a “bottom-up” household allocation methodology. This combined approach is adopted to ensure that both regional economic/demographic trends and local housing market conditions are adequately assessed in developing the County's long-term growth potential.



Figure B-1
Frontenac County
Approach to Long-Term Population, Household and Employment Growth Forecast



Economic Base Model

Local/regional economic activities can be divided into two categories: those that are “export-based,” and those that are “community-based.” The export-based sector is comprised of industries (i.e. economic clusters) which produce goods that reach markets outside the community (e.g. agriculture and primary resources, manufacturing, research and development). Export-based industries also provide services to temporary and seasonal residents of the municipality (hotels, restaurants, tourism-related sectors, colleges and universities) or to businesses outside the municipality (specialized financial, professional, scientific and technical services). Community-based industries produce services that primarily meet the needs of the residents in the County (retail, medical, primary and secondary education and personal and government services).



Cohort-Survival Population and Household Forecast Methodology

The cohort-survival population forecast methodology uses, as its base, population age groups by sex and ages each group over time, taking into consideration age-specific death rates and age-specific fertility rates for the female population in the appropriate years (to generate new births). To this total, an estimated rate of net migration is added (in-migration to the municipality, less out-migration, by age group).

Forecast trends in population age structure provide important insights with respect to future housing needs based on forecast trends in average household occupancy. Total housing growth is generated from the population forecast by major age group using a headship rate forecast.

Total Housing Growth in Frontenac County

Forecast housing demand is derived based on the relationship between forecast population growth by age and housing demand. A headship rate is defined as the number of primary household maintainers or heads of households by major population age group (i.e. cohort). Average headship rates do not tend to vary significantly over time by major age group; however, the number of maintainers per household varies by population age group. For example, the ratio of household maintainers per total housing occupants is higher on average for households occupied by older cohorts (i.e. 55+ years of age) as opposed to households occupied by adults 29 to 54 years of age. This is important because, as the County's population ages, the ratio of household maintainers is anticipated to increase. The average headship rate represents the inverse of the average number of persons per unit (P.P.U.). As such, as the County's population ages over time, the average P.P.U. is forecast to steadily decline as the ratio of household maintainers per total housing occupants increases.

Housing by Structure Type

Forecast housing growth by structure type (i.e. low-, medium- and high-density households) is anticipated to be influenced by the following supply and demand factors:

Supply Factors

- Potential future housing stock in the development process by housing type and approval status;



- Housing intensification opportunities;
- Current inventory of net vacant designated settlement area “greenfield” lands within settlement areas, not currently in the development approvals process; and
- Provincial and local planning policy.

Demand Factors

- Housing preferences (i.e. propensity) by structure type for each age group of homebuyers and renters (i.e. young adults, adults, empty-nesters, seniors);
- Market demand for housing intensification;
- The County’s appeal to new immigrants by age group including young adults, families, empty-nesters and seniors; and
- Long-term trends in housing affordability (i.e. trends in housing prices vs. household income) within the Kingston C.M.A. and Frontenac County.

Employment Forecast by Sector

The long-term employment growth potential for Frontenac County has been developed based on a comprehensive review of long-term labour force growth trends and local employment growth drivers. Further, a long-term employment growth forecast by employment sector has been established for Frontenac County based on a review of historical employment trends and the future outlook of each of these sectors within the broader regional and provincial context.

When forecasting long-term employment, it is important to understand how growth in the County’s major employment categories (i.e. industrial, commercial and institutional) is impacted by forecast labour force and both permanent and seasonal population growth. Population-related employment (i.e. retail, schools, service and commercial) is generally automatically attracted to locations convenient to residents. Typically, as the population grows, the demand for population-related employment also increases in order to service the needs of the local community. Forecast commercial and institutional activity rates have been based on historical activity rates and employment trends, as well as future commercial and institutional employment prospects within a local and regional context. Similar to population-related employment, home-based employment is also anticipated to generally increase in proportion to population growth.



Industrial and office commercial employment (export-based employment), on the other hand, is not closely linked to population growth. Employment growth within the industrial sector tends to be more influenced by broader market conditions (i.e. economic competitiveness, transportation access, access to labour and distance to employment markets), as well as local site characteristics, such as servicing capacity, highway access and exposure, site size/configuration, physical conditions and site location within existing and future Employment Areas throughout the County and the surrounding market area.

B.2 Key Assumptions

Within the context of the “top-down” and “bottom-up” factors discussed above, there are a number of variables that can ultimately influence the amount, growth rate, type and location of development within Frontenac County. These issues are discussed in further detail below.

Global and National Trends

Immigration

Canada’s attractiveness to immigration largely depends on the Country’s economic and labour force outlook relative to other employment markets on a global level. In turn, this has an impact on the Country’s annual demand associated with international migrants. Canada’s immigration policies can impact the annual rate of immigration on a national level. For the past several decades, Canada has had a relatively “open” immigration policy compared to other developed nations. By 2021, the number of new nation-wide immigrants is targeted at 350,000.¹

National Population Labour Force Trends

Canada’s immigration initiatives are largely aimed at addressing the Country’s aging population and labour force base. As of 2016, approximately 21% of the Country’s population is 65 years of age or older. By 2046 this ratio is forecast to increase to 35%. An aging population base also brings with it an aging labour force pool. As of September 2019, Canada’s labour force participation rate was estimated at

¹ Government of Canada. Supplementary Information 2018-2020 Immigration Levels Plan.



approximately 65%.¹ As summarized below in Figure B-2, the Country's total labour force participation rate is forecast to steadily decline to approximately 62% by the year 2031.²

The decline in the national labour force participation rate is forecast to moderate after 2031, approaching 61% by 2051. Canada's modest labour force growth outlook and aging population represent constraining factors regarding national economic growth and gross domestic product (G.D.P.). These national labour force and demographic trends which continue to shape the Country are also anticipated to similarly impact the long-term population and employment growth outlook for the Kingston C.M.A. and Frontenac County.

Provincial and Regional Trends

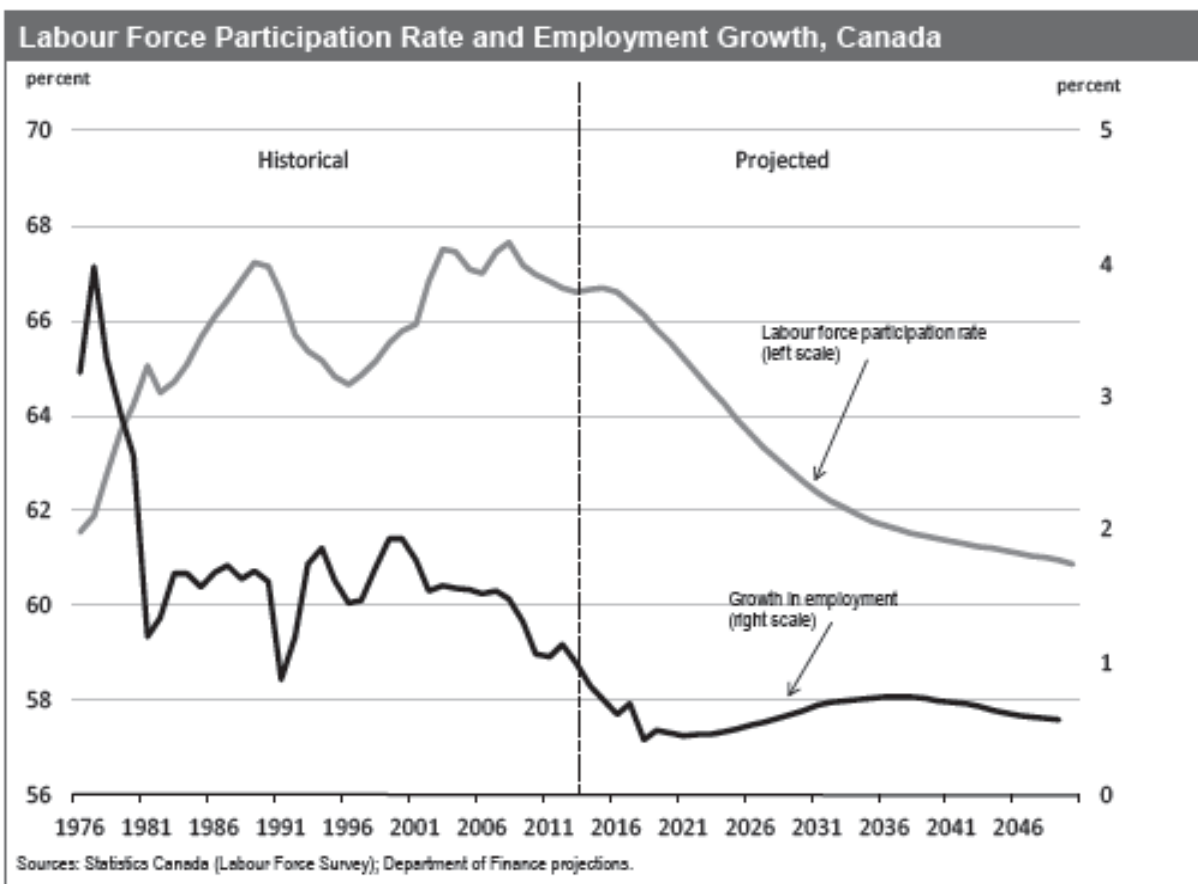
At the provincial level, the economic outlook and competitive position of Ontario have direct influence on the number of international and interprovincial migrants who choose to reside within the Province. Regional economic conditions within the Province also impact the share of labour force growth and net-migration (inter-national, inter-provincial and intra-provincial) by broader region (i.e. Eastern Ontario, central Ontario, southwestern Ontario and northern Ontario).

¹ Statistics Canada Data Table 14-10-0287-03

² The labour force participation rate is defined as the ratio of total labour force divided by the total population 15 years of age and older.



Figure B-2
Forecast Trends in Long-Term Annual Employment Growth and Labour Force Participation Rates, Canada



Frontenac County Components of Population Growth

Net Migration

Similar to the provincial and regional level, population growth in Frontenac County will be heavily driven by net migration. Under the County's Base Case population forecast, net migration is anticipated to represent approximately over 100% of the County's future population growth due to the decline and ultimately negative trends associated with population change from natural increase. As such, changes in net migration assumptions are highly sensitive to overall rate of permanent population growth.

Natural Increase (Births less Deaths)



To a lesser extent, population growth from natural increase also contributes to population growth across Frontenac County. Population growth associated with natural increase is highly influenced by the age structure of the existing population base. Across North America and other developed countries worldwide, the average age of the population is increasing, largely as a result of the aging of the Baby Boom population (born between 1946 and 1964). This trend is also occurring within Frontenac County. As previously mentioned, population growth associated with natural increase is anticipated to steadily decrease over the forecast period within Frontenac County as a result of the aging of the existing population base.

Forecast births within Frontenac County are directly influenced by forecast trends in fertility rates. Since the 1970s, average fertility rates across Canada (including Frontenac County) have been gradually declining. Under the Base Case population growth scenario, the forecast fertility rate is expected to gradually increase from 1.61 to 1.69 in 2046. Comparatively, an average forecast fertility rate of 1.52 to 1.55 has been assumed for the Province as a whole, as per the Ministry of Finance Summer 2019 Projections Update.¹

Trends in life expectancy and mortality are anticipated to impact the long-term population forecast for the County. Forecast deaths have been based on assumptions related to forecast mortality rates. Mortality rates are forecast to gradually increase over the long term (particularly in the 65+ age group). Average mortality rates are highest within the 65+ age group, compared to the other demographic groups within the County. As a result, as the percentage of the 65+ population increases within Frontenac County, the number of forecast deaths is expected to steadily increase. As previously mentioned, this trend is anticipated to result in a population decline associated with the natural increase (i.e. births less deaths).

¹ Ontario Population Projections Update. Summer 2019. Ministry of Finance. Ontario.



Appendix C

Frontenac County Net Migration Analysis



Appendix C: Frontenac County Net Migration Analysis

2001-2006

Age Cohort	Males	Females	Total	%
Under 1	33	27	61	5%
1-3 Years	71	59	129	10%
4-8 Years	186	51	238	19%
9-13 Years	123	89	212	17%
14-18 Years	97	42	139	11%
19-24 Years	(143)	(305)	(448)	-36%
25-29 Years	(15)	56	41	3%
30-34 Years	182	233	415	33%
35-39 Years	196	83	280	22%
40-44 Years	174	106	279	22%
45-49 Years	137	64	201	16%
50-54 Years	135	74	208	17%
55-59 Years	194	162	357	29%
60-64 Years	129	83	212	17%
65-69 Years	21	39	59	5%
70-74 Years	(98)	31	(67)	-5%
75-79 Years	(72)	(32)	(104)	-8%
80-84 Years	(67)	(13)	(80)	-6%
85-89 Years	(27)	(14)	(42)	-3%
90+	11	(2)	9	1%
Total	1,266	833	2,099	168%

Source: Watson & Associates Economists Ltd., 2019.

2006-2011

Age Cohort	Males	Females	Total	%
Under 1	36	35	71	6%
1-3 Years	131	138	269	21%
4-8 Years	118	112	230	18%
9-13 Years	48	3	52	4%
14-18 Years	(3)	(20)	(23)	-2%
19-24 Years	(414)	(245)	(659)	-53%
25-29 Years	(226)	(65)	(292)	-23%
30-34 Years	(2)	119	117	9%
35-39 Years	(62)	72	10	1%
40-44 Years	(54)	86	32	3%
45-49 Years	(21)	12	(9)	-1%
50-54 Years	29	126	155	12%
55-59 Years	44	75	118	9%
60-64 Years	73	0	73	6%
65-69 Years	(81)	(38)	(119)	-10%
70-74 Years	(92)	(65)	(157)	-13%
75-79 Years	(39)	(94)	(133)	-11%
80-84 Years	(26)	(15)	(41)	-3%
85-89 Years	(27)	(34)	(61)	-5%
90+	(4)	35	31	2%
Total	(575)	238	(337)	-27%

Source: Watson & Associates Economists Ltd., 2019.

2011-2016

Age Cohort	Males	Females	Total	%
Under 1	23	34	57	5%
1-3 Years	99	141	241	19%
4-8 Years	113	110	224	18%
9-13 Years	(9)	82	74	6%
14-18 Years	(11)	40	29	2%
19-24 Years	(106)	(413)	(519)	-42%
25-29 Years	25	(183)	(158)	-13%
30-34 Years	146	76	222	18%
35-39 Years	34	36	70	6%
40-44 Years	41	20	61	5%
45-49 Years	32	58	90	7%
50-54 Years	74	105	179	14%
55-59 Years	66	78	144	11%
60-64 Years	62	88	150	12%
65-69 Years	(40)	(3)	(43)	-3%
70-74 Years	(31)	(60)	(91)	-7%
75-79 Years	(51)	(60)	(111)	-9%
80-84 Years	(88)	(59)	(147)	-12%
85-89 Years	(17)	(49)	(66)	-5%
90+	9	28	37	3%
Total	371	70	441	35%

Source: Watson & Associates Economists Ltd., 2019.



2016-2021

Age Cohort	Males	Females	Total	%
Under 1	47	47	94	8%
1-3 Years	160	160	320	26%
4-8 Years	208	139	346	28%
9-13 Years	84	84	169	14%
14-18 Years	44	29	73	6%
19-24 Years	(145)	(217)	(362)	-30%
25-29 Years	(45)	(45)	(91)	-7%
30-34 Years	67	101	168	14%
35-39 Years	105	105	210	17%
40-44 Years	87	130	217	18%
45-49 Years	82	82	164	13%
50-54 Years	127	190	316	26%
55-59 Years	124	124	248	20%
60-64 Years	104	70	174	14%
65-69 Years	(62)	(26)	(88)	-7%
70-74 Years	(189)	(81)	(269)	-22%
75-79 Years	(114)	(114)	(229)	-19%
80-84 Years	(123)	(53)	(176)	-14%
85-89 Years	(44)	(66)	(110)	-9%
90+	15	35	51	4%
Total	532	693	1,225	100%

Source: Watson & Associates Economists Ltd., 2019.

2021-2026

Age Cohort	Males	Females	Total	%
Under 1	46	46	92	7%
1-3 Years	156	156	313	24%
4-8 Years	203	135	339	26%
9-13 Years	83	83	165	13%
14-18 Years	43	28	71	5%
19-24 Years	(192)	(288)	(480)	-37%
25-29 Years	(60)	(60)	(121)	-9%
30-34 Years	89	133	222	17%
35-39 Years	119	119	238	18%
40-44 Years	98	148	246	19%
45-49 Years	87	87	175	13%
50-54 Years	134	201	336	26%
55-59 Years	186	186	372	29%
60-64 Years	157	105	262	20%
65-69 Years	(54)	(23)	(78)	-6%
70-74 Years	(166)	(71)	(238)	-18%
75-79 Years	(151)	(151)	(303)	-23%
80-84 Years	(163)	(70)	(232)	-18%
85-89 Years	(58)	(88)	(146)	-11%
90+	20	47	67	5%
Total	576	724	1,300	100%

Source: Watson & Associates Economists Ltd., 2019.

2026-2031

Age Cohort	Males	Females	Total	%
Under 1	39	39	78	6%
1-3 Years	132	132	264	20%
4-8 Years	171	114	286	22%
9-13 Years	70	70	139	11%
14-18 Years	36	24	60	5%
19-24 Years	(211)	(317)	(528)	-41%
25-29 Years	(66)	(66)	(133)	-10%
30-34 Years	98	147	245	19%
35-39 Years	127	127	255	20%
40-44 Years	105	158	264	20%
45-49 Years	98	98	197	15%
50-54 Years	152	227	379	29%
55-59 Years	219	219	438	34%
60-64 Years	185	123	308	24%
65-69 Years	(60)	(26)	(85)	-7%
70-74 Years	(182)	(78)	(260)	-20%
75-79 Years	(149)	(149)	(298)	-23%
80-84 Years	(160)	(69)	(229)	-18%
85-89 Years	(58)	(86)	(144)	-11%
90+	20	46	66	5%
Total	566	734	1,300	100%

Source: Watson & Associates Economists Ltd., 2019.

2031-2036

Age Cohort	Males	Females	Total	%
Under 1	43	43	85	7%
1-3 Years	145	145	290	23%
4-8 Years	188	126	314	25%
9-13 Years	77	77	153	12%
14-18 Years	39	26	66	5%
19-24 Years	(203)	(305)	(508)	-41%
25-29 Years	(64)	(64)	(128)	-10%
30-34 Years	94	141	235	19%
35-39 Years	100	100	200	16%
40-44 Years	83	124	207	17%
45-49 Years	85	85	171	14%
50-54 Years	132	197	329	26%
55-59 Years	246	246	492	39%
60-64 Years	207	138	346	28%
65-69 Years	(59)	(25)	(85)	-7%
70-74 Years	(181)	(78)	(259)	-21%
75-79 Years	(162)	(162)	(324)	-26%
80-84 Years	(174)	(75)	(249)	-20%
85-89 Years	(63)	(94)	(156)	-13%
90+	22	50	72	6%
Total	554	696	1,250	100%

Source: Watson & Associates Economists Ltd., 2019.

2036-2041

Age Cohort	Males	Females	Total	%
Under 1	42	42	85	22%
1-3 Years	48	48	96	24%
4-8 Years	37	25	62	16%
9-13 Years	15	15	30	8%
14-18 Years	8	5	13	3%
19-24 Years	(30)	(45)	(74)	-19%
25-29 Years	(11)	(11)	(22)	-6%
30-34 Years	17	25	41	11%
35-39 Years	24	24	48	12%
40-44 Years	20	30	50	13%
45-49 Years	16	16	32	8%
50-54 Years	25	37	62	16%
55-59 Years	34	34	69	17%
60-64 Years	29	19	48	12%
65-69 Years	(14)	(6)	(20)	-5%
70-74 Years	(42)	(18)	(60)	-15%
75-79 Years	(30)	(30)	(59)	-15%
80-84 Years	(32)	(14)	(45)	-12%
85-89 Years	(11)	(17)	(29)	-7%
90+	20	46	66	17%
Total	166	227	393	100%

Source: Watson & Associates Economists Ltd., 2019.

2041-2046

Age Cohort	Males	Females	Total	%
Under 1	21	21	42	21%
1-3 Years	24	24	48	24%
4-8 Years	19	12	31	16%
9-13 Years	8	8	15	8%
14-18 Years	4	3	7	3%
19-24 Years	(18)	(26)	(44)	-22%
25-29 Years	(7)	(7)	(13)	-7%
30-34 Years	10	15	24	12%
35-39 Years	12	12	24	12%
40-44 Years	10	15	25	13%
45-49 Years	9	9	18	9%
50-54 Years	14	21	35	18%
55-59 Years	17	17	34	17%
60-64 Years	14	10	24	12%
65-69 Years	(7)	(3)	(10)	-5%
70-74 Years	(21)	(9)	(30)	-15%
75-79 Years	(15)	(15)	(30)	-15%
80-84 Years	(16)	(7)	(23)	-11%
85-89 Years	(6)	(9)	(14)	-7%
90+	10	23	33	17%
Total	83	114	198	100%

Source: Watson & Associates Economists Ltd., 2019.



Appendix D

Frontenac County Local Population & Housing Growth Forecasts



Appendix D: Frontenac County Local Population & Housing Growth Forecasts

Figure D-1
Frontenac County
Permanent Population and Household Forecast by Age Cohort, 2016 to 2046

Population by Age Cohort (Including Census undercount) ¹

Cohort	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
0-19	6,556	6,471	5,894	5,512	5,700	6,000	6,000	5,900	5,900	6,000
20-34	3,724	3,983	3,571	3,667	3,600	3,500	3,500	3,600	3,900	4,300
35-44	4,292	4,186	3,342	2,860	3,000	3,100	3,100	3,100	2,900	2,700
45-54	4,138	4,727	4,864	4,423	3,900	3,700	4,000	4,000	3,900	3,700
55-64	3,168	4,226	4,745	5,138	5,500	5,500	5,100	5,100	5,100	4,800
65-74	2,175	2,519	2,930	3,775	4,400	4,900	5,400	5,500	5,200	5,100
75+	1,247	1,409	1,671	1,912	2,300	2,900	3,600	4,500	5,500	6,600
Total	25,300	27,520	27,020	27,290	28,400	29,600	30,700	31,800	32,500	33,200

Percentage of Population by Age Cohort

Cohort	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
0-19	26%	24%	22%	20%	20%	20%	20%	19%	18%	18.2%
20-34	15%	14%	13%	13%	13%	12%	11%	11%	12%	13.0%
35-44	17%	15%	12%	10%	11%	10%	10%	10%	9%	8.0%
45-54	16%	17%	18%	16%	14%	12%	13%	13%	12%	11.3%
55-64	13%	15%	18%	19%	19%	18%	17%	16%	16%	14.4%
65-74	9%	9%	11%	14%	15%	17%	18%	17%	16%	15.3%
75+	5%	5%	6%	7%	8%	10%	12%	14%	17%	19.8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%

Source: 2001 to 2016 Derived from Statistics Canada, Demography Division (Catalogue no. 91C0005) , by Watson & Associates Economists Ltd. 2016 to 2046 Forecast by Watson & Associates Economists Ltd., 2019.

¹ Population includes Census undercount of approximately 2.3%.

Note: Figures may not add precisely due to rounding.



Figure D-2
Frontenac County
Permanent Population and Household Forecast, 2016 to 2046

Year		Population (Including Census Undercount) ¹	Population (Excluding Census undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.) without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	27,520	26,660	9,765		90	245	160	10,260	2.68	2.60
	Mid-2011	27,020	26,380	9,965		135	175	105	10,380	2.60	2.54
	Mid-2016	27,290	26,680	10,415		80	160	135	10,790	2.53	2.47
Forecast	Mid-2019	28,000	27,380	10,695	45	80	165	135	11,120	2.52	2.46
	Mid-2021	28,440	27,810	10,860	70	80	170	135	11,315	2.51	2.46
	Mid-2026	29,600	28,950	11,365	145	100	195	135	11,940	2.48	2.42
	Mid-2031	30,710	30,030	11,895	225	130	225	135	12,610	2.44	2.38
	Mid-2036	31,750	31,040	12,370	300	165	250	135	13,220	2.40	2.35
	Mid-2041	32,470	31,750	12,715	355	195	270	135	13,670	2.38	2.32
	Mid-2046	33,150	32,420	12,975	395	215	285	135	14,005	2.37	2.31
Incremental	Mid-2011 to Mid-2016	270	300	450		-55	-15	30	410		
	Mid-2016 to Mid-2019	710	700	280	0	0	5	0	330		
	Mid-2016 to Mid-2021	1,150	1,130	445	45	0	10	0	525		
	Mid-2016 to Mid-2026	2,310	2,270	950	145	20	35	0	1,150		
	Mid-2016 to Mid-2031	3,420	3,350	1,480	225	50	65	0	1,820		
	Mid-2016 to Mid-2036	4,460	4,360	1,955	300	85	90	0	2,430		
	Mid-2016 to Mid-2041	5,180	5,070	2,300	355	115	110	0	2,880		
	Mid-2016 to Mid-2046	5,860	5,740	2,560	395	135	125	0	3,215		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-3
Township of South Frontenac
Permanent Population and Household Forecast by Municipality, 2016 to 2046

	Year	Population (Including Census Undercount) ¹	Population (Excluding Census Undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.): without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	18,820	18,230	6,420		70	170	120	6,780	2.78	2.69
	Mid-2011	18,550	18,110	6,525		85	135	55	6,800	2.73	2.66
	Mid-2016	19,070	18,650	6,920		40	140	90	7,190	2.65	2.59
Forecast	Mid-2019	19,610	19,170	7,130	20	40	145	90	7,425	2.64	2.58
	Mid-2021	19,940	19,500	7,255	35	40	150	90	7,570	2.63	2.58
	Mid-2026	20,840	20,370	7,645	75	55	175	90	8,040	2.59	2.53
	Mid-2031	21,760	21,280	8,080	115	80	205	90	8,570	2.54	2.48
	Mid-2036	22,640	22,140	8,485	150	105	230	90	9,060	2.50	2.44
	Mid-2041	23,220	22,700	8,760	175	125	250	90	9,400	2.47	2.41
	Mid-2046	23,780	23,250	8,975	195	140	265	90	9,665	2.46	2.41
Incremental	Mid-2011 to Mid-2016	520	540	395		-45	5	35	390		
	Mid-2016 to Mid-2019	540	520	210	20	0	5	0	235		
	Mid-2016 to Mid-2021	870	850	335	35	0	10	0	380		
	Mid-2016 to Mid-2026	1,770	1,720	725	75	15	35	0	850		
	Mid-2016 to Mid-2031	2,690	2,630	1,160	115	40	65	0	1,380		
	Mid-2016 to Mid-2036	3,570	3,490	1,565	150	65	90	0	1,870		
	Mid-2016 to Mid-2041	4,150	4,050	1,840	175	85	110	0	2,210		
	Mid-2016 to Mid-2046	4,710	4,600	2,055	195	100	125	0	2,475		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-4
Township of Frontenac Islands
Permanent Population and Household Forecast by Municipality, 2016 to 2046

	Year	Population (Including Census Undercount) ¹	Population (Excluding Census undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.): without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	1,920	1,860	760		5	5	10	780	2.46	2.38
	Mid-2011	1,910	1,860	760		10	5	5	780	2.45	2.38
	Mid-2016	1,800	1,760	775		0	0	5	780	2.31	2.26
Forecast	Mid-2019	1,860	1,820	800	5	0	0	5	810	2.30	2.25
	Mid-2021	1,900	1,860	815	10	0	0	5	830	2.29	2.24
	Mid-2026	2,050	2,000	875	25	5	0	5	910	2.25	2.20
	Mid-2031	2,160	2,110	930	40	5	0	5	980	2.20	2.15
	Mid-2036	2,270	2,220	980	50	10	0	5	1,045	2.17	2.12
	Mid-2041	2,380	2,330	1,035	60	15	0	5	1,115	2.13	2.09
	Mid-2046	2,470	2,420	1,070	65	20	0	5	1,160	2.13	2.09
Incremental	Mid-2011 to Mid-2016	-110	-100	15		-10	-5	0	0		
	Mid-2016 to Mid-2019	60	60	25	5	0	0	0	30		
	Mid-2016 to Mid-2021	100	100	40	10	0	0	0	50		
	Mid-2016 to Mid-2026	250	240	100	25	5	0	0	130		
	Mid-2016 to Mid-2031	360	350	155	40	5	0	0	200		
	Mid-2016 to Mid-2036	470	460	205	50	10	0	0	265		
	Mid-2016 to Mid-2041	580	570	260	60	15	0	0	335		
	Mid-2016 to Mid-2046	670	660	295	65	20	0	0	380		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D–4a
Howe Island
Permanent Population and Household Forecast by Municipality, 2016 to 2046

Year		Population (Including Census Undercount) ¹	Population (Excluding Census undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.) without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	620	560	245		0	0	0	245	2.53	2.29
	Mid-2011	620	600	250		0	0	0	250	2.48	2.40
	Mid-2016	570	560	260		0	0	0	260	2.19	2.15
Forecast	Mid-2019	590	580	265	5	0	0	0	270	2.19	2.15
	Mid-2021	600	590	270	5	0	0	0	275	2.18	2.15
	Mid-2026	640	630	285	10	0	0	0	295	2.17	2.14
	Mid-2031	680	660	300	15	0	0	0	315	2.16	2.10
	Mid-2036	710	690	315	15	0	0	0	330	2.15	2.09
	Mid-2041	740	720	330	20	0	0	0	350	2.11	2.06
	Mid-2046	760	740	335	20	0	0	0	355	2.14	2.08
Incremental	Mid-2011 to Mid-2016	-50	-40	10		0	0	0	10		
	Mid-2016 to Mid-2019	20	20	5	5	0	0	0	10		
	Mid-2016 to Mid-2021	30	30	10	5	0	0	0	15		
	Mid-2016 to Mid-2026	75	70	25	10	0	0	0	35		
	Mid-2016 to Mid-2031	110	100	40	15	0	0	0	55		
	Mid-2016 to Mid-2036	140	130	55	15	0	0	0	70		
	Mid-2016 to Mid-2041	165	160	70	20	0	0	0	90		
	Mid-2016 to Mid-2046	190	180	75	20	0	0	0	95		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D–4b
Wolfe Island
Permanent Population and Household Forecast by Municipality, 2016 to 2046

Year		Population (Including Census Undercount) ¹	Population (Excluding Census undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.): without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	1,300	1,300	515	0	5	5	10	535	2.43	2.43
	Mid-2011	1,290	1,260	510	0	10	5	5	530	2.43	2.38
	Mid-2016	1,230	1,200	515	0	0	0	5	520	2.37	2.31
Forecast	Mid-2019	1,270	1,240	535	0	0	0	5	540	2.35	2.30
	Mid-2021	1,300	1,270	545	5	0	0	5	555	2.34	2.29
	Mid-2026	1,410	1,370	590	15	5	0	5	615	2.29	2.23
	Mid-2031	1,480	1,450	630	25	5	0	5	665	2.23	2.18
	Mid-2036	1,560	1,530	665	35	10	0	5	715	2.18	2.14
	Mid-2041	1,640	1,610	705	40	15	0	5	765	2.14	2.10
	Mid-2046	1,710	1,680	735	45	20	0	5	805	2.12	2.09
Incremental	Mid-2011 to Mid-2016	-60	-60	5		-10	-5	0	-10		
	Mid-2016 to Mid-2019	40	40	20	0	0	0	0	20		
	Mid-2016 to Mid-2021	70	70	30	5	0	0	0	35		
	Mid-2016 to Mid-2026	180	170	75	15	5	0	0	95		
	Mid-2016 to Mid-2031	250	250	115	25	5	0	0	145		
	Mid-2016 to Mid-2036	330	330	150	35	10	0	0	195		
	Mid-2016 to Mid-2041	410	410	190	40	15	0	0	245		
	Mid-2016 to Mid-2046	480	480	220	45	20	0	0	285		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-5
Township of Central Frontenac
Permanent Population and Household Forecast by Municipality, 2016 to 2046

Year		Population (Including Census Undercount) ¹	Population (Excluding Census Undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.) without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	4,820	4,670	1,775		10	40	25	1,850	2.61	2.52
	Mid-2011	4,670	4,560	1,795		30	35	35	1,895	2.46	2.41
	Mid-2016	4,470	4,370	1,810		40	20	25	1,895	2.36	2.31
Forecast	Mid-2019	4,540	4,440	1,840	5	40	20	25	1,930	2.35	2.30
	Mid-2021	4,590	4,490	1,855	10	40	20	25	1,950	2.35	2.30
	Mid-2026	4,670	4,570	1,890	25	45	20	25	2,005	2.33	2.28
	Mid-2031	4,720	4,610	1,915	35	45	20	25	2,040	2.31	2.26
	Mid-2036	4,740	4,640	1,930	45	50	20	25	2,070	2.29	2.24
	Mid-2041	4,760	4,660	1,940	55	55	20	25	2,095	2.27	2.22
	Mid-2046	4,790	4,680	1,945	60	55	20	25	2,105	2.28	2.22
Incremental	Mid-2011 to Mid-2016	-200	-190	15		10	-15	-10	0		
	Mid-2016 to Mid-2019	70	70	30	5	0	0	0	35		
	Mid-2016 to Mid-2021	120	120	45	10	0	0	0	55		
	Mid-2016 to Mid-2026	200	200	80	25	5	0	0	110		
	Mid-2016 to Mid-2031	250	240	105	35	5	0	0	145		
	Mid-2016 to Mid-2036	270	270	120	45	10	0	0	175		
	Mid-2016 to Mid-2041	290	290	130	55	15	0	0	200		
	Mid-2016 to Mid-2046	320	310	135	60	15	0	0	210		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-6
Township of North Frontenac
Permanent Population and Household Forecast by Municipality, 2016 to 2046

Year		Population (Including Census Undercount) ¹	Population (Excluding Census Undercount)	Housing Units						Persons Per Unit (P.P.U.) with undercount	Person Per Unit (P.P.U.): without undercount
				Singles & Semi- Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Households		
Historical	Mid-2006	1,970	1,900	845		0	5	30	880	2.24	2.16
	Mid-2011	1,890	1,840	885		10	0	10	905	2.09	2.03
	Mid-2016	1,940	1,900	910		0	0	15	925	2.10	2.05
Forecast	Mid-2019	1,980	1,940	925	10	0	0	15	950	2.08	2.04
	Mid-2021	2,000	1,960	935	15	0	0	15	965	2.07	2.03
	Mid-2026	2,050	2,000	955	25	0	0	15	995	2.06	2.01
	Mid-2031	2,070	2,030	965	40	0	0	15	1,020	2.03	1.99
	Mid-2036	2,090	2,040	975	55	0	0	15	1,045	2.00	1.95
	Mid-2041	2,100	2,050	980	65	0	0	15	1,060	1.98	1.93
	Mid-2046	2,110	2,060	985	70	0	0	15	1,070	1.97	1.93
Incremental	Mid-2011 to Mid-2016	50	60	25		-10	0	5	20		
	Mid-2016 to Mid-2019	40	40	15	10	0	0	0	25		
	Mid-2016 to Mid-2021	60	60	25	15	0	0	0	40		
	Mid-2016 to Mid-2026	110	100	45	25	0	0	0	70		
	Mid-2016 to Mid-2031	130	130	55	40	0	0	0	95		
	Mid-2016 to Mid-2036	150	140	65	55	0	0	0	120		
	Mid-2016 to Mid-2041	160	150	70	65	0	0	0	135		
	Mid-2016 to Mid-2046	170	160	75	70	0	0	0	145		

Source: 2006 to 2016 from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019.

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-7
Frontenac County
Seasonal Population and Household Forecast, 2016 to 2046¹

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	26,780	7,315	3.66
	Mid-2016	27,400	7,485	3.66
Forecast	Mid-2019	27,700	7,570	3.66
	Mid-2021	27,840	7,605	3.66
	Mid-2026	28,280	7,725	3.66
	Mid-2031	28,750	7,855	3.66
	Mid-2036	29,190	7,975	3.66
	Mid-2041	29,520	8,065	3.66
	Mid-2046	29,760	8,130	3.66
Incremental	Mid-2011 to Mid-2016	620	170	
	Mid-2016 to Mid-2019	300	85	
	Mid-2016 to Mid-2021	440	120	
	Mid-2016 to Mid-2026	880	240	
	Mid-2016 to Mid-2031	1,350	370	
	Mid-2016 to Mid-2036	1,790	490	
	Mid-2016 to Mid-2041	2,120	580	
	Mid-2016 to Mid-2046	2,360	645	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.

¹ A Seasonal P.P.U. of 3.66 is used for all municipalities across Frontenac County. This P.P.U. is derived from the Muskoka District Home Study.



Figure D-8
Township of South Frontenac
Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	10,150	2,775	3.66
	Mid-2016	10,310	2,815	3.66
Forecast	Mid-2019	10,430	2,850	3.66
	Mid-2021	10,440	2,855	3.66
	Mid-2026	10,580	2,890	3.66
	Mid-2031	10,730	2,930	3.66
	Mid-2036	10,860	2,970	3.66
	Mid-2041	10,970	2,995	3.66
	Mid-2046	11,040	3,015	3.66
Incremental	Mid-2011 to Mid-2016	160	40	
	Mid-2016 to Mid-2019	120	35	
	Mid-2016 to Mid-2021	130	40	
	Mid-2016 to Mid-2026	270	75	
	Mid-2016 to Mid-2031	420	115	
	Mid-2016 to Mid-2036	550	155	
	Mid-2016 to Mid-2041	660	180	
	Mid-2016 to Mid-2046	730	200	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.



Figure D-9
Township of Frontenac Islands
Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	1,650	450	3.66
	Mid-2016	1,630	445	3.66
Forecast	Mid-2019	1,650	450	3.66
	Mid-2021	1,620	440	3.66
	Mid-2026	1,600	440	3.66
	Mid-2031	1,590	435	3.66
	Mid-2036	1,580	430	3.66
	Mid-2041	1,570	430	3.66
	Mid-2046	1,560	425	3.66
Incremental	Mid-2011 to Mid-2016	-20	-5	
	Mid-2016 to Mid-2019	20	5	
	Mid-2016 to Mid-2021	-10	-5	
	Mid-2016 to Mid-2026	-30	-5	
	Mid-2016 to Mid-2031	-40	-10	
	Mid-2016 to Mid-2036	-50	-15	
	Mid-2016 to Mid-2041	-60	-15	
	Mid-2016 to Mid-2046	-70	-20	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.



Figure D–9a
Howe Island
Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	420	115	3.66
	Mid-2016	410	115	3.66
Forecast	Mid-2019	400	110	3.66
	Mid-2021	400	110	3.66
	Mid-2026	400	110	3.66
	Mid-2031	400	110	3.66
	Mid-2036	400	110	3.66
	Mid-2041	400	110	3.66
	Mid-2046	400	110	3.66
Incremental	Mid-2011 to Mid-2016	-10	0	
	Mid-2016 to Mid-2019	-10	-5	
	Mid-2016 to Mid-2021	-10	-5	
	Mid-2016 to Mid-2026	-10	-5	
	Mid-2016 to Mid-2031	-10	-5	
	Mid-2016 to Mid-2036	-10	-5	
	Mid-2016 to Mid-2041	-10	-5	
	Mid-2016 to Mid-2046	-10	-5	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.



Figure D-9b
Wolfe Island
Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	1,230	335	3.66
	Mid-2016	1,220	330	3.66
Forecast	Mid-2019	1,250	340	3.66
	Mid-2021	1,220	330	3.66
	Mid-2026	1,200	330	3.66
	Mid-2031	1,190	325	3.66
	Mid-2036	1,180	320	3.66
	Mid-2041	1,170	320	3.66
	Mid-2046	1,160	315	3.66
Incremental	Mid-2011 to Mid-2016	-10	-5	
	Mid-2016 to Mid-2019	35	10	
	Mid-2016 to Mid-2021	5	0	
	Mid-2016 to Mid-2026	-15	0	
	Mid-2016 to Mid-2031	-25	-5	
	Mid-2016 to Mid-2036	-35	-10	
	Mid-2016 to Mid-2041	-45	-10	
	Mid-2016 to Mid-2046	-55	-15	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.



Figure D-10
Township of Central Frontenac
Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	6,570	1,795	3.66
	Mid-2016	6,900	1,885	3.66
Forecast	Mid-2019	7,050	1,925	3.66
	Mid-2021	7,070	1,930	3.66
	Mid-2026	7,230	1,975	3.66
	Mid-2031	7,410	2,025	3.66
	Mid-2036	7,580	2,070	3.66
	Mid-2041	7,700	2,105	3.66
	Mid-2046	7,790	2,130	3.66
Incremental	Mid-2011 to Mid-2016	330	90	
	Mid-2016 to Mid-2019	150	40	
	Mid-2016 to Mid-2021	170	45	
	Mid-2016 to Mid-2026	330	90	
	Mid-2016 to Mid-2031	510	140	
	Mid-2016 to Mid-2036	680	185	
	Mid-2016 to Mid-2041	800	220	
	Mid-2016 to Mid-2046	890	245	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.



Figure D-11
Township of North Frontenac
Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Seasonal Population	Total Seasonal Households	Persons Per Unit (P.P.U.)
Historical	Mid-2006			3.66
	Mid-2011	8,410	2,295	3.66
	Mid-2016	8,550	2,335	3.66
Forecast	Mid-2019	8,580	2,345	3.66
	Mid-2021	8,710	2,380	3.66
	Mid-2026	8,860	2,420	3.66
	Mid-2031	9,030	2,465	3.66
	Mid-2036	9,180	2,505	3.66
	Mid-2041	9,290	2,540	3.66
	Mid-2046	9,370	2,560	3.66
Incremental	Mid-2011 to Mid-2016	140	40	
	Mid-2016 to Mid-2019	30	10	
	Mid-2016 to Mid-2021	160	45	
	Mid-2016 to Mid-2026	310	85	
	Mid-2016 to Mid-2031	480	130	
	Mid-2016 to Mid-2036	630	170	
	Mid-2016 to Mid-2041	740	205	
	Mid-2016 to Mid-2046	820	225	

Source: 2011 and 2016 from MPAC. Forecast by Watson & Associates Economists Ltd., 2019.



Figure D-12
Frontenac County
Permanent + Seasonal Population and Household Forecast, 2016 to 2046

Year		Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U.) with undercount
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	27,020	53,790	9,965	-	135	175	105	10,380	7,315	17,695	3.04
	Mid-2016	27,290	54,680	10,415	-	80	160	135	10,790	7,485	18,275	2.99
Forecast	Mid-2019	28,000	55,700	10,695	45	80	165	135	11,120	7,570	18,685	2.98
	Mid-2021	28,440	56,280	10,860	70	80	170	135	11,315	7,605	18,920	2.97
	Mid-2026	29,600	57,880	11,365	145	100	195	135	11,940	7,725	19,665	2.94
	Mid-2031	30,710	59,470	11,895	225	130	225	135	12,610	7,855	20,465	2.91
	Mid-2036	31,750	60,940	12,370	300	165	250	135	13,220	7,975	21,195	2.88
	Mid-2041	32,470	61,990	12,715	355	195	270	135	13,670	8,065	21,735	2.85
	Mid-2046	33,150	62,910	12,975	395	215	285	135	14,005	8,130	22,135	2.84
Incremental	Mid-2011 to Mid-2016	270	890	450	-	-55	-15	30	410	170	580	
	Mid-2016 to Mid-2019	710	1,020	280	45	0	5	0	330	85	410	
	Mid-2016 to Mid-2021	1,150	1,600	445	70	0	10	0	525	120	645	
	Mid-2016 to Mid-2026	2,310	3,200	950	145	20	35	0	1,150	240	1,390	
	Mid-2016 to Mid-2031	3,420	4,790	1,480	225	50	65	0	1,820	370	2,190	
	Mid-2016 to Mid-2036	4,460	6,260	1,955	300	85	90	0	2,430	490	2,920	
	Mid-2016 to Mid-2041	5,180	7,310	2,300	355	115	110	0	2,880	580	3,460	
	Mid-2016 - Mid-2046	5,860	8,230	2,560	395	135	125	0	3,215	645	3,860	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-13
Township of South Frontenac
Permanent + Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U.) with undercount
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	18,550	28,700	6,525	-	85	135	55	6,800	2,775	9,575	3.00
	Mid-2016	19,070	29,380	6,920	-	40	140	90	7,190	2,815	10,005	2.94
Forecast	Mid-2019	19,610	30,040	7,130	20	40	145	90	7,425	2,850	10,275	2.92
	Mid-2021	19,940	30,380	7,255	35	40	150	90	7,570	2,855	10,425	2.91
	Mid-2026	20,840	31,420	7,645	75	55	175	90	8,040	2,890	10,930	2.87
	Mid-2031	21,760	32,490	8,080	115	80	205	90	8,570	2,930	11,500	2.83
	Mid-2036	22,640	33,500	8,485	150	105	230	90	9,060	2,970	12,030	2.78
	Mid-2041	23,220	34,190	8,760	175	125	250	90	9,400	2,995	12,395	2.76
	Mid-2046	23,780	34,820	8,975	195	140	265	90	9,665	3,015	12,680	2.75
Incremental	Mid-2011 to Mid-2016	520	680	395	-	-45	5	35	390	40	430	
	Mid-2016 to Mid-2019	540	660	210	20	0	5	0	235	35	270	
	Mid-2016 to Mid-2021	870	1,000	335	35	0	10	0	380	40	420	
	Mid-2016 to Mid-2026	1,770	2,040	725	75	15	35	0	850	75	925	
	Mid-2016 to Mid-2031	2,690	3,110	1,160	115	40	65	0	1,380	115	1,495	
	Mid-2016 to Mid-2036	3,570	4,120	1,565	150	65	90	0	1,870	155	2,025	
	Mid-2016 to Mid-2041	4,150	4,810	1,840	175	85	110	0	2,210	180	2,390	
	Mid-2016 - Mid-2046	4,710	5,440	2,055	195	100	125	0	2,475	200	2,675	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-14
Township of Frontenac Islands
Permanent + Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U.) with undercount
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	1,910	3,560	760	-	10	5	5	780	450	1,230	2.89
	Mid-2016	1,800	3,430	775	-	0	0	5	780	445	1,225	2.80
Forecast	Mid-2019	1,860	3,510	800	5	0	0	5	810	450	1,260	2.79
	Mid-2021	1,900	3,520	815	10	0	0	5	830	440	1,270	2.77
	Mid-2026	2,050	3,650	875	25	5	0	5	910	440	1,350	2.70
	Mid-2031	2,160	3,750	930	40	5	0	5	980	435	1,415	2.65
	Mid-2036	2,270	3,850	980	50	10	0	5	1,045	430	1,475	2.61
	Mid-2041	2,380	3,950	1,035	60	15	0	5	1,115	430	1,545	2.56
	Mid-2046	2,470	4,030	1,070	65	20	0	5	1,160	425	1,585	2.54
Incremental	Mid-2011 to Mid-2016	-110	-130	15	-	-10	-5	0	0	-5	-5	
	Mid-2016 to Mid-2019	60	80	25	5	0	0	0	30	5	35	
	Mid-2016 to Mid-2021	100	90	40	10	0	0	0	50	-5	45	
	Mid-2016 to Mid-2026	250	220	100	25	5	0	0	130	-5	125	
	Mid-2016 to Mid-2031	360	320	155	40	5	0	0	200	-10	190	
	Mid-2016 to Mid-2036	470	420	205	50	10	0	0	265	-15	250	
	Mid-2016 to Mid-2041	580	520	260	60	15	0	0	335	-15	320	
	Mid-2016 - Mid-2046	670	600	295	65	20	0	0	380	-20	360	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D–14a
Howe Island
Permanent + Seasonal Population and Household Forecast by Municipality, 2016 to 2046

	Year	Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U.) with undercount
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	620	1,040	250	-	0	0	0	250	115	365	2.85
	Mid-2016	570	980	260	-	0	0	0	260	115	375	2.61
Forecast	Mid-2019	590	990	265	5	0	0	0	270	110	380	2.61
	Mid-2021	600	1,000	270	5	0	0	0	275	110	385	2.60
	Mid-2026	640	1,040	285	10	0	0	0	295	110	405	2.57
	Mid-2031	680	1,080	300	15	0	0	0	315	110	425	2.54
	Mid-2036	710	1,110	315	15	0	0	0	330	110	440	2.52
	Mid-2041	740	1,140	330	20	0	0	0	350	110	460	2.48
	Mid-2046	760	1,160	335	20	0	0	0	355	110	465	2.49
Incremental	Mid-2011 to Mid-2016	-50	-60	10	-	0	0	0	10	0	10	
	Mid-2016 to Mid-2019	20	10	5	5	0	0	0	10	-5	5	
	Mid-2016 to Mid-2021	30	20	10	5	0	0	0	15	-5	10	
	Mid-2016 to Mid-2026	70	60	25	10	0	0	0	35	-5	30	
	Mid-2016 to Mid-2031	110	100	40	15	0	0	0	55	-5	50	
	Mid-2016 to Mid-2036	140	130	55	15	0	0	0	70	-5	65	
	Mid-2016 to Mid-2041	170	160	70	20	0	0	0	90	-5	85	
	Mid-2016 - Mid-2046	190	180	75	20	0	0	0	95	-5	90	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D–14b
Wolfe Island
Permanent + Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U. with undercount)
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	1,290	2,520	510	-	10	5	5	530	335	865	2.91
	Mid-2016	1,230	2,450	515	-	0	0	5	520	330	850	2.88
Forecast	Mid-2019	1,270	2,520	535	0	0	0	5	540	340	880	2.86
	Mid-2021	1,300	2,520	545	5	0	0	5	555	330	885	2.85
	Mid-2026	1,410	2,610	590	15	5	0	5	615	330	945	2.76
	Mid-2031	1,480	2,670	630	25	5	0	5	665	325	990	2.70
	Mid-2036	1,560	2,740	665	35	10	0	5	715	320	1,035	2.65
	Mid-2041	1,640	2,810	705	40	15	0	5	765	320	1,085	2.59
	Mid-2046	1,710	2,870	735	45	20	0	5	805	315	1,120	2.56
Incremental	Mid-2011 to Mid-2016	-60	-70	5	-	-10	-5	0	-10	-5	-15	
	Mid-2016 to Mid-2019	40	70	20	0	0	0	0	20	10	30	
	Mid-2016 to Mid-2021	70	70	30	5	0	0	0	35	0	35	
	Mid-2016 to Mid-2026	180	160	75	15	5	0	0	95	0	95	
	Mid-2016 to Mid-2031	250	220	115	25	5	0	0	145	-5	140	
	Mid-2016 to Mid-2036	330	290	150	35	10	0	0	195	-10	185	
	Mid-2016 to Mid-2041	410	360	190	40	15	0	0	245	-10	235	
	Mid-2016 - Mid-2046	480	420	220	45	20	0	0	285	-15	270	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-15
Township of Central Frontenac
Permanent + Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U. with undercount)
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	4,670	11,240	1,795	-	30	35	35	1,895	1,795	3,690	3.05
	Mid-2016	4,470	11,370	1,810	-	40	20	25	1,895	1,885	3,780	3.01
Forecast	Mid-2019	4,540	11,590	1,840	5	40	20	25	1,930	1,925	3,855	3.01
	Mid-2021	4,590	11,660	1,855	10	40	20	25	1,950	1,930	3,880	3.01
	Mid-2026	4,670	11,900	1,890	25	45	20	25	2,005	1,975	3,980	2.99
	Mid-2031	4,720	12,130	1,915	35	45	20	25	2,040	2,025	4,065	2.98
	Mid-2036	4,740	12,320	1,930	45	50	20	25	2,070	2,070	4,140	2.98
	Mid-2041	4,760	12,460	1,940	55	55	20	25	2,095	2,105	4,200	2.97
	Mid-2046	4,790	12,580	1,945	60	55	20	25	2,105	2,130	4,235	2.97
Incremental	Mid-2011 to Mid-2016	-200	130	15	-	10	-15	-10	0	90	90	
	Mid-2016 to Mid-2019	70	220	30	5	0	0	0	35	40	75	
	Mid-2016 to Mid-2021	120	290	45	10	0	0	0	55	45	100	
	Mid-2016 to Mid-2026	200	530	80	25	5	0	0	110	90	200	
	Mid-2016 to Mid-2031	250	760	105	35	5	0	0	145	140	285	
	Mid-2016 to Mid-2036	270	950	120	45	10	0	0	175	185	360	
	Mid-2016 to Mid-2041	290	1,090	130	55	15	0	0	200	220	420	
	Mid-2016 - Mid-2046	320	1,210	135	60	15	0	0	210	245	455	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-16
Township of North Frontenac
Permanent + Seasonal Population and Household Forecast by Municipality, 2016 to 2046

Year		Permanent Population (Including Census undercount) ¹	Permanent and Seasonal Population (Including Census Undercount)	Housing Units								Permanent + Seasonal Persons Per Unit (P.P.U.) with undercount
				Singles & Semi-Detached	Conversions Net (From Seasonal to Permanent)	Multiple Dwellings ²	Apartments ³	Other	Total Permanent Households	Seasonal	Total Households (Seasonal + Permanent)	
Historical	Mid-2011	1,890	10,300	885	-	10	0	10	905	2,295	3,200	3.22
	Mid-2016	1,940	10,490	910	-	0	0	15	925	2,335	3,260	3.22
Forecast	Mid-2019	1,980	10,560	925	10	0	0	15	950	2,345	3,295	3.20
	Mid-2021	2,000	10,710	935	15	0	0	15	965	2,380	3,345	3.20
	Mid-2026	2,050	10,910	955	25	0	0	15	995	2,420	3,415	3.19
	Mid-2031	2,070	11,100	965	40	0	0	15	1,020	2,465	3,485	3.19
	Mid-2036	2,090	11,270	975	55	0	0	15	1,045	2,505	3,550	3.17
	Mid-2041	2,100	11,390	980	65	0	0	15	1,060	2,540	3,600	3.16
	Mid-2046	2,110	11,480	985	70	0	0	15	1,070	2,560	3,630	3.16
Incremental	Mid-2011 to Mid-2016	50	190	25	-	-10	0	5	20	40	60	
	Mid-2016 to Mid-2019	40	70	15	10	0	0	0	25	10	35	
	Mid-2016 to Mid-2021	60	220	25	15	0	0	0	40	45	85	
	Mid-2016 to Mid-2026	110	420	45	25	0	0	0	70	85	155	
	Mid-2016 to Mid-2031	130	610	55	40	0	0	0	95	130	225	
	Mid-2016 to Mid-2036	150	780	65	55	0	0	0	120	170	290	
	Mid-2016 to Mid-2041	160	900	70	65	0	0	0	135	205	340	
	Mid-2016 - Mid-2046	170	990	75	70	0	0	0	145	225	370	

Source: 2011 and 2016 seasonal and conversion data from MPAC. 2011 and 2016 permanent population and housing data from Statistics Canada Census. Forecast by Watson & Associates Economists Ltd., 2019

¹ Census undercount estimated at approximately 2.3%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

³ Includes bachelor, 1 bedroom and 2 bedroom+ apartments.



Figure D-17
Frontenac County
Permanent + Seasonal Housing Growth, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal	Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
Frontenac County (Settlement Area)	2016 - 2021	215	-	10	225	-	225	-	225	670	(20)	650	-	650
	2016 - 2026	465	25	35	525	-	525	-	525	1,450	(70)	1,380	-	1,380
	2016 - 2031	735	50	65	850	-	850	-	850	2,330	(170)	2,160	-	2,160
	2016 - 2036	980	85	90	1,155	-	1,155	-	1,155	3,120	(240)	2,880	-	2,880
	2016 - 2041	1,170	115	110	1,395	-	1,395	-	1,395	3,710	(310)	3,400	-	3,400
	2016 - 2046	1,310	135	125	1,570	-	1,570	-	1,570	4,150	(330)	3,820	-	3,820
Frontenac County (Rural)	2016 - 2021	230	-	-	230	70	300	125	425	600	(100)	500	450	950
	2016 - 2026	485	-	-	485	150	635	245	880	1,310	(360)	950	880	1,830
	2016 - 2031	740	-	-	740	230	970	375	1,345	2,030	(760)	1,270	1,370	2,640
	2016 - 2036	975	-	-	975	300	1,275	495	1,770	2,690	(1,110)	1,580	1,810	3,390
	2016 - 2041	1,130	-	-	1,130	355	1,485	590	2,075	3,170	(1,390)	1,780	2,140	3,920
	2016 - 2046	1,250	-	-	1,250	390	1,640	650	2,290	3,540	(1,490)	2,050	2,370	4,420
Frontenac County	2016 - 2021	445	-	10	455	70	525	125	650	1,270	(120)	1,150	450	1,600
	2016 - 2026	950	25	35	1,010	150	1,160	245	1,405	2,760	(430)	2,330	880	3,210
	2016 - 2031	1,475	50	65	1,590	230	1,820	375	2,195	4,360	(930)	3,430	1,370	4,800
	2016 - 2036	1,955	85	90	2,130	300	2,430	495	2,925	5,810	(1,350)	4,460	1,810	6,270
	2016 - 2041	2,300	115	110	2,525	355	2,880	590	3,470	6,880	(1,700)	5,180	2,140	7,320
	2016 - 2046	2,560	135	125	2,820	390	3,210	650	3,860	7,690	(1,820)	5,870	2,370	8,240

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.



Figure D-18
Township of South Frontenac
Permanent + Seasonal Housing Growth by Local Municipality, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal	Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
Township of South Frontenac (Settlement Area)	2016 - 2021	185	-	10	195	-	195	-	195	570	(20)	550	-	550
	2016 - 2026	405	15	35	455	-	455	-	455	1,240	(70)	1,170	-	1,170
	2016 - 2031	645	40	65	750	-	750	-	750	2,010	(140)	1,870	-	1,870
	2016 - 2036	870	65	90	1,025	-	1,025	-	1,025	2,710	(210)	2,500	-	2,500
	2016 - 2041	1,025	85	110	1,220	-	1,220	-	1,220	3,210	(260)	2,950	-	2,950
	2016 - 2046	1,145	100	125	1,370	-	1,370	-	1,370	3,590	(280)	3,310	-	3,310
Township of South Frontenac (Rural)	2016 - 2021	150	-	-	150	35	185	40	225	380	(60)	320	130	450
	2016 - 2026	320	-	-	320	75	395	75	470	830	(230)	600	270	870
	2016 - 2031	515	-	-	515	115	630	115	745	1,330	(510)	820	420	1,240
	2016 - 2036	695	-	-	695	150	845	155	1,000	1,800	(730)	1,070	550	1,620
	2016 - 2041	815	-	-	815	175	990	180	1,170	2,130	(930)	1,200	660	1,860
	2016 - 2046	910	-	-	910	195	1,105	200	1,305	2,390	(990)	1,400	730	2,130
Township of South Frontenac	2016 - 2021	335	-	10	345	35	380	40	420	950	(80)	870	130	1,000
	2016 - 2026	725	15	35	775	75	850	75	925	2,070	(300)	1,770	270	2,040
	2016 - 2031	1,160	40	65	1,265	115	1,380	115	1,495	3,340	(650)	2,690	420	3,110
	2016 - 2036	1,565	65	90	1,720	150	1,870	155	2,025	4,510	(940)	3,570	550	4,120
	2016 - 2041	1,840	85	110	2,035	175	2,210	180	2,390	5,340	(1,190)	4,150	660	4,810
	2016 - 2046	2,055	100	125	2,280	195	2,475	200	2,675	5,980	(1,270)	4,710	730	5,440

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.



Figure D-19
Township of Frontenac Islands
Permanent + Seasonal Housing Growth by Local Municipality, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal	Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
Township of Frontenac Islands (Settlement Area)	2016 - 2021	20	-	-	20	-	20	-	20	60	-	60	-	60
	2016 - 2026	45	5	-	50	-	50	-	50	140	-	140	-	140
	2016 - 2031	75	5	-	80	-	80	-	80	210	(10)	200	-	200
	2016 - 2036	95	10	-	105	-	105	-	105	280	(10)	270	-	270
	2016 - 2041	120	15	-	135	-	135	-	135	350	(20)	330	-	330
	2016 - 2046	140	20	-	160	-	160	-	160	400	(20)	380	-	380
Township of Frontenac Islands (Rural)	2016 - 2021	20	-	-	20	10	30	(5)	25	50	(10)	40	(10)	30
	2016 - 2026	55	-	-	55	25	80	(5)	75	140	(30)	110	(30)	80
	2016 - 2031	80	-	-	80	40	120	(10)	110	210	(50)	160	(40)	120
	2016 - 2036	110	-	-	110	50	160	(15)	145	280	(80)	200	(50)	150
	2016 - 2041	140	-	-	140	60	200	(15)	185	340	(90)	250	(60)	190
	2016 - 2046	155	-	-	155	65	220	(20)	200	390	(100)	290	(70)	220
Township of Frontenac Islands	2016 - 2021	40	-	-	40	10	50	(5)	45	110	(10)	100	(10)	90
	2016 - 2026	100	5	-	105	25	130	(5)	125	280	(30)	250	(30)	220
	2016 - 2031	155	5	-	160	40	200	(10)	190	420	(60)	360	(40)	320
	2016 - 2036	205	10	-	215	50	265	(15)	250	560	(90)	470	(50)	420
	2016 - 2041	260	15	-	275	60	335	(15)	320	690	(110)	580	(60)	520
	2016 - 2046	295	20	-	315	65	380	(20)	360	790	(120)	670	(70)	600

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.



Figure D–19a
Howe Island
Permanent + Seasonal Housing Growth by Local Municipality, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal	Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
Howe Island (Settlement Area)	2016 - 2021	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016 - 2026	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016 - 2031	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016 - 2036	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016 - 2041	-	-	-	-	-	-	-	-	-	-	-	-	-
	2016 - 2046	-	-	-	-	-	-	-	-	-	-	-	-	-
Howe Island (Rural)	2016 - 2021	10	-	-	10	5	15	(5)	10	40	(10)	30	-	30
	2016 - 2026	25	-	-	25	10	35	(5)	30	80	(10)	70	-	70
	2016 - 2031	40	-	-	40	15	55	(5)	50	130	(20)	110	-	110
	2016 - 2036	55	-	-	55	15	70	(5)	65	170	(30)	140	-	140
	2016 - 2041	70	-	-	70	20	90	(5)	85	210	(40)	170	-	170
	2016 - 2046	75	-	-	75	20	95	(5)	90	240	(50)	190	-	190
Howe Island	2016 - 2021	10	-	-	10	5	15	(5)	10	40	(10)	30	-	30
	2016 - 2026	25	-	-	25	10	35	(5)	30	80	(10)	70	-	70
	2016 - 2031	40	-	-	40	15	55	(5)	50	130	(20)	110	-	110
	2016 - 2036	55	-	-	55	15	70	(5)	65	170	(30)	140	-	140
	2016 - 2041	70	-	-	70	20	90	(5)	85	210	(40)	170	-	170
	2016 - 2046	75	-	-	75	20	95	(5)	90	240	(50)	190	-	190

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.



Figure D–19a
Wolfe Island
Permanent + Seasonal Housing Growth by Local Municipality, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal
Wolfe Island (Settlement Area)	2016 - 2021	20	-	-	20	-	20	-	20
	2016 - 2026	45	5	-	50	-	50	-	50
	2016 - 2031	75	5	-	80	-	80	-	80
	2016 - 2036	95	10	-	105	-	105	-	105
	2016 - 2041	120	15	-	135	-	135	-	135
	2016 - 2046	140	20	-	160	-	160	-	160
Wolfe Island (Rural)	2016 - 2021	10	-	-	10	5	15	-	15
	2016 - 2026	30	-	-	30	15	45	-	45
	2016 - 2031	40	-	-	40	25	65	(5)	60
	2016 - 2036	55	-	-	55	35	90	(10)	80
	2016 - 2041	70	-	-	70	40	110	(10)	100
	2016 - 2046	80	-	-	80	45	125	(15)	110
Wolfe Island	2016 - 2021	30	-	-	30	5	35	-	35
	2016 - 2026	75	5	-	80	15	95	-	95
	2016 - 2031	115	5	-	120	25	145	(5)	140
	2016 - 2036	150	10	-	160	35	195	(10)	185
	2016 - 2041	190	15	-	205	40	245	(10)	235
	2016 - 2046	220	20	-	240	45	285	(15)	270

Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
50	-	50	-	50
130	(10)	120	-	120
190	(10)	180	-	180
260	(20)	240	-	240
320	(20)	300	-	300
370	(20)	350	-	350
20	-	20	(10)	10
70	(10)	60	(30)	30
100	(30)	70	(40)	30
130	(40)	90	(50)	40
160	(50)	110	(60)	50
180	(50)	130	(70)	60
70	-	70	(10)	60
200	(20)	180	(30)	150
290	(40)	250	(40)	210
390	(60)	330	(50)	280
480	(70)	410	(60)	350
550	(70)	480	(70)	410

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.



Figure D-20
Township of Central Frontenac
Permanent + Seasonal Housing Growth by Local Municipality, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal	Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
Township of Central Frontenac (Settlement Area)	2016 - 2021	5	-	-	5	-	5	-	5	30	-	30	-	30
	2016 - 2026	10	5	-	15	-	15	-	15	50	-	50	-	50
	2016 - 2031	10	5	-	15	-	15	-	15	80	(10)	70	-	70
	2016 - 2036	10	10	-	20	-	20	-	20	100	(10)	90	-	90
	2016 - 2041	15	15	-	30	-	30	-	30	110	(20)	90	-	90
	2016 - 2046	15	15	-	30	-	30	-	30	120	(20)	100	-	100
Township of Central Frontenac (Rural)	2016 - 2021	40	-	-	40	10	50	45	95	110	(20)	90	170	260
	2016 - 2026	70	-	-	70	25	95	90	185	220	(70)	150	330	480
	2016 - 2031	95	-	-	95	35	130	140	270	320	(140)	180	510	690
	2016 - 2036	110	-	-	110	45	155	185	340	390	(210)	180	680	860
	2016 - 2041	115	-	-	115	55	170	220	390	460	(260)	200	800	1,000
	2016 - 2046	120	-	-	120	60	180	245	425	500	(280)	220	890	1,110
Township of Central Frontenac	2016 - 2021	45	-	-	45	10	55	45	100	140	(20)	120	170	290
	2016 - 2026	80	5	-	85	25	110	90	200	270	(70)	200	330	530
	2016 - 2031	105	5	-	110	35	145	140	285	400	(150)	250	510	760
	2016 - 2036	120	10	-	130	45	175	185	360	490	(220)	270	680	950
	2016 - 2041	130	15	-	145	55	200	220	420	570	(280)	290	800	1,090
	2016 - 2046	135	15	-	150	60	210	245	455	620	(300)	320	890	1,210

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.



Figure D-21
Township of North Frontenac
Permanent + Seasonal Housing Growth by Local Municipality, 2016 to 2046

Development Location	Timing	Single & Semi-Detached	Multiples ¹	Apartments ²	Total Residential Units	Conversions (From seasonal to permanent)	Total Permanent Units Including Conversions	Seasonal	Total Units Including Permanent, Conversions & Seasonal	Permanent Population in New Units (Including Undercount)	Permanent Existing Population Decline	Permanent Net Population Increase	Seasonal Population Increase	Net Population in New Units (Including Seasonal Population)
Township of North Frontenac (Settlement Area)	2016 - 2021	5	-	-	5	-	5	-	5	10	-	10	-	10
	2016 - 2026	5	-	-	5	-	5	-	5	20	-	20	-	20
	2016 - 2031	5	-	-	5	-	5	-	5	30	(10)	20	-	20
	2016 - 2036	5	-	-	5	-	5	-	5	30	(10)	20	-	20
	2016 - 2041	10	-	-	10	-	10	-	10	40	(10)	30	-	30
	2016 - 2046	10	-	-	10	-	10	-	10	40	(10)	30	-	30
Township of North Frontenac (Rural)	2016 - 2021	20	-	-	20	15	35	45	80	60	(10)	50	160	210
	2016 - 2026	40	-	-	40	25	65	85	150	120	(30)	90	310	400
	2016 - 2031	50	-	-	50	40	90	130	220	170	(60)	110	480	590
	2016 - 2036	60	-	-	60	55	115	170	285	220	(90)	130	630	760
	2016 - 2041	60	-	-	60	65	125	205	330	240	(110)	130	740	870
	2016 - 2046	65	-	-	65	70	135	225	360	260	(120)	140	820	960
Township of North Frontenac	2016 - 2021	25	-	-	25	15	40	45	85	70	(10)	60	160	220
	2016 - 2026	45	-	-	45	25	70	85	155	140	(30)	110	310	420
	2016 - 2031	55	-	-	55	40	95	130	225	200	(70)	130	480	610
	2016 - 2036	65	-	-	65	55	120	170	290	250	(100)	150	630	780
	2016 - 2041	70	-	-	70	65	135	205	340	280	(120)	160	740	900
	2016 - 2046	75	-	-	75	70	145	225	370	300	(130)	170	820	990

Source: Watson & Associates Economists Ltd., 2019.

¹ Includes townhouses and apartments in duplexes.

² Includes accessory apartments, bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add up precisely due to rounding.