

Appendix 9

Population and Housing Projections Report



Committee of the Whole

Meeting Date: January 19, 2021
Submitted by: Durk Vanderwerff, Director of Planning
SUBJECT: POPULATION AND HOUSING PROJECTIONS FOR MIDDLESEX COUNTY

BACKGROUND:

Population Projections for Middlesex County are included within the County's Official Plan and are intended to be used by the County and local municipalities to assist in managing growth and development. The County's Projections were last updated in 2018 following the release of the 2016 Census population information. At that time, Council endorsed a Projected Population Range (which included low and high projections) as being the most likely to represent the future population for Middlesex (attached). The ranged approach provided local municipalities with flexibility to select projections that suit local purposes while maintaining positive projections for all municipalities.

It is considered timely to update the projections as a number of underlying factors have changed. The 2018 projections were completed for a 20-year planning horizon, as was required by the Provincial Policy Statement (PPS) in place at that time, whereas the PPS now requires a 25-year planning horizon. Provincially, the Ministry of Finance Population Projections were updated. Locally, there has been an upswing in development activity. The projections have therefore been updated to reflect the 25-year planning horizon, the more recently available Provincial numbers, the rapid development that is occurring within the County as best can be captured, and also the passing of time.

To support this work, Watson & Associates Economists (Watson) were engaged to refine and update the County's projections. They have reviewed the projections against the broader economic and demographic changes occurring within Southwestern Ontario and Middlesex County, have updated the projections, and have provided a level of detailed demographic analysis (age cohorts, headship rates, housing propensity trends, scenario testing, housing forecasts) that staff are unable to complete (attached).

This report summarizes the work undertaken by Watson and recommends that the projected growth scenarios be endorsed by Council. It is noted that for the sake of consistency, the figures in this summary report utilize the same numbering as in the source Watson report and therefore are not in numerical order and not all are included.

ANALYSIS:

Population Forecast

Three growth scenarios (Low, Reference and High) were completed for the County and for each local municipality (Figures 2, A-5, A-6, A-7 and Watson Appendix B). The Provincial Ministry of Finance Projections are the foundation of this work however the scenarios adjust for different assumptions including differing levels of within Ontario migration given recent development activity.

- Under the Low Scenario, the County's population is forecast to increase from 74,000 in 2016 to 96,300 in 2046, which represents an annual population growth rate of 0.9%. This would result in a housing growth rate of 1.3% annually.
- Under the Reference Scenario, the County's population is forecast to increase to 107,600 by 2046, representing an annual growth rate of 1.3%. This would result in a housing growth rate of 1.7% annually.
- Under the High Scenario, the County's population is forecast to increase to 115,000 by 2046, representing an annual growth rate of 1.5%. This would result in a housing growth rate of 1.9% annually.
- This can be compared to between 2001 and 2016, when Middlesex County experienced relatively modest annual population growth of 0.5%.
- Under all three growth scenarios, all local municipalities are anticipated to experience moderate to strong population and housing growth.

The inclusion of growth scenarios allows municipalities to select a forecast that is appropriate for their local circumstances. While a High growth scenario may represent the most likely growth scenario for some municipalities, for others the Reference growth scenario or the Low growth scenario may be more appropriate as municipalities balance anticipated growth with the increased service provision (in particular servicing infrastructure such as roads, sewers, and water) that accompanies such growth.

Figure 2
Middlesex County
Population Forecast Scenarios, 2016 to 2046

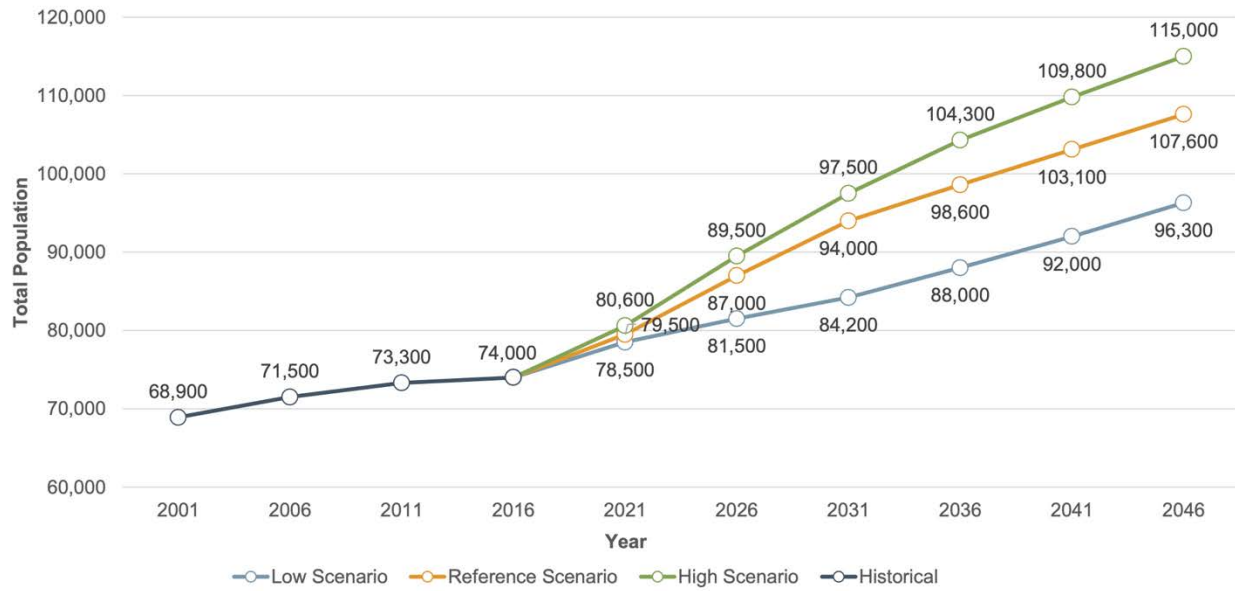


Figure A-5
Middlesex County
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	Mid-2001	68,900	66,600	20,960	510	1,480	220	23,160	2.98	2.88
	Mid-2006	71,500	69,100	21,810	820	1,530	400	24,550	2.91	2.81
	Mid-2011	73,300	70,800	23,180	650	1,600	420	25,840	2.84	2.74
	Mid-2016	74,000	71,500	24,060	650	1,720	400	26,820	2.76	2.67
Forecast	Mid-2021	78,500	75,900	25,750	780	1,840	400	28,770	2.73	2.64
	Mid-2026	81,500	78,800	27,670	940	2,020	400	31,030	2.63	2.54
	Mid-2031	84,200	81,400	29,230	1,130	2,200	400	32,950	2.55	2.47
	Mid-2036	88,000	85,000	30,870	1,380	2,410	400	35,060	2.51	2.43
	Mid-2041	92,000	88,900	32,590	1,710	2,690	400	37,380	2.46	2.38
	Mid-2046	96,300	93,100	34,140	2,060	2,970	400	39,560	2.43	2.35
Incremental	Mid-2001 to Mid-2006	2,600	2,500	850	310	50	180	1,390		
	Mid-2006 to Mid-2011	1,800	1,700	1,370	-170	70	20	1,290		
	Mid-2011 to Mid-2016	700	700	880	0	120	-20	980		
	Mid-2016 to Mid-2021	4,500	4,400	1,690	130	120	0	1,950		
	Mid-2016 to Mid-2026	7,500	7,300	3,610	290	300	0	4,210		
	Mid-2016 to Mid-2031	10,200	9,900	5,170	480	480	0	6,130		
	Mid-2016 to Mid-2036	14,000	13,500	6,810	730	690	0	8,240		
	Mid-2016 to Mid-2046	22,300	21,600	10,080	1,410	1,250	0	12,740		

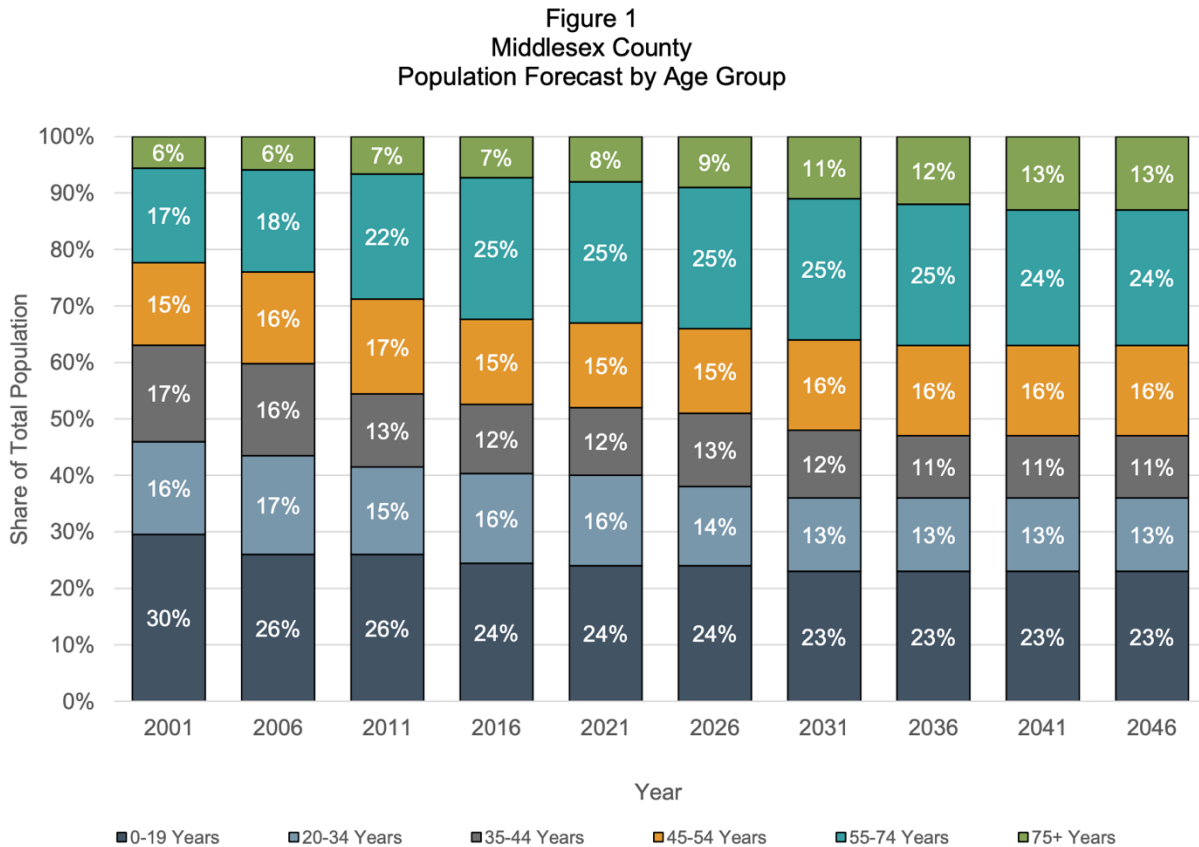
**Figure A-6
Middlesex County
Population and Housing Growth, 2016 to 2046
Reference Scenario**

	Year	Population		Housing Units				Total Households	Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			
Historical	Mid-2001	68,900	66,600	20,960	510	1,480	220	23,160	2.98	2.88
	Mid-2006	71,500	69,100	21,810	820	1,530	400	24,550	2.91	2.81
	Mid-2011	73,300	70,800	23,180	650	1,600	420	25,840	2.84	2.74
	Mid-2016	74,000	71,500	24,060	650	1,720	400	26,820	2.76	2.67
Forecast	Mid-2021	79,500	76,900	26,050	800	1,860	400	29,110	2.73	2.64
	Mid-2026	87,000	84,100	29,470	1,080	2,190	400	33,150	2.62	2.54
	Mid-2031	94,000	90,800	32,470	1,450	2,520	400	36,850	2.55	2.47
	Mid-2036	98,600	95,200	34,410	1,750	2,770	400	39,330	2.51	2.42
	Mid-2041	103,100	99,600	36,350	2,120	3,080	400	41,950	2.46	2.38
	Mid-2046	107,600	104,000	38,000	2,490	3,390	400	44,280	2.43	2.35
Incremental	Mid-2001 to Mid-2006	2,600	2,500	850	310	50	180	1,390		
	Mid-2006 to Mid-2011	1,800	1,700	1,370	-170	70	20	1,290		
	Mid-2011 to Mid-2016	700	700	880	0	120	-20	980		
	Mid-2016 to Mid-2021	5,500	5,400	1,990	150	140	0	2,290		
	Mid-2016 to Mid-2026	13,000	12,600	5,410	430	470	0	6,330		
	Mid-2016 to Mid-2031	20,000	19,300	8,410	800	800	0	10,030		
	Mid-2016 to Mid-2036	24,600	23,700	10,350	1,100	1,050	0	12,510		
	Mid-2016 to Mid-2041	29,100	28,100	12,290	1,470	1,360	0	15,130		
	Mid-2016 - Mid-2046	33,600	32,500	13,940	1,840	1,670	0	17,460		

**Figure A-7
Middlesex County
Population and Housing Growth, 2016 to 2046
High Scenario**

	Year	Population		Housing Units				Total Households	Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			
Historical	Mid-2001	68,900	66,600	20,960	510	1,480	220	23,160	2.98	2.88
	Mid-2006	71,500	69,100	21,810	820	1,530	400	24,550	2.91	2.81
	Mid-2011	73,300	70,800	23,180	650	1,600	420	25,840	2.84	2.74
	Mid-2016	74,000	71,500	24,060	650	1,720	400	26,820	2.76	2.67
Forecast	Mid-2021	80,600	77,800	26,370	830	1,890	400	29,480	2.73	2.64
	Mid-2026	89,500	86,500	30,300	1,150	2,260	400	34,110	2.62	2.54
	Mid-2031	97,500	94,200	33,650	1,560	2,630	400	38,240	2.55	2.46
	Mid-2036	104,300	100,800	36,310	1,970	2,970	400	41,660	2.50	2.42
	Mid-2041	109,800	106,100	38,580	2,400	3,340	400	44,720	2.46	2.37
	Mid-2046	115,000	111,100	40,450	2,820	3,680	400	47,360	2.43	2.35
Incremental	Mid-2001 to Mid-2006	2,600	2,500	850	310	50	180	1,390		
	Mid-2006 to Mid-2011	1,800	1,700	1,370	-170	70	20	1,290		
	Mid-2011 to Mid-2016	700	700	880	0	120	-20	980		
	Mid-2016 to Mid-2021	6,600	6,300	2,310	180	170	0	2,660		
	Mid-2016 to Mid-2026	15,500	15,000	6,240	500	540	0	7,290		
	Mid-2016 to Mid-2031	23,500	22,700	9,590	910	910	0	11,420		
	Mid-2016 to Mid-2036	30,300	29,300	12,250	1,320	1,250	0	14,840		
	Mid-2016 to Mid-2041	35,800	34,600	14,520	1,750	1,620	0	17,900		
	Mid-2016 - Mid-2046	41,000	39,600	16,390	2,170	1,960	0	20,540		

The population forecast by major age group is shown in Figure 1 and highlights certain population age structure trends that are explored below.



Baby Boom Generation

The average age of the population in the County is getting older, similar to the Province as a whole. This is due to the large concentration of Baby Boomers (empty-nesters and young seniors) between 56 and 74 years of age (born 1946 to 1964) which represents approximately a quarter of the total population. As the Baby Boom population continues to age, the percentage of seniors, particularly older seniors (seniors 75 years of age and older), is anticipated to steadily increase and is forecast to almost double, from 7% in 2016 to 13% by 2046. This trend is anticipated to be largely driven by the aging of the County’s existing population as opposed to net-migration of older residents into the County.

Watson observe that on average, seniors, particularly those in the 75+ age group, have less mobility, less disposable income and have increased health care needs. Typically, these characteristics drive demand for relatively higher density housing forms that are in proximity to urban amenities. Ultimately, the aging of the population will continue to

place downward pressure on County-wide population growth and labour force participation while at the same time increasing demand for housing, amenities, and community services on the County's larger urban areas.

Millennials, Generation Z, and Future Generations

Future population growth, as well as associated housing needs will largely be driven by the "Millennial" generation and "Generation Z". The Millennial generation can be considered those persons born between 1980 and 1992 (currently 28 to 40 years of age) and Generation Z can be considered those persons born between 1993 and 2005 (currently 15 to 27 years of age).

A diverse range of housing by both type and tenure (ownership and rental) are anticipated to be required to accommodate these two demographic groups. Watson note that the extent to which Middlesex County can capitalize on potential demand from these groups is subject to a number of economic and socio-economic variables such as relative housing costs, local and regional employment opportunities, technological disruption and advancement, fuel costs, lifestyle preferences, local amenities, community services, and perceived quality of life.

Labour Force

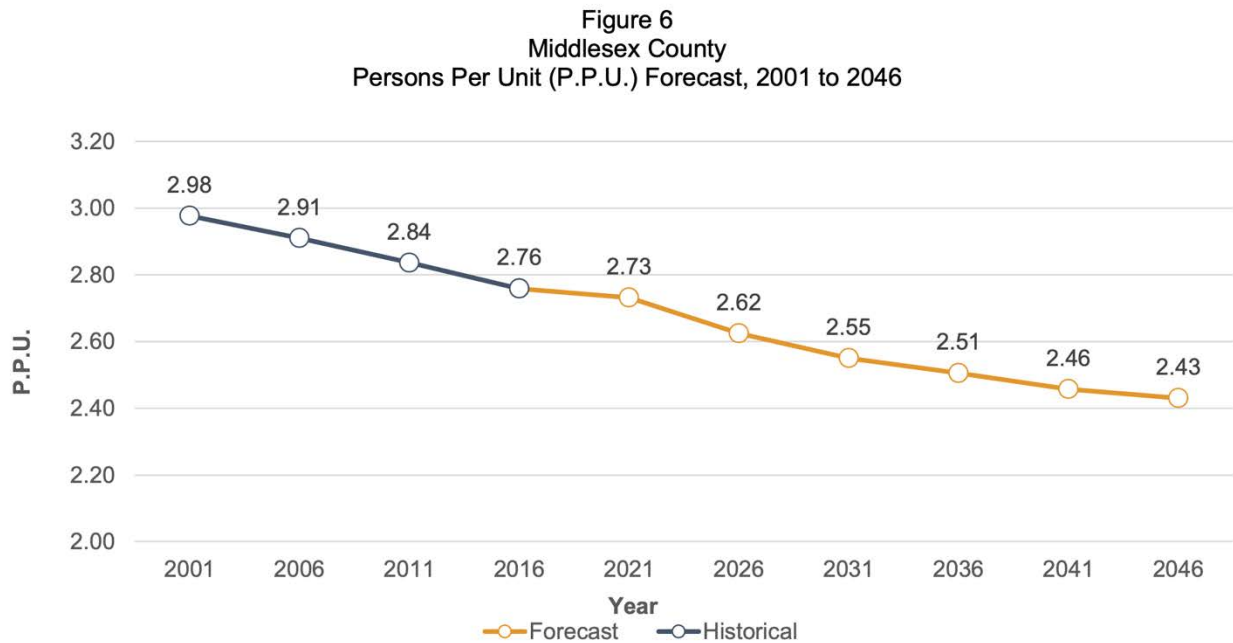
The Millennial generation, Generation Z, and the generations following Generation Z, represent the majority of the County's existing and future labour force supply. Watson note that it is important to recognize that the accommodation of skilled labour and the attraction of new businesses are linked and positively reinforce one another.

They note that to ensure that economic growth is not constrained by future labour shortages, effort is required to attract and accommodate new skilled working residents to the County across a diverse range of employment opportunities and a broad choice of competitively priced housing options. Attraction efforts must also be linked to housing accommodation (both ownership and rental), municipal services, and infrastructure, as well as quality of life attributes that appeal to a younger mobile population.

Housing

Forecast trends in population age structure provide insights into future housing needs based on anticipated average household occupancy. Total housing growth is generated from the population forecast using a headship rate forecast, being the number of primary household maintainers or heads of households by major population age group. This results in an estimated Persons Per Unit (PPU) which generally represents the average number of people within a household.

Figure 6 summarizes historical and forecast PPU for Middlesex. The average PPU has steadily declined over the 15-year historical period, falling from 2.98 in 2001 to 2.76 in 2016. This can be attributed to several factors including the aging of the County's population and overall household composition trends of less children per household and more single-person households. A declining PPU can be expected to translate into continuing demand for new construction even where a stable population is projected.



Over the long-term planning horizon, average PPU levels for the County are forecast to continue to decline, from 2.75 in 2016 to 2.43 in 2046. This projected moderation in the County's PPU rate of decline is largely a result of an anticipated increase in the number of young adults and children migrating to the County under all three Growth Scenarios, relative to the past. Figures 7, 8 and 9 include the housing forecast for the County and local municipalities under the three Growth Scenarios.

Figure 7
Middlesex County
Housing Forecast by Local Municipality – Low Scenario, 2016 to 2046

Year	Village of Newbury	Municipality of Southwest Middlesex	Municipality of Strathroy-Caradoc	Municipality of Thames Centre	Municipality of Middlesex Centre	Municipality of North Middlesex	Township of Adelaide-Metcalf	Township of Lucan Biddulph	Middlesex County
2016	180	2,350	8,300	4,920	5,990	2,330	990	1,790	26,820
2021	180	2,390	9,050	5,240	6,550	2,370	1,020	1,970	28,770
2026	200	2,550	9,800	5,620	7,110	2,560	1,110	2,080	31,030
2031	210	2,620	10,530	5,910	7,690	2,630	1,150	2,210	32,950
2036	220	2,680	11,230	6,220	8,430	2,700	1,190	2,380	35,060
2041	240	2,740	11,980	6,550	9,310	2,770	1,230	2,560	37,380
2046	250	2,790	12,660	6,840	10,180	2,810	1,260	2,780	39,560
Share of 2016 County Housing	1%	9%	31%	18%	22%	9%	4%	7%	100%
Share of 2046 County Housing	1%	7%	32%	17%	26%	7%	3%	7%	100%
Housing Growth									
2016-2046	70	440	4,360	1,920	4,190	480	270	990	12,740
Annual Growth Rate, 2016-2046	1.1%	0.6%	1.4%	1.1%	1.8%	0.6%	0.8%	1.5%	1.3%
Share of County Housing Growth, 2016-2046	1%	3%	34%	15%	33%	4%	2%	8%	100%

Figure 8
Middlesex County
Household Forecast by Local Municipality – Reference Scenario, 2016 to 2046

Year	Village of Newbury	Municipality of Southwest Middlesex	Municipality of Strathroy-Caradoc	Municipality of Thames Centre	Municipality of Middlesex Centre	Municipality of North Middlesex	Township of Adelaide-Metcalf	Township of Lucan Biddulph	Middlesex County
2016	180	2,350	8,300	4,920	5,990	2,330	990	1,790	26,820
2021	180	2,390	9,180	5,290	6,650	2,380	1,020	2,010	29,110
2026	220	2,660	10,560	5,970	7,680	2,680	1,170	2,230	33,150
2031	240	2,790	11,960	6,540	8,770	2,830	1,250	2,470	36,850
2036	250	2,860	12,760	6,900	9,700	2,890	1,290	2,690	39,330
2041	260	2,920	13,540	7,270	10,760	2,960	1,330	2,910	41,950
2046	280	2,950	14,210	7,570	11,750	3,000	1,360	3,160	44,280
Share of 2016 County Housing	1%	9%	31%	18%	22%	9%	4%	7%	100%
Share of 2046 County Housing	1%	7%	32%	17%	27%	7%	3%	7%	100%
Housing Growth									
2016-2046	100	600	5,910	2,650	5,760	670	370	1,370	17,460
Annual Growth Rate, 2016-2046	1.5%	0.8%	1.8%	1.4%	2.3%	0.8%	1.1%	1.9%	1.7%
Share of County Housing Growth, 2016-2046	1%	3%	34%	15%	33%	4%	2%	8%	100%

Figure 9
Middlesex County
Household Forecast by Local Municipality – High Scenario, 2016 to 2046

Year	Village of Newbury	Municipality of Southwest Middlesex	Municipality of Strathroy-Caradoc	Municipality of Thames Centre	Municipality of Middlesex Centre	Municipality of North Middlesex	Township of Adelaide-Metcalf	Township of Lucan Biddulph	Middlesex County
2016	180	2,350	8,300	4,920	5,990	2,330	990	1,790	26,820
2021	180	2,400	9,320	5,350	6,760	2,380	1,030	2,040	29,480
2026	220	2,700	10,900	6,130	7,930	2,730	1,200	2,300	34,110
2031	240	2,860	12,470	6,760	9,160	2,900	1,290	2,570	38,240
2036	260	2,950	13,600	7,260	10,390	3,000	1,350	2,850	41,660
2041	280	3,020	14,510	7,690	11,630	3,080	1,390	3,110	44,720
2046	290	3,060	15,260	8,040	12,760	3,110	1,420	3,410	47,360
Share of 2016 County Housing	1%	9%	31%	18%	22%	9%	4%	7%	100%
Share of 2046 County Housing	1%	6%	32%	17%	27%	7%	3%	7%	100%
Housing Growth									
2016-2046	110	710	6,960	3,120	6,770	780	430	1,620	20,540
Annual Growth Rate, 2016-2046	1.6%	0.9%	2.1%	1.7%	2.6%	1.0%	1.2%	2.2%	1.9%
Share of County Housing Growth, 2016-2046	1%	3%	34%	15%	33%	4%	2%	8%	100%

Watson observe that relative to the past, it is anticipated that housing demand will shift more towards medium / high density housing (townhomes, apartments) from low-density housing (single-detached). It is forecast that 21% of new housing will be medium / high density forms which will over time will result in 13% of all housing being that form.

Limitations

When considering population projections, it is important to note some of the limitations to this work. Projections are necessarily based on past population statistics and therefore are trend based. This is reasonably accurate for large populations but is more challenging for smaller populations.

Past population statistics are based on the Census, which is the best available information, but which may be less reflective of the current local population. For example, the 2011 Census showed a population decline for Thames Centre and the 2016 Census showed a population decline for Strathroy-Caradoc whereas the experience 'on the ground' is of development and growth. It will be very informative when the 2021 Census population and housing statistics are released in 2022 and 2023.

Projections are based on assumptions that can be significantly impacted by external factors such as declining birth rates, changes in migration patterns, the aging of the population, changes in life expectancy, and differences in commuting patterns. Those external factors tend to occur at the societal level and are difficult to influence at the municipal level. It can also be some time before those factors are reflected in the Census, in part, because of the inertia of existing populations. A future population is strongly influenced by the current base population such that changes, even significant changes, are moderated by the existing population.

The County is experiencing greater development activity when compared to the past – it remains to be seen how that translates into sustained population growth. The upward trend in building and development within the County appears to signal changing within-Ontario migration but it will be some time before the extent of this is fully known. The High Growth Scenario attempts to capture aspects of this growth. Similarly, any impact as a result of COVID-19 is not yet known.

Reviewing the population forecasts and recent development activity has highlighted to staff that the County should, working with local municipalities, more closely monitor the residential land supply on an ongoing basis and consider any actions that may need to be undertaken to help ensure that sufficient supply continues to be available. This is especially important at this time, when housing affordability has increasingly become an issue within the County, and where ensuring that land is available for housing across the affordability spectrum is increasingly important.

Conclusion

Population Projections for Middlesex County are included within the County's Official Plan and are intended to be used by the County and local municipalities to assist in managing growth and development. The Projected Population Range numbers have been updated to reflect the 25-year planning horizon, the more recently available Provincial numbers, the rapid development and growth that is occurring within the County as best can be captured, and also the passing of time. This was an iterative process and staff consider that the projections are now reasonable.

Finally, it is important to note that it is a requirement of the PPS for the County Official Plan to identify and allocate population and housing projections based on local municipalities. The County Plan does not however constrain municipalities from realizing growth at a faster or slower rate than the projections. It is not the intention of the County Official Plan to limit well planned housing and the Official Plan is flexible in this regard.

RECOMMENDATION:

That the 'Middlesex County Housing Growth Forecast and Allocations by Local Municipality' completed by Watson & Associates Economists Ltd. and dated December 11th, 2020, be selected as the projected growth scenarios that are most likely to occur over the 25-year planning horizon and that this be included in the draft amendment to the County Official Plan for the purposes of consultation.

Attachments

December 11, 2020

Mr. Durk Vanderwerff
Director of Planning
Middlesex County
399 Ridout Street North
London, ON
N6A 2P1

Dear Mr. Vanderwerff:

Re: Middlesex County Housing Growth Forecast and Allocations by Local Municipality

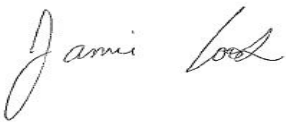
During the spring of 2020, updated population projections for Middlesex County and its local municipalities were prepared by Middlesex County staff. These projections provided a low and high range of projected population and households by local municipality to the year 2046. As part of this review, Middlesex County has retained Watson & Associates Economists Ltd. to review the population and housing projections for the County and allocations by local municipality associated with the 2020 update of the County's Low and High Population Growth Scenarios.

The purpose of this work is to review the projections, provide an update to the 2020 forecast the County had prepared, and provide Low, Reference, and High Scenarios to allow the local municipalities to select projections that reflect anticipated growth trends.

The results of the study are presented on the following pages.

Yours very truly,

WATSON & ASSOCIATES ECONOMISTS LTD.



Jamie Cook, MCIP, RPP, PLE
Managing Partner and Director



1. Introduction

1.1 Study Purpose

Middlesex County is in the process of undertaking a Five Year Review of the County's Official Plan (O.P.). The *Planning Act* requires that County Council regularly review its O.P. to determine the need for updates or changes. A number of topic areas are being reviewed as part of the current Five Year Review, including a review of the County's long-term population projections.¹

During the spring of 2020, updated population projections for the County and its local municipalities were prepared by County staff. The updated projections provide a low and high range of projected population and households by local municipality to the year 2046. As part of this review, Middlesex County has retained Watson & Associates Economists Ltd. (Watson) to review the housing projections for the County and allocations by local municipality associated with the 2020 update of the County's Low and High Population Growth Scenarios.

1.2 Background

Population and housing projections for Middlesex County and its local municipalities, included within the County's O.P., are intended to be used by the County and its local municipalities to assist in managing growth and development. The County's projections were last updated in July of 2018 following the release of the 2016 Census population data from Statistics Canada. The 2018 growth projections update provides a review of past growth trends and includes an overview of five projection methods, including the Ministry of Finance, Employment Land Needs Study, Geometric, Geometric Adjusted, and Cohort Survival techniques.²

In accordance with the recommendations of the 2018 growth projections update, Council endorsed a projected population range as being the most likely to represent the future population for Middlesex County. The ranged approach provides the County and its local municipalities with flexibility to select projections that suit local purposes while maintaining positive projections for all municipalities. As previously noted, the 2018 population projections are being updated as part of the County's Five Year O.P. Review to reflect recent economic and demographic changes occurring across the broader regional economy and more locally across the County.

¹ <https://www.middlesex.ca/departments/planning/county-official-plan>

² Population Projections for Middlesex County. Committee of the Whole. July 17, 2018



2. Middlesex County Population Forecast, 2016 to 2046

2.1 Summary of Low, Reference, and High Population Growth Scenarios

Figure 1 summarizes Middlesex County's population forecast by major age group.¹ Forecast trends in the County's age structure provide important insights with respect to the County's anticipated household formation trends. For example, a municipality with a higher percentage of older adults and seniors will typically result in lower average housing occupancy levels 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.

Middlesex County's population forecast by major age group utilizes the most recent Ministry of Finance (M.O.F.) 2019 population forecast by age cohort prepared for the County and the City of London. Consideration was also given to historical Statistics Canada Census trends from 2001 to 2016 regarding population change by major age group for Middlesex County to ensure that local demographic trends within the County (excluding the City of London) were considered.

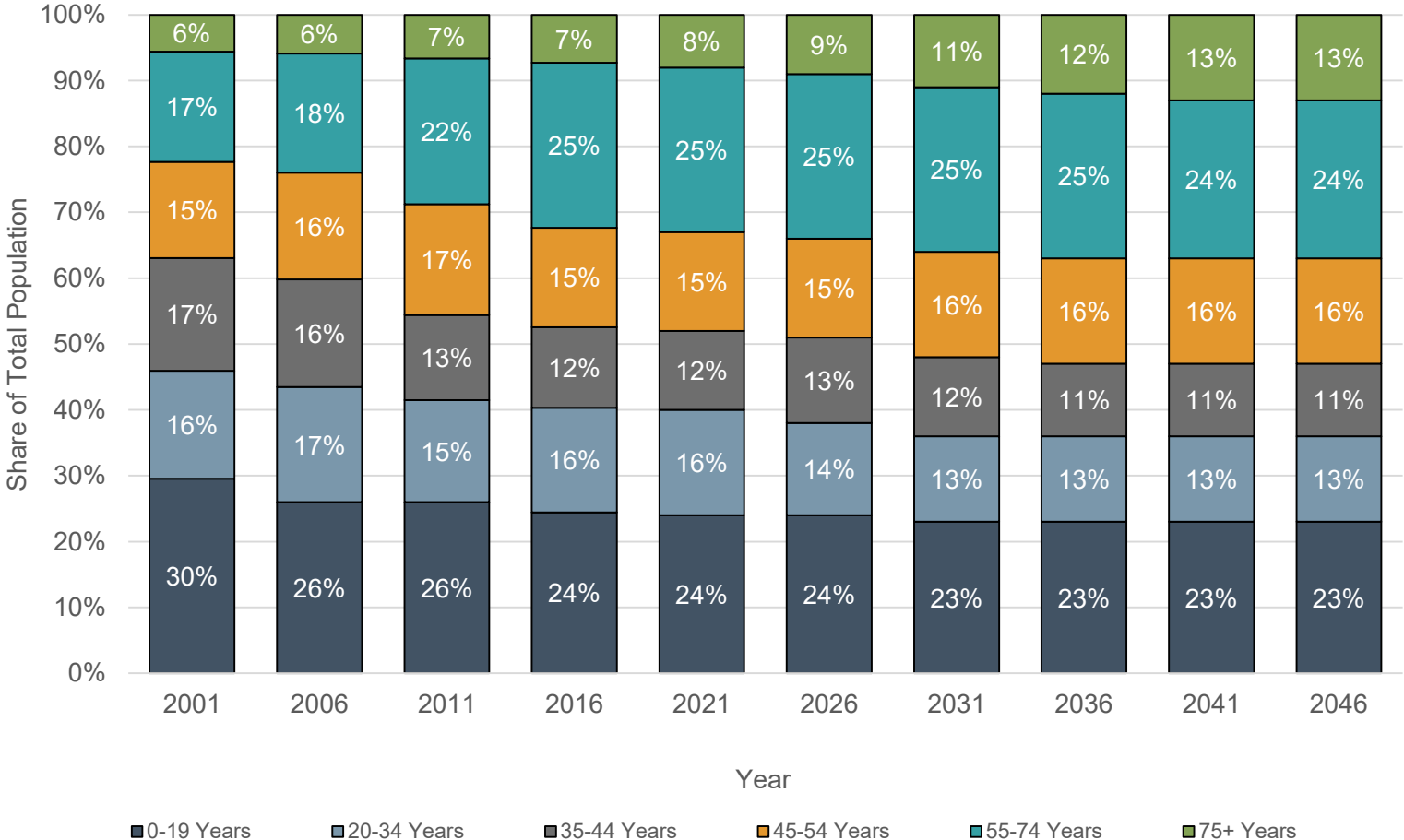
¹ Population forecast by age derived by Watson & Associates Economists Ltd., December 2020. Population by age is forecast to remain relatively consistent by major age group under the Low, Reference and High Growth Scenarios.

Figure 1 summarizes Middlesex County's population forecast by major group from 2016 to 2046. It is noted that the County's population forecast by age group is not anticipated to vary considerably under the Low, Reference, and High Growth Scenarios.

Key observations include:

- The percentage of population in the 0 to 19 age group (youth population) is forecast to decline slightly from 24% in 2016 to 23% by 2046;
- Similar to the youth population, the percentage share of the County's young adult population (20 to 34 age group) is forecast to gradually decline, falling from 17% in 2016 to 13% by 2046;
- The proportion of population in the 45 to 54 age group is forecast to slightly increase from 15% in 2016 to 16% by 2046;
- The proportion of population in the 55 to 74 age group (i.e. empty-nesters and young seniors) represents a quarter of the total population in the County. The percentage share of this age group is expected to gradually decline from 25% in 2016 to 24% by 2046; and
- The percentage of older seniors (75+ age group) is forecast to almost double, increasing from 7% in 2016 to 13% by 2046.

Figure 1
Middlesex County
Population Forecast by Age Group



Source: 2001 to 2016 historical data based on Statistics Canada. 2021 to 2046 forecast data based on Ministry of Finance 2019 Summer projections for Middlesex County.
Note: Middlesex County does not include the City of London and population figures include net Census undercount estimated at 3.46%.
Figures may not add precisely due to rounding.

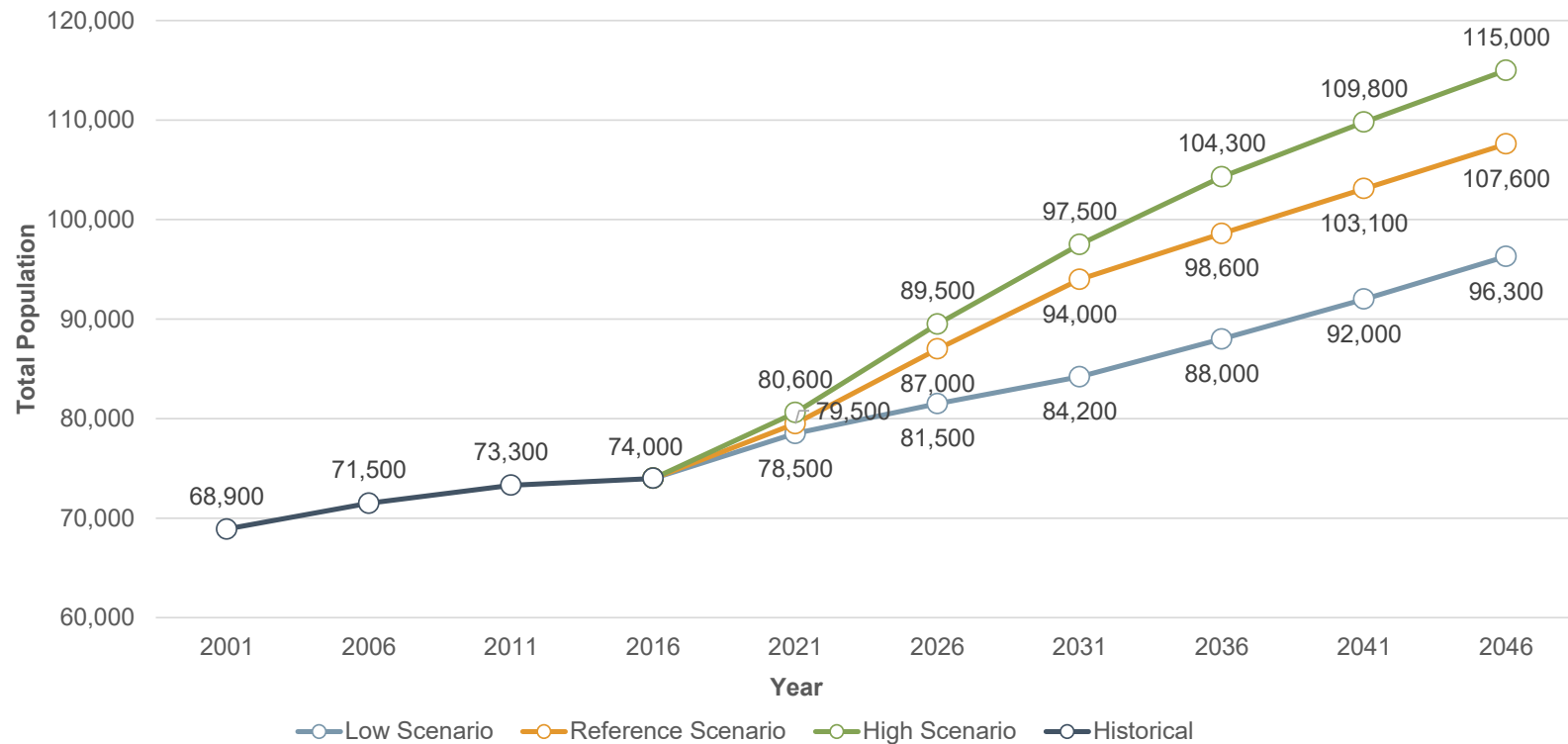


Figure 2 summarizes the Low, Reference, and High Population Growth Scenarios for the County (refer to Appendix A for additional details). It is noted that the short-term County population forecast (2016 to 2021) has been adjusted by Watson to reflect recent residential development trends that have occurred in the County.¹ Key observations include:

- Between 2001 and 2016, Middlesex County experienced relatively modest annual population growth of approximately 340 people per year, which represents an annual population growth rate of 0.5%;
- Under the Low Scenario, the County's population base is forecast to increase from 74,000 in 2016 to 96,300 in 2046, which represents an annual population growth rate of 0.9% or approximately 740 people per year;
- Under the Reference Scenario, the County's population base is forecast to increase to 107,600 by 2046, representing an annual growth rate of 1.3%, or approximately 1,120 people annually; and
- Under the High Scenario, the County's population base is forecast to increase to 115,000 by 2046, representing an annual growth rate of 1.5%, or approximately 1,370 people annually.

¹ Building permits (new units only) for Middlesex County derived from Statistics Canada, with the exception of building permits from the Municipality of Middlesex Centre.

Figure 2
Middlesex County
Population Forecast Scenarios, 2016 to 2046



Source: 2001 to 2016 historical data derived from Statistics Canada Table 17-10-0139-01. 2021 forecast prepared by Watson & Associates Economists Ltd., 2020. 2026 to 2046 forecast by Middlesex County presented by Watson & Associates Economists Ltd., 2020.
Note: Population includes net Census undercount estimated at approximately 3.46%. Numbers may not add precisely due to rounding.



3. Middlesex County Housing Forecast, 2016 to 2046

3.1 Introduction

In accordance with the Low, Reference, and High Population Growth Scenarios summarized in section 2, three housing forecast scenarios have been prepared for Middlesex County based on a headship rate analysis. A headship rate is defined as the ratio of primary household maintainers, or heads of households, by major 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.

In accordance with 2016 Statistics Canada Census data a constant headship rate by age cohort has been calculated and applied to Middlesex County's population forecast scenarios by major age group to generate a total household forecast from 2016 to 2046 (refer to Appendix A for further details). The ratio of total population divided by total households is referred to as the average number of persons per unit (P.P.U.). Using this approach, the County's 2046 housing forecast is projected to range from 39,600 households under the Low Scenario to 47,400 households under the High Scenario (refer to Figures 3 through 5).

Figures 3 through 5 provide additional details regarding Middlesex County's housing forecast by type over the 2046 planning horizon in five-year increments. Forecast trends in household structure were derived by Watson based on a review of the following:

- Historical housing trends by structure type between 2001 and 2016;
- Forecast housing propensity trends by structure type by major age group; and
- Consideration of future demographic trends (i.e. aging of the population) and socio-economic trends across the County.

Key observations include:

- Under the Low Scenario, the County is forecast to average approximately 425 new housing units per year, which represents an annual growth rate of 1.3%;
- Under the Reference Scenario, the County is forecast to average approximately 580 new units per year from 2016 to 2046, which represents an annual growth rate of 1.7%;

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



- Under the High Scenario, the County is forecast to average approximately 685 new units per year, which represents an annual growth rate of 1.9%;
- Forecast housing demand is anticipated to be largely represented by low-density housing forms accounting for approximately 79% of new households constructed between 2016 and 2046, while medium- and high-density housing is forecast to account for the remaining 21%; and
- Relative to recent historical trends observed, it is noted that housing demand across the County is anticipated to gradually shift from low-density housing forms to medium- and high-density housing types. The factors influencing this shift are discussed further below.

3.2 Accommodating Existing and Future Generations in Middlesex County

3.2.1 *Planning for the Baby Boom Generation*

As previously summarized in Figure 1, the average age of the population base in Middlesex County is getting older, similar to the Province as a whole. This is due to the large concentration of Baby Boomers (born between 1946 and 1964) currently living within the County. As of 2020, this age group is between 56 and 74 years of age and comprises 23% of the County's population base. As the County's Baby Boom population continues to age, the percentage of seniors, particularly older seniors (i.e. seniors 75 years of age and older), is anticipated to steadily increase over the next few decades. From 2001 to 2016, the County's 75+ population grew at an annual rate of 2.2%. Between 2016 and 2046, the forecast annual population growth rate for the 75+ age group is forecast to steadily increase from 3.1% under the Low Scenario, 3.5% under the Reference Scenario, and 3.7% under the High Scenario. This demographic trend is anticipated to be largely driven by the aging of the County's existing population as opposed to net-migration of older residents into the County. It is important to recognize that not only is the Baby Boom age group large in terms of its population share in Middlesex County, this group is also diverse with respect to age, income, health, mobility, and lifestyle/life stage.

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 care needs 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 urban amenities (e.g. hospitals/health care facilities, amenities and other community services geared towards older seniors). Ultimately, the aging of the population will continue to place downward pressure on County-wide



population growth and labour force participation. This demographic trend, however, is also anticipated to place increasing demand for housing, amenities, and community services on the County's larger urban areas.

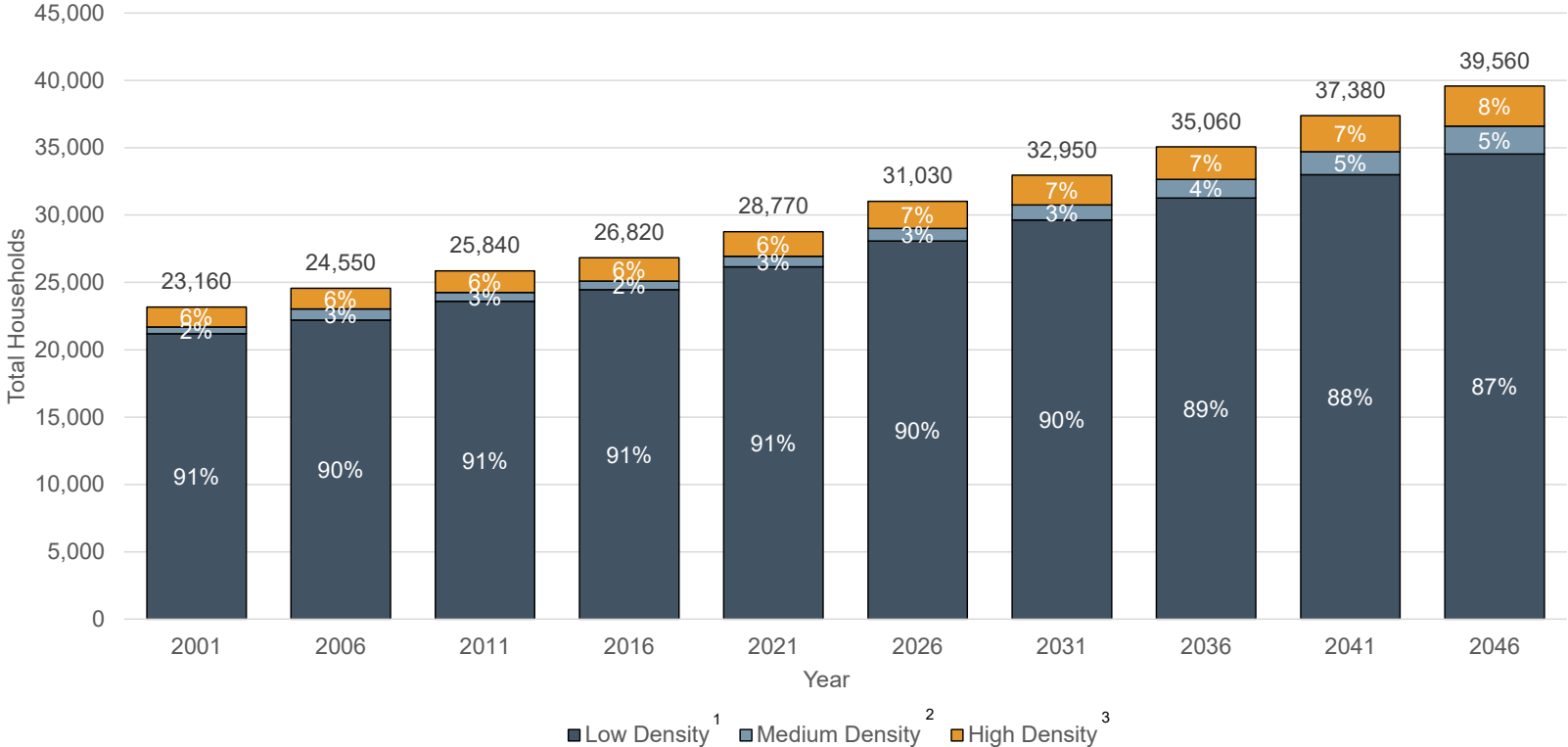
3.2.2 Planning for Millennials, Generation Z, and Future Generations

Future population, as well as associated housing needs in Middlesex County will also be driven by the "Millennial" generation and "Generation Z." While there is no standard age group associated with the Millennial generation, persons born between 1980 and 1992 (currently 28 to 40 years of age) best fit the definition of this age group. Generation Z, the cohort that directly follows the Millennial generation, is also anticipated to contribute to long-term population growth within the County. Demographers typically describe those born between the mid-1990s and mid-2000s when characterizing the Generation Z cohort. For the purposes of this study, we have assumed that those born between 1993 and 2005 (currently 15 to 27 years of age) comprise Generation Z.

A diverse range of housing products by both type and tenure (i.e. ownership and rental) are anticipated to be required to accommodate population growth associated with Millennials and Generation Z. Over the next several decades, these two demographic groups are anticipated to drive housing demand from first-time homebuyers, young-families, move-up buyers, and empty-nesters. The extent to which Middlesex County can capitalize on potential demand from these demographic groups is subject to a number of economic and socio-economic variables (e.g. relative housing costs/affordability, local and regional employment opportunities, technological disruption and advancement, fuel costs, lifestyle preferences, local amenities, community services, and perceived quality of life).

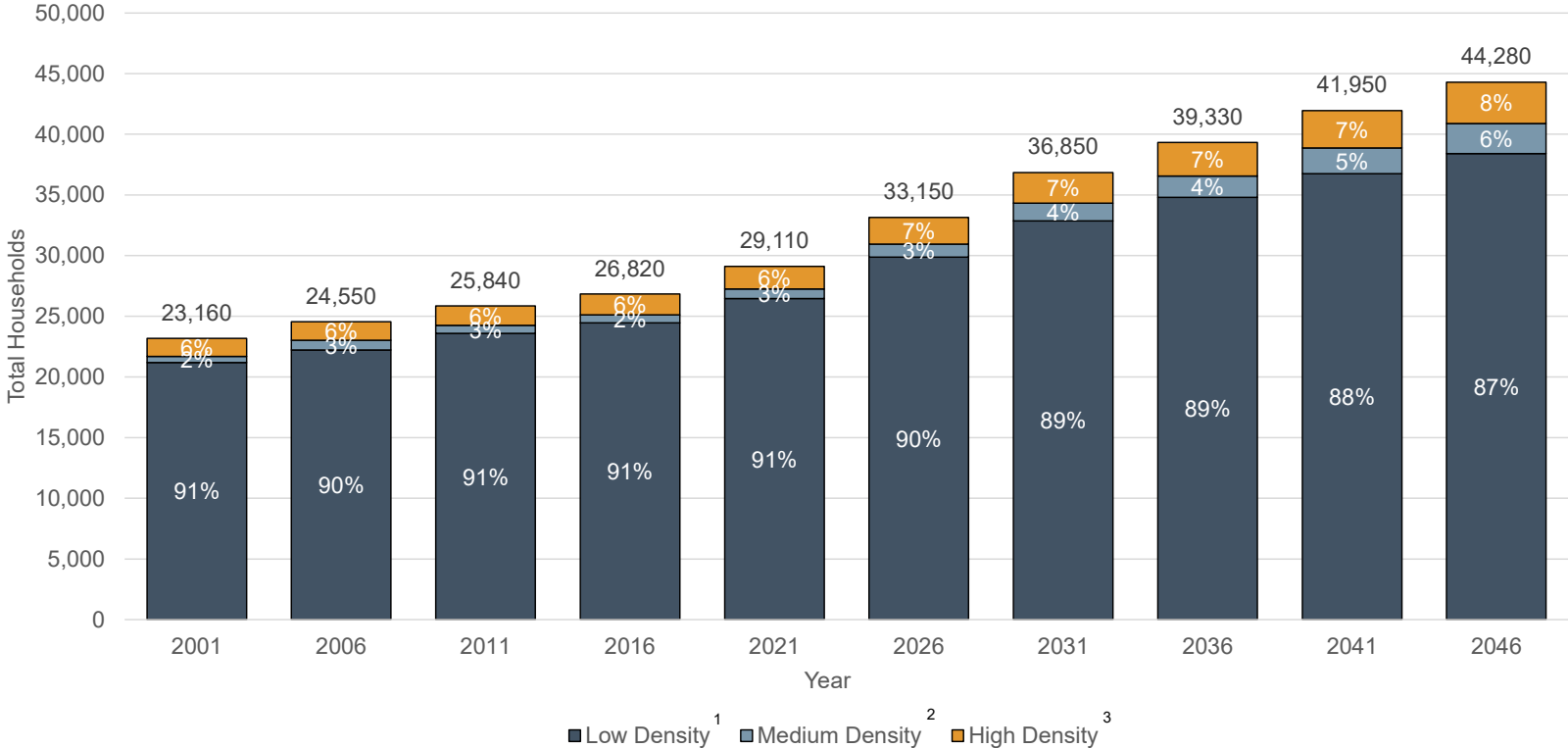
These two demographic groups, as well as generations following Generation Z, represent the County's existing and future labour force supply for the next several decades. It is also important to recognize that the accommodation of skilled labour and the attraction of new businesses are inextricably linked and positively reinforce one another. To ensure that economic growth is not constrained by future labour shortages, effort will be required by Middlesex County to continue to explore ways to attract and accommodate new skilled working residents to the County across a diverse range of employment opportunities and a broader choice of competitively priced housing options. Attraction efforts must also be linked to housing accommodation (both ownership and rental), municipal services, and infrastructure, as well as quality of life attributes that appeal to the younger mobile population, while not detracting from the County's attractiveness to older population segments.

Figure 3
Middlesex County
Household Growth – Low Scenario, 2016 to 2046



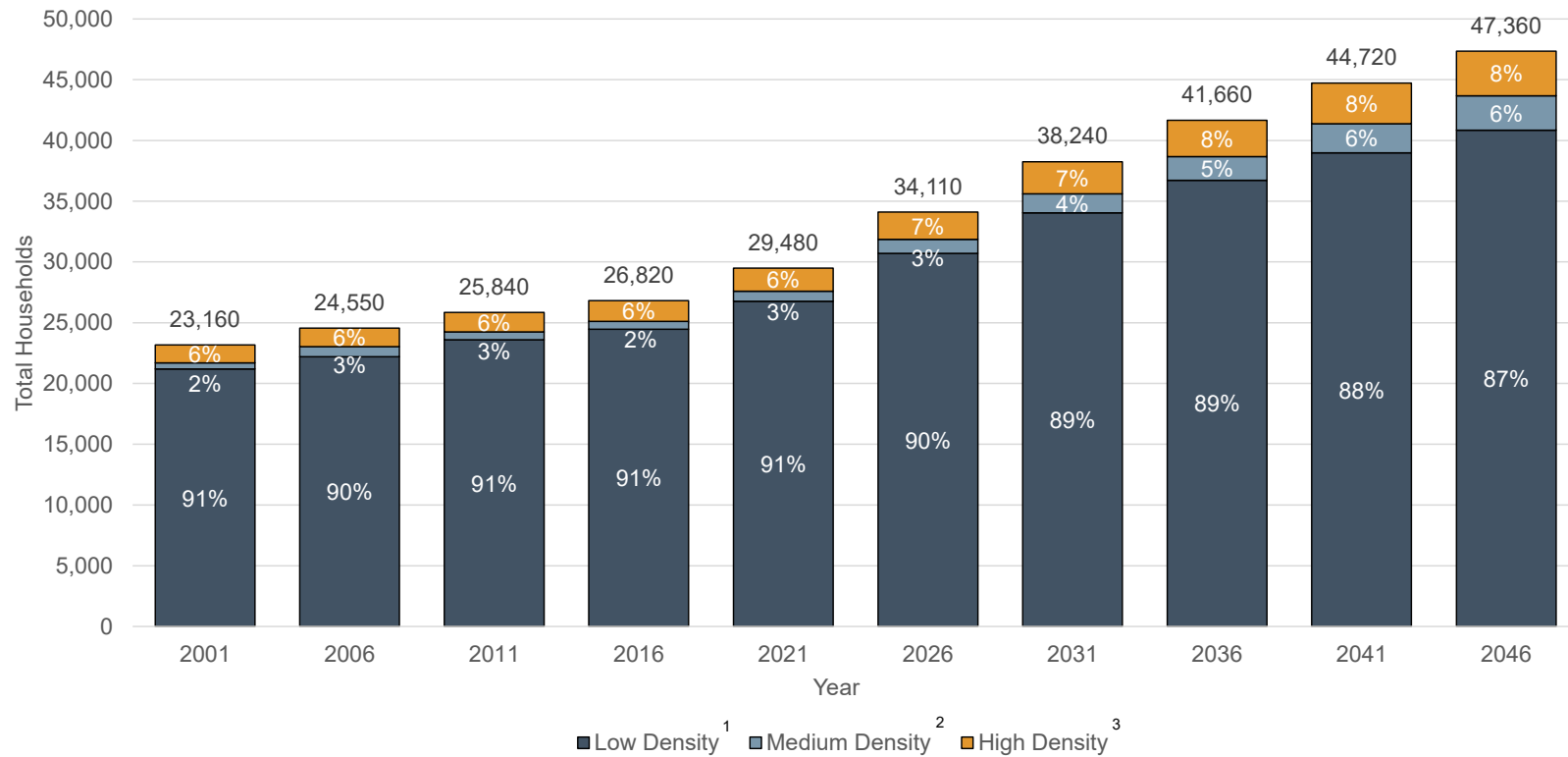
Source: 2001 to 2016 historical data derived from Statistics Canada. 2021 to 2046 forecast by Watson & Associates Economists Ltd., 2020.
 Note: Figures may not add precisely due to rounding.
¹ Includes single and semi-detached units.
² Includes townhouses and apartments in duplexes.
³ Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Figure 4
Middlesex County
Household Growth – Reference Scenario, 2016 to 2046



Source: 2001 to 2016 historical data derived from Statistics Canada. 2021 to 2046 forecast by Watson & Associates Economists Ltd., 2020.
 Note: Figures may not add precisely due to rounding.
¹ Includes single and semi-detached units.
² Includes townhouses and apartments in duplexes.
³ Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Figure 5
Middlesex County
Household Growth – High Scenario, 2016 to 2046



Source: 2001 to 2016 historical data derived from Statistics Canada. 2021 to 2046 forecast by Watson & Associates Economists Ltd., 2020.

Note: Figures may not add precisely due to rounding.

¹ Includes single and semi-detached units.

² Includes townhouses and apartments in duplexes.

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



Figure 6 summarizes historical and forecast P.P.U. trends for Middlesex County from 2001 to 2046. It is observed that the average P.P.U. for the County steadily declined over the 15-year historical period, falling from 2.98 in 2001 to 2.76 in 2016. Over the long-term planning horizon, average P.P.U. levels for the County are forecast to continue to decline, from 2.75 in 2016 to 2.43 in 2046. This projected moderation in the County's P.P.U. decline rate is largely a result of an anticipated increase in the number of young adults and children migrating to the County under all three Growth Scenarios, relative to the past two decades.

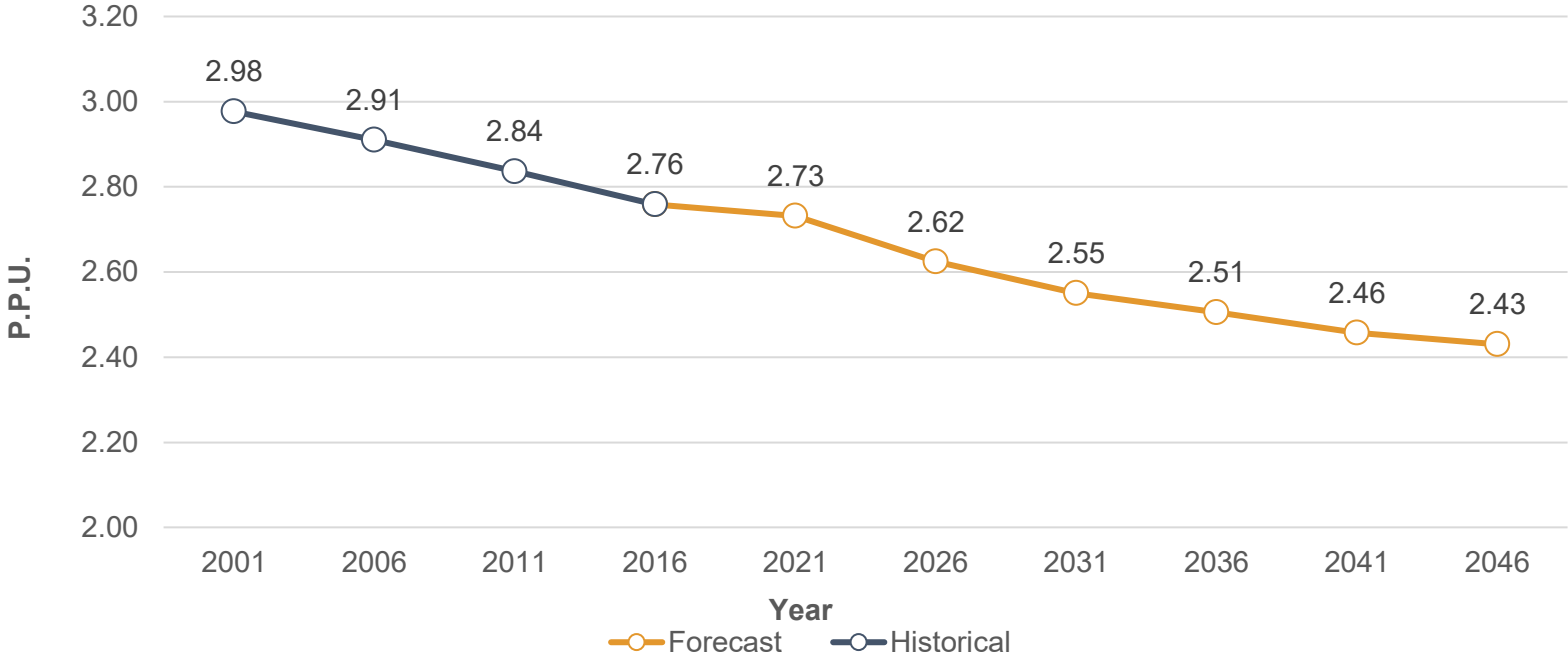
4. Allocation of Middlesex County Housing Forecast by Local Municipality

Each of the long-term housing forecast scenarios was further allocated by local municipality based on an analysis of long-term housing occupancy trends and housing demand by structure type. For each local municipality, the short-term population forecast (2016 to 2021) has been adjusted to reflect recent residential development trends. The long-term household forecast has been derived from the County's Low and High Population Scenarios by local municipality (refer to Appendix B for further details).

Figures 7 through 9 summarize the housing forecast by local municipality for the Low, Reference, and High Scenarios, respectively. Key observations regarding each scenario are noted below:

- Under all three Growth Scenarios, all the County's local municipalities are anticipated to experience a moderate to strong rate of housing growth;
- The Municipalities of Strathroy-Caradoc, Middlesex Centre, and Thames Centre accounted for 72% of the County's housing in 2016. By 2046, the percentage share of County-wide housing represented by these three municipalities is forecast to grow to 75% in the Low Scenario to 77% in the High Scenario; and
- Collectively, the Municipalities of Strathroy-Caradoc, Middlesex Centre, and Thames Centre account for approximately 87% to 88% of the County-wide demand for high-density housing forms.

Figure 6
Middlesex County
Persons Per Unit (P.P.U.) Forecast, 2001 to 2046



Source: 2001 to 2016 historical data derived from Statistics Canada Table 17-10-0139-01 and Statistics Canada Census Profiles for Middlesex County. 2021 forecast prepared by Watson & Associates Economists Ltd., 2020. 2026 to 2046 forecast by Middlesex County presented by Watson & Associates Economists Ltd., 2020.
 Note: Population includes net Census undercount estimated at approximately 3.46%. Numbers may not add precisely due to rounding.

Figure 7
Middlesex County
Housing Forecast by Local Municipality – Low Scenario, 2016 to 2046

Year	Village of Newbury	Municipality of Southwest Middlesex	Municipality of Strathroy-Caradoc	Municipality of Thames Centre	Municipality of Middlesex Centre	Municipality of North Middlesex	Township of Adelaide-Metcalf	Township of Lucan Biddulph	Middlesex County
2016	180	2,350	8,300	4,920	5,990	2,330	990	1,790	26,820
2021	180	2,390	9,050	5,240	6,550	2,370	1,020	1,970	28,770
2026	200	2,550	9,800	5,620	7,110	2,560	1,110	2,080	31,030
2031	210	2,620	10,530	5,910	7,690	2,630	1,150	2,210	32,950
2036	220	2,680	11,230	6,220	8,430	2,700	1,190	2,380	35,060
2041	240	2,740	11,980	6,550	9,310	2,770	1,230	2,560	37,380
2046	250	2,790	12,660	6,840	10,180	2,810	1,260	2,780	39,560
Share of 2016 County Housing	1%	9%	31%	18%	22%	9%	4%	7%	100%
Share of 2046 County Housing	1%	7%	32%	17%	26%	7%	3%	7%	100%
Housing Growth									
2016-2046	70	440	4,360	1,920	4,190	480	270	990	12,740
Annual Growth Rate, 2016-2046	1.1%	0.6%	1.4%	1.1%	1.8%	0.6%	0.8%	1.5%	1.3%
Share of County Housing Growth, 2016-2046	1%	3%	34%	15%	33%	4%	2%	8%	100%

Source: 2016 data derived from Statistics Canada by Watson & Associates Economists Ltd., 2020. 2021 forecast prepared by Watson & Associates Economists Ltd., 2020. 2026 to 2046 forecast by Middlesex County presented by Watson & Associates Economists Ltd., 2020.

Note: Numbers may not add precisely due to rounding.

Figure 8
Middlesex County
Household Forecast by Local Municipality – Reference Scenario, 2016 to 2046

Year	Village of Newbury	Municipality of Southwest Middlesex	Municipality of Strathroy-Caradoc	Municipality of Thames Centre	Municipality of Middlesex Centre	Municipality of North Middlesex	Township of Adelaide-Metcalf	Township of Lucan Biddulph	Middlesex County
2016	180	2,350	8,300	4,920	5,990	2,330	990	1,790	26,820
2021	180	2,390	9,180	5,290	6,650	2,380	1,020	2,010	29,110
2026	220	2,660	10,560	5,970	7,680	2,680	1,170	2,230	33,150
2031	240	2,790	11,960	6,540	8,770	2,830	1,250	2,470	36,850
2036	250	2,860	12,760	6,900	9,700	2,890	1,290	2,690	39,330
2041	260	2,920	13,540	7,270	10,760	2,960	1,330	2,910	41,950
2046	280	2,950	14,210	7,570	11,750	3,000	1,360	3,160	44,280
Share of 2016 County Housing	1%	9%	31%	18%	22%	9%	4%	7%	100%
Share of 2046 County Housing	1%	7%	32%	17%	27%	7%	3%	7%	100%
Housing Growth									
2016-2046	100	600	5,910	2,650	5,760	670	370	1,370	17,460
Annual Growth Rate, 2016-2046	1.5%	0.8%	1.8%	1.4%	2.3%	0.8%	1.1%	1.9%	1.7%
Share of County Housing Growth, 2016-2046	1%	3%	34%	15%	33%	4%	2%	8%	100%

Source: 2016 data derived from Statistics Canada by Watson & Associates Economists Ltd., 2020. 2021 forecast prepared by Watson & Associates Economists Ltd., 2020. 2026 to 2046 forecast by Middlesex County presented by Watson & Associates Economists Ltd., 2020.

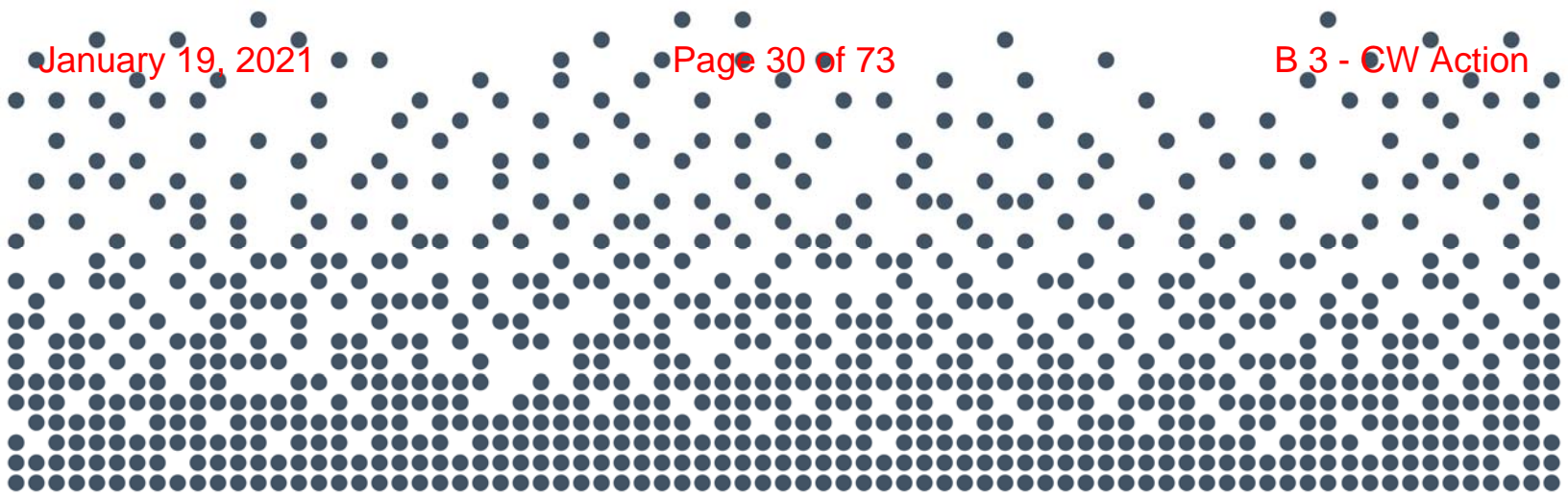
Note: Numbers may not add precisely due to rounding.

Figure 9
Middlesex County
Household Forecast by Local Municipality – High Scenario, 2016 to 2046

Year	Village of Newbury	Municipality of Southwest Middlesex	Municipality of Strathroy-Caradoc	Municipality of Thames Centre	Municipality of Middlesex Centre	Municipality of North Middlesex	Township of Adelaide-Metcalf	Township of Lucan Biddulph	Middlesex County
2016	180	2,350	8,300	4,920	5,990	2,330	990	1,790	26,820
2021	180	2,400	9,320	5,350	6,760	2,380	1,030	2,040	29,480
2026	220	2,700	10,900	6,130	7,930	2,730	1,200	2,300	34,110
2031	240	2,860	12,470	6,760	9,160	2,900	1,290	2,570	38,240
2036	260	2,950	13,600	7,260	10,390	3,000	1,350	2,850	41,660
2041	280	3,020	14,510	7,690	11,630	3,080	1,390	3,110	44,720
2046	290	3,060	15,260	8,040	12,760	3,110	1,420	3,410	47,360
Share of 2016 County Housing	1%	9%	31%	18%	22%	9%	4%	7%	100%
Share of 2046 County Housing	1%	6%	32%	17%	27%	7%	3%	7%	100%
Housing Growth									
2016-2046	110	710	6,960	3,120	6,770	780	430	1,620	20,540
Annual Growth Rate, 2016-2046	1.6%	0.9%	2.1%	1.7%	2.6%	1.0%	1.2%	2.2%	1.9%
Share of County Housing Growth, 2016-2046	1%	3%	34%	15%	33%	4%	2%	8%	100%

Source: 2016 data derived from Statistics Canada by Watson & Associates Economists Ltd., 2020. 2021 forecast prepared by Watson & Associates Economists Ltd., 2020. 2026 to 2046 forecast by Middlesex County presented by Watson & Associates Economists Ltd., 2020.

Note: Numbers may not add precisely due to rounding.



Appendix A

Middlesex County Population and Household Forecast

Appendix A: Middlesex County Population and Household Forecast

Figure A-1
Middlesex County
Housing Headship Rate, 2016 to 2046

Age Group	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
Under 25 years	0.0123	0.0168	0.0145	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139	0.0139
25 to 34 years	0.4458	0.4156	0.4476	0.5134	0.5134	0.5134	0.5134	0.5134	0.5134	0.5134
35 to 44 years	0.5396	0.5107	0.5681	0.4816	0.4816	0.4816	0.4816	0.4816	0.4816	0.4816
45 to 54 years	0.5531	0.5480	0.5544	0.5475	0.5475	0.5475	0.5475	0.5475	0.5475	0.5475
55 to 64 years	0.5543	0.5698	0.5575	0.5427	0.5427	0.5427	0.5427	0.5427	0.5427	0.5427
65 to 74 years	0.5952	0.6185	0.5844	0.5766	0.5766	0.5766	0.5766	0.5766	0.5766	0.5766
75 years and over	0.6242	0.6617	0.6129	0.6452	0.6452	0.6452	0.6452	0.6452	0.6452	0.6452
Total	0.3363	0.3484	0.3638	0.3636	0.3765	0.3905	0.4009	0.4075	0.4149	0.4191

Source: 2001 to 2016 historical data derived from Statistics Canada Census of Population data. 2021 to 2046 forecast data prepared by Watson & Associates Economists Ltd., 2020.

Figure A-2
Middlesex County
Population by Age Cohort, 2016 to 2046
Low Scenario

Age Group	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
Under 25 years	26,900	26,200	25,800	25,300	25,100	24,000	23,300	23,400	23,400	23,800
25 to 34 years	6,700	7,000	5,900	5,400	5,900	7,300	8,200	8,400	8,600	9,000
35 to 44 years	10,800	10,700	8,600	9,000	9,800	10,300	10,700	11,400	12,000	12,500
45 to 54 years	9,500	10,900	12,100	10,800	10,900	10,800	10,800	11,000	11,000	11,300
55 to 64 years	6,700	8,100	9,700	10,800	11,800	12,300	12,900	13,600	14,700	15,400
65 to 74 years	4,700	4,700	6,500	7,600	8,500	9,000	9,400	10,200	11,000	11,800
75 years and over	3,700	4,000	4,700	5,000	6,500	7,700	8,900	10,000	11,300	12,400
Total	68,900	71,500	73,300	74,000	78,500	81,500	84,200	88,000	92,000	96,300

Source: 2001 to 2016 historical data derived from Statistics Canada Table 17-10-0139-01. 2021 to 2046 forecast data derived by Watson & Associates Economists Ltd., 2020.

Note: Population includes net Census undercount estimated at approximately 3.47%. Figures may not add precisely due to rounding.

Figure A-3
Middlesex County
Population by Age Cohort, 2016 to 2046
Reference Scenario

Age Group	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
Under 25 years	26,900	26,200	25,800	25,300	25,500	25,700	26,000	26,200	26,200	26,600
25 to 34 years	6,700	7,000	5,900	5,400	6,000	7,700	9,100	9,400	9,600	10,100
35 to 44 years	10,800	10,700	8,600	9,000	9,900	11,000	11,900	12,800	13,400	14,000
45 to 54 years	9,500	10,900	12,100	10,800	11,100	11,600	12,000	12,300	12,400	12,600
55 to 64 years	6,700	8,100	9,700	10,800	11,900	13,100	14,400	15,200	16,500	17,200
65 to 74 years	4,700	4,700	6,500	7,600	8,600	9,700	10,500	11,400	12,400	13,200
75 years and over	3,700	4,000	4,700	5,000	6,600	8,300	10,000	11,200	12,700	13,900
Total	68,900	71,500	73,300	74,000	79,500	87,000	94,000	98,600	103,100	107,600

Source: 2001 to 2016 historical data derived from Statistics Canada Table 17-10-0139-01. 2021 to 2046 forecast data derived by Watson & Associates Economists Ltd., 2020.

Note: Population includes net Census undercount estimated at approximately 3.47%. Figures may not add precisely due to rounding.

Figure A-4
Middlesex County
Population by Age Cohort, 2016 to 2046
High Scenario

Age Group	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046
Under 25 years	26,900	26,200	25,800	25,300	25,800	26,400	27,000	27,700	27,900	28,500
25 to 34 years	6,700	7,000	5,900	5,400	6,000	8,000	9,500	9,900	10,200	10,800
35 to 44 years	10,800	10,700	8,600	9,000	10,100	11,300	12,400	13,600	14,300	15,000
45 to 54 years	9,500	10,900	12,100	10,800	11,200	11,900	12,500	13,000	13,200	13,500
55 to 64 years	6,700	8,100	9,700	10,800	12,100	13,500	14,900	16,100	17,600	18,400
65 to 74 years	4,700	4,700	6,500	7,600	8,700	9,900	10,900	12,100	13,200	14,100
75 years and over	3,700	4,000	4,700	5,000	6,700	8,500	10,300	11,900	13,500	14,800
Total	68,900	71,500	73,300	74,000	80,600	89,500	97,500	104,300	109,800	115,000

Source: 2001 to 2016 historical data derived from Statistics Canada Table 17-10-0139-01. 2021 to 2046 forecast data derived by Watson & Associates Economists Ltd., 2020.

Note: Population includes net Census undercount estimated at approximately 3.47%. Figures may not add precisely due to rounding.



Figure A-5
Middlesex County
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	Mid-2001	68,900	66,600	20,960	510	1,480	220	23,160	2.98	2.88
	Mid-2006	71,500	69,100	21,810	820	1,530	400	24,550	2.91	2.81
	Mid-2011	73,300	70,800	23,180	650	1,600	420	25,840	2.84	2.74
	Mid-2016	74,000	71,500	24,060	650	1,720	400	26,820	2.76	2.67
Forecast	Mid-2021	78,500	75,900	25,750	780	1,840	400	28,770	2.73	2.64
	Mid-2026	81,500	78,800	27,670	940	2,020	400	31,030	2.63	2.54
	Mid-2031	84,200	81,400	29,230	1,130	2,200	400	32,950	2.55	2.47
	Mid-2036	88,000	85,000	30,870	1,380	2,410	400	35,060	2.51	2.43
	Mid-2041	92,000	88,900	32,590	1,710	2,690	400	37,380	2.46	2.38
	Mid-2046	96,300	93,100	34,140	2,060	2,970	400	39,560	2.43	2.35
Incremental	Mid-2001 to Mid-2006	2,600	2,500	850	310	50	180	1,390		
	Mid-2006 to Mid-2011	1,800	1,700	1,370	-170	70	20	1,290		
	Mid-2011 to Mid-2016	700	700	880	0	120	-20	980		
	Mid-2016 to Mid-2021	4,500	4,400	1,690	130	120	0	1,950		
	Mid-2016 to Mid-2026	7,500	7,300	3,610	290	300	0	4,210		
	Mid-2016 to Mid-2031	10,200	9,900	5,170	480	480	0	6,130		
	Mid-2016 to Mid-2036	14,000	13,500	6,810	730	690	0	8,240		
	Mid-2016 to Mid-2041	18,000	17,400	8,530	1,060	970	0	10,560		
Mid-2016 to Mid-2046	22,300	21,600	10,080	1,410	1,250	0	12,740			

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Note: Figures may not add precisely due to rounding.



Figure A-6
Middlesex County
Population and Housing Growth, 2016 to 2046
Reference Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	Mid-2001	68,900	66,600	20,960	510	1,480	220	23,160	2.98	2.88
	Mid-2006	71,500	69,100	21,810	820	1,530	400	24,550	2.91	2.81
	Mid-2011	73,300	70,800	23,180	650	1,600	420	25,840	2.84	2.74
	Mid-2016	74,000	71,500	24,060	650	1,720	400	26,820	2.76	2.67
Forecast	Mid-2021	79,500	76,900	26,050	800	1,860	400	29,110	2.73	2.64
	Mid-2026	87,000	84,100	29,470	1,080	2,190	400	33,150	2.62	2.54
	Mid-2031	94,000	90,800	32,470	1,450	2,520	400	36,850	2.55	2.47
	Mid-2036	98,600	95,200	34,410	1,750	2,770	400	39,330	2.51	2.42
	Mid-2041	103,100	99,600	36,350	2,120	3,080	400	41,950	2.46	2.38
	Mid-2046	107,600	104,000	38,000	2,490	3,390	400	44,280	2.43	2.35
Incremental	Mid-2001 to Mid-2006	2,600	2,500	850	310	50	180	1,390		
	Mid-2006 to Mid-2011	1,800	1,700	1,370	-170	70	20	1,290		
	Mid-2011 to Mid-2016	700	700	880	0	120	-20	980		
	Mid-2016 to Mid-2021	5,500	5,400	1,990	150	140	0	2,290		
	Mid-2016 to Mid-2026	13,000	12,600	5,410	430	470	0	6,330		
	Mid-2016 to Mid-2031	20,000	19,300	8,410	800	800	0	10,030		
	Mid-2016 to Mid-2036	24,600	23,700	10,350	1,100	1,050	0	12,510		
	Mid-2016 to Mid-2041	29,100	28,100	12,290	1,470	1,360	0	15,130		
Mid-2016 - Mid-2046	33,600	32,500	13,940	1,840	1,670	0	17,460			

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Note: Figures may not add precisely due to rounding.



Figure A-7
Middlesex County
Population and Housing Growth, 2016 to 2046
High Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	Mid-2001	68,900	66,600	20,960	510	1,480	220	23,160	2.98	2.88
	Mid-2006	71,500	69,100	21,810	820	1,530	400	24,550	2.91	2.81
	Mid-2011	73,300	70,800	23,180	650	1,600	420	25,840	2.84	2.74
	Mid-2016	74,000	71,500	24,060	650	1,720	400	26,820	2.76	2.67
Forecast	Mid-2021	80,600	77,800	26,370	830	1,890	400	29,480	2.73	2.64
	Mid-2026	89,500	86,500	30,300	1,150	2,260	400	34,110	2.62	2.54
	Mid-2031	97,500	94,200	33,650	1,560	2,630	400	38,240	2.55	2.46
	Mid-2036	104,300	100,800	36,310	1,970	2,970	400	41,660	2.50	2.42
	Mid-2041	109,800	106,100	38,580	2,400	3,340	400	44,720	2.46	2.37
	Mid-2046	115,000	111,100	40,450	2,820	3,680	400	47,360	2.43	2.35
Incremental	Mid-2001 to Mid-2006	2,600	2,500	850	310	50	180	1,390		
	Mid-2006 to Mid-2011	1,800	1,700	1,370	-170	70	20	1,290		
	Mid-2011 to Mid-2016	700	700	880	0	120	-20	980		
	Mid-2016 to Mid-2021	6,600	6,300	2,310	180	170	0	2,660		
	Mid-2016 to Mid-2026	15,500	15,000	6,240	500	540	0	7,290		
	Mid-2016 to Mid-2031	23,500	22,700	9,590	910	910	0	11,420		
	Mid-2016 to Mid-2036	30,300	29,300	12,250	1,320	1,250	0	14,840		
	Mid-2016 to Mid-2041	35,800	34,600	14,520	1,750	1,620	0	17,900		
Mid-2016 - Mid-2046	41,000	39,600	16,390	2,170	1,960	0	20,540			

Source: Watson & Associates Economists Ltd., 2020.

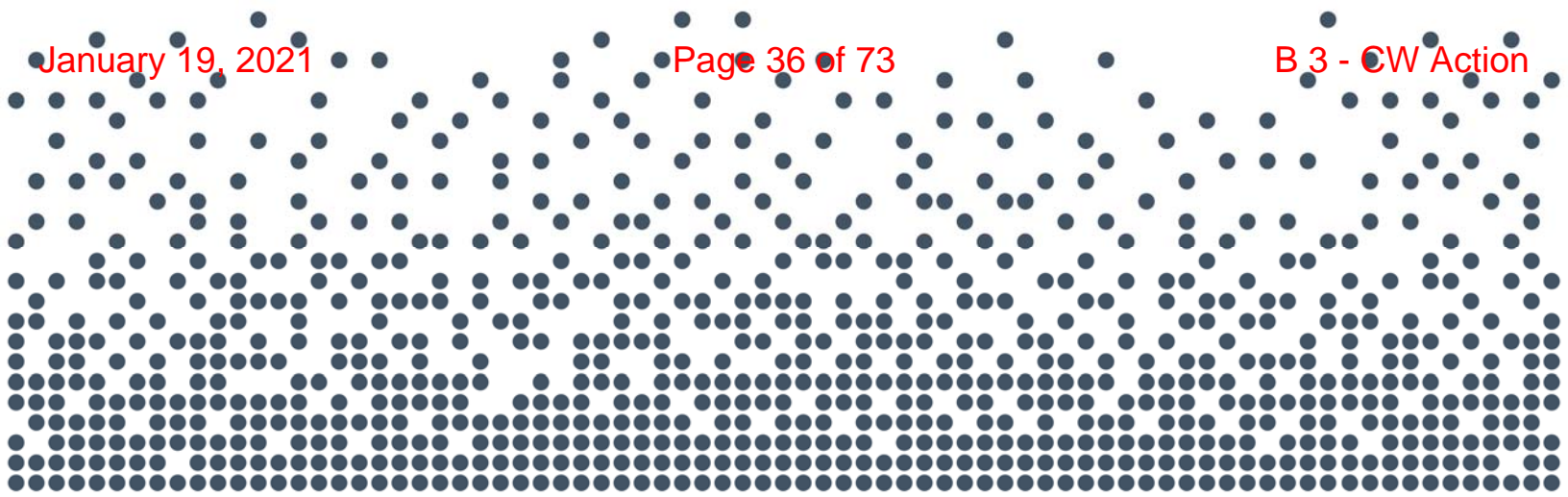
¹ Census undercount estimated at approximately 3.5%. Note: Population including the undercount has been rounded.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Note: Figures may not add precisely due to rounding.



Appendix B

Middlesex County Population and Household Forecast by Local Municipality

Appendix B: Middlesex County Population and Household Forecast by Local Municipality

Figure B-1
Village of Newbury
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	440	420	150	10	0	0	160	2.75	2.63
	2006	450	440	150	0	20	10	180	2.50	2.44
	2011	460	450	160	0	30	0	190	2.42	2.37
	2016	480	470	170	0	10	0	180	2.67	2.61
Forecast	2021	490	480	170	0	10	0	180	2.72	2.67
	2026	530	510	190	0	20	0	210	2.52	2.43
	2031	540	520	190	0	20	0	210	2.57	2.48
	2036	550	540	200	0	20	0	220	2.50	2.45
	2041	570	550	210	0	30	0	240	2.38	2.29
	2046	590	570	220	0	30	0	250	2.36	2.28
Incremental	2001 to 2006	10	20	0	-10	20	10	20		
	2006 to 2011	10	10	10	0	10	-10	10		
	2011 to 2016	20	20	10	0	-20	0	-10		
	2016 to 2021	10	10	0	0	0	0	0	0	0
	2016 to 2026	50	40	20	0	10	0	30	0	0
	2016 to 2031	60	50	20	0	10	0	30	0	0
	2016 to 2036	70	70	30	0	10	0	40	0	0
	2016 to 2041	90	80	40	0	20	0	60	0	0
2016 to 2046	110	100	50	0	20	0	70	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-2
Village of Newbury
Population and Housing Growth, 2016 to 2046
Reference Scenario

Year		Population		Housing Units					Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴	Total Households		
Historical	2001	440	420	150	10	0	0	160	2.75	2.63
	2006	450	440	150	0	20	10	180	2.50	2.44
	2011	460	450	160	0	30	0	190	2.42	2.37
	2016	480	470	170	0	10	0	180	2.67	2.61
Forecast	2021	500	480	170	0	10	0	180	2.78	2.67
	2026	560	540	200	0	20	0	220	2.55	2.45
	2031	590	570	210	0	30	0	240	2.46	2.38
	2036	610	590	220	0	30	0	250	2.44	2.36
	2041	630	610	230	0	30	0	260	2.42	2.35
	2046	660	630	240	0	40	0	280	2.36	2.25
Incremental	2001 to 2006	10	20	0	-10	20	10	20		
	2006 to 2011	10	10	10	0	10	-10	10		
	2011 to 2016	20	20	10	0	-20	0	-10		
	2016 to 2021	20	10	0	0	0	0	0	0	0
	2016 to 2026	80	70	30	0	10	0	40	0	0
	2016 to 2031	110	100	40	0	20	0	60	0	0
	2016 to 2036	130	120	50	0	20	0	70	0	0
	2016 to 2041	150	140	60	0	20	0	80	0	0
2016 to 2046	180	160	70	0	30	0	100	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-3
Village of Newbury
Population and Housing Growth, 2016 to 2046
High Scenario

Year		Population		Housing Units					Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴	Total Households		
Historical	2001	440	420	150	10	0	0	160	2.75	2.63
	2006	450	440	150	0	20	10	180	2.50	2.44
	2011	460	450	160	0	30	0	190	2.42	2.37
	2016	480	470	170	0	10	0	180	2.67	2.61
Forecast	2021	500	480	170	0	10	0	180	2.78	2.67
	2026	580	560	200	0	20	0	220	2.64	2.55
	2031	610	590	220	0	30	0	240	2.54	2.46
	2036	650	630	230	0	30	0	260	2.50	2.42
	2041	670	650	240	0	40	0	280	2.39	2.32
	2046	700	670	250	0	40	0	290	2.41	2.31
Incremental	2001 to 2006	10	20	0	-10	20	10	20		
	2006 to 2011	10	10	10	0	10	-10	10		
	2011 to 2016	20	20	10	0	-20	0	-10		
	2016 to 2021	20	10	0	0	0	0	0	0	0
	2016 to 2026	100	90	30	0	10	0	40	0	0
	2016 to 2031	130	120	50	0	20	0	60	0	0
	2016 to 2036	170	160	60	0	20	0	80	0	0
	2016 to 2041	190	180	70	0	30	0	100	0	0
2016 to 2046	220	200	80	0	30	0	110	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-4
Municipality of Southwest Middlesex
Population and Housing Growth, 2016 to 2046
Low Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	6,400	6,100	2,040	50	150	20	2,260	2.83	2.70
	2006	6,100	5,900	2,060	80	130	10	2,280	2.68	2.59
	2011	6,100	5,900	2,100	100	140	30	2,370	2.57	2.49
	2016	5,900	5,700	2,100	90	160	10	2,360	2.50	2.42
Forecast	2021	5,900	5,700	2,140	90	160	10	2,400	2.46	2.38
	2026	6,200	6,000	2,300	90	160	10	2,560	2.42	2.34
	2031	6,100	5,900	2,370	90	160	10	2,630	2.32	2.24
	2036	6,100	5,900	2,420	90	170	10	2,690	2.27	2.19
	2041	6,100	5,900	2,480	90	170	10	2,750	2.22	2.15
	2046	6,100	5,900	2,520	90	180	10	2,800	2.18	2.11
Incremental	2001 to 2006	-300	-200	20	30	-20	-10	20		
	2006 to 2011	0	0	40	20	10	20	90		
	2011 to 2016	-200	-200	0	-10	20	-20	-10		
	2016 to 2021	0	0	40	0	0	0	40	0	0
	2016 to 2026	300	300	200	0	0	0	200	0	0
	2016 to 2031	200	200	270	0	0	0	270	0	0
	2016 to 2036	200	200	320	0	10	0	330	0	0
	2016 to 2041	200	200	380	0	10	0	390	0	0
2016 to 2046	200	200	420	0	20	0	440	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-5
Municipality of Southwest Middlesex
Population and Housing Growth, 2016 to 2046
Reference Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	6,400	6,100	2,040	50	150	20	2,250	2.84	2.71
	2006	6,100	5,900	2,060	80	130	10	2,280	2.68	2.59
	2011	6,100	5,900	2,100	100	140	30	2,370	2.57	2.49
	2016	5,900	5,700	2,100	90	160	10	2,350	2.51	2.43
Forecast	2021	6,000	5,800	2,150	90	160	10	2,390	2.51	2.43
	2026	6,400	6,200	2,400	90	160	10	2,660	2.41	2.33
	2031	6,500	6,300	2,540	90	170	10	2,790	2.33	2.26
	2036	6,500	6,300	2,590	90	180	10	2,860	2.27	2.20
	2041	6,500	6,200	2,650	90	180	10	2,920	2.23	2.12
	2046	6,400	6,200	2,670	90	190	10	2,950	2.17	2.10
Incremental	2001 to 2006	-300	-200	20	30	-20	-10	30		
	2006 to 2011	0	0	40	20	10	20	90		
	2011 to 2016	-200	-200	0	-10	20	-20	-20		
	2016 to 2021	100	100	50	0	0	0	40	0	0
	2016 to 2026	500	500	300	0	0	0	310	0	0
	2016 to 2031	600	600	440	0	10	0	440	0	0
	2016 to 2036	600	600	490	0	20	0	510	0	0
	2016 to 2041	600	500	550	0	20	0	570	0	0
2016 to 2046	500	500	570	0	30	0	600	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-6
Municipality of Southwest Middlesex
Population and Housing Growth, 2016 to 2046
High Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	6,360	6,140	2,040	50	150	20	2,250	2.83	2.73
	2006	6,090	5,890	2,060	80	130	10	2,280	2.67	2.58
	2011	6,060	5,860	2,100	100	140	30	2,370	2.56	2.47
	2016	5,920	5,720	2,100	90	160	10	2,350	2.52	2.43
Forecast	2021	5,980	5,780	2,160	90	160	10	2,400	2.49	2.41
	2026	6,530	6,310	2,450	90	160	10	2,700	2.42	2.34
	2031	6,670	6,450	2,600	90	170	10	2,860	2.33	2.26
	2036	6,710	6,480	2,680	90	180	10	2,950	2.27	2.20
	2041	6,660	6,440	2,740	90	180	10	3,020	2.21	2.13
	2046	6,590	6,370	2,770	90	190	10	3,060	2.15	2.08
Incremental	2001 to 2006	-270	-250	20	30	-20	-10	30		
	2006 to 2011	-30	-30	40	20	10	20	90		
	2011 to 2016	-140	-140	0	-10	20	-20	-20		
	2016 to 2021	60	60	60	0	0	0	50	0	0
	2016 to 2026	610	590	350	0	0	0	350	0	0
	2016 to 2031	750	730	500	0	10	0	510	0	0
	2016 to 2036	790	760	580	0	20	0	600	0	0
	2016 to 2041	740	720	640	0	20	0	670	0	0
2016 to 2046	670	650	670	0	30	0	710	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-7
Municipality of Strathroy-Caradoc
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	19,800	19,100	5,780	270	900	50	7,000	2.83	2.73
	2006	20,700	20,000	6,100	320	900	170	7,490	2.76	2.67
	2011	21,700	21,000	6,490	290	1,010	190	7,980	2.72	2.63
	2016	21,600	20,900	6,770	310	1,030	190	8,300	2.60	2.52
Forecast	2021	23,300	22,600	7,310	410	1,140	190	9,050	2.57	2.50
	2026	24,300	23,500	7,810	530	1,260	190	9,790	2.48	2.40
	2031	25,500	24,600	8,310	670	1,350	190	10,520	2.42	2.34
	2036	26,800	25,900	8,770	810	1,460	190	11,230	2.39	2.31
	2041	28,000	27,100	9,210	980	1,590	190	11,970	2.34	2.26
	2046	29,300	28,300	9,600	1,170	1,700	190	12,660	2.31	2.24
Incremental	2001 to 2006	900	900	320	50	0	120	490		
	2006 to 2011	1,000	1,000	390	-30	110	20	490		
	2011 to 2016	-100	-100	280	20	20	0	320		
	2016 to 2021	1,700	1,700	540	100	110	0	750	0	0
	2016 to 2026	2,700	2,600	1,040	220	230	0	1,490	0	0
	2016 to 2031	3,900	3,700	1,540	360	320	0	2,220	0	0
	2016 to 2036	5,200	5,000	2,000	500	430	0	2,930	0	0
	2016 to 2041	6,400	6,200	2,440	670	560	0	3,670	0	0
2016 to 2046	7,700	7,400	2,830	860	670	0	4,360	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).



Figure B-8
Municipality of Strathroy-Caradoc
Population and Housing Growth, 2016 to 2046
Reference Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	19,800	19,100	5,780	270	900	50	6,990	2.83	2.73
	2006	20,700	20,000	6,100	320	900	170	7,490	2.76	2.67
	2011	21,700	21,000	6,490	290	1,010	190	7,970	2.72	2.63
	2016	21,600	20,900	6,770	310	1,030	190	8,300	2.60	2.52
Forecast	2021	23,700	22,900	7,410	430	1,160	190	9,180	2.58	2.49
	2026	26,200	25,300	8,330	650	1,390	190	10,560	2.48	2.40
	2031	29,000	28,000	9,270	920	1,580	190	11,960	2.42	2.34
	2036	30,400	29,400	9,810	1,070	1,690	190	12,760	2.38	2.30
	2041	31,700	30,600	10,310	1,230	1,820	190	13,540	2.34	2.26
	2046	32,900	31,800	10,720	1,410	1,900	190	14,210	2.32	2.24
Incremental	2001 to 2006	900	900	320	50	0	120	500		
	2006 to 2011	1,000	1,000	390	-30	110	20	480		
	2011 to 2016	-100	-100	280	20	20	0	330		
	2016 to 2021	2,100	2,000	640	120	130	0	880	0	0
	2016 to 2026	4,600	4,400	1,560	340	360	0	2,260	0	0
	2016 to 2031	7,400	7,100	2,500	610	550	0	3,660	0	0
	2016 to 2036	8,800	8,500	3,040	760	660	0	4,460	0	0
	2016 to 2041	10,100	9,700	3,540	920	790	0	5,240	0	0
2016 to 2046	11,300	10,900	3,950	1,100	870	0	5,910	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-9
Municipality of Strathroy-Caradoc
Population and Housing Growth, 2016 to 2046
High Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	19,780	19,110	5,780	270	900	50	6,990	2.83	2.73
	2006	20,670	19,980	6,100	320	900	170	7,490	2.76	2.67
	2011	21,710	20,980	6,490	290	1,010	190	7,970	2.72	2.63
	2016	21,590	20,870	6,770	310	1,030	190	8,300	2.60	2.51
Forecast	2021	24,100	23,290	7,510	440	1,180	190	9,320	2.59	2.50
	2026	27,030	26,130	8,570	700	1,450	190	10,900	2.48	2.40
	2031	30,190	29,180	9,620	1,010	1,660	190	12,470	2.42	2.34
	2036	32,400	31,310	10,360	1,220	1,820	190	13,600	2.38	2.30
	2041	33,960	32,830	10,950	1,410	1,970	190	14,510	2.34	2.26
	2046	35,360	34,180	11,410	1,610	2,060	190	15,260	2.32	2.24
Incremental	2001 to 2006	890	870	320	50	0	120	500		
	2006 to 2011	1,040	1,000	390	-30	110	20	480		
	2011 to 2016	-120	-110	280	20	20	0	330		
	2016 to 2021	2,510	2,420	740	130	150	0	1,020	0	0
	2016 to 2026	5,440	5,260	1,800	390	420	0	2,600	0	0
	2016 to 2031	8,600	8,310	2,850	700	630	0	4,170	0	0
	2016 to 2036	10,810	10,440	3,590	910	790	0	5,300	0	0
	2016 to 2041	12,370	11,960	4,180	1,100	940	0	6,210	0	0
2016 to 2046	13,770	13,310	4,640	1,300	1,030	0	6,960	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-10
Municipality of Thames Centre
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	12,900	12,500	4,040	70	110	120	4,330	2.98	2.89
	2006	13,500	13,100	4,220	90	130	170	4,590	2.94	2.85
	2011	13,500	13,000	4,360	80	110	180	4,720	2.86	2.75
	2016	13,600	13,200	4,530	80	160	170	4,920	2.76	2.68
Forecast	2021	14,400	13,900	4,840	80	160	170	5,240	2.75	2.65
	2026	14,900	14,400	5,210	80	160	170	5,620	2.65	2.56
	2031	15,200	14,700	5,490	80	170	170	5,910	2.57	2.49
	2036	15,700	15,200	5,780	100	180	170	6,220	2.52	2.44
	2041	16,300	15,700	6,070	110	200	170	6,550	2.49	2.40
	2046	16,800	16,200	6,330	110	230	170	6,840	2.46	2.37
Incremental	2001 to 2006	600	600	180	20	20	50	260		
	2006 to 2011	0	-100	140	-10	-20	10	130		
	2011 to 2016	100	200	170	0	50	-10	200		
	2016 to 2021	800	700	310	0	0	0	320	0	0
	2016 to 2026	1,300	1,200	680	0	0	0	700	0	0
	2016 to 2031	1,600	1,500	960	0	10	0	990	0	0
	2016 to 2036	2,100	2,000	1,250	20	20	0	1,300	0	0
	2016 to 2041	2,700	2,500	1,540	30	40	0	1,630	0	0
2016 to 2046	3,200	3,000	1,800	30	70	0	1,920	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-11
Municipality of Thames Centre
Population and Housing Growth, 2016 to 2046
Reference Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	12,900	12,500	4,040	70	110	120	4,330	2.98	2.89
	2006	13,500	13,100	4,220	90	130	170	4,590	2.94	2.85
	2011	13,500	13,000	4,360	80	110	180	4,720	2.86	2.75
	2016	13,600	13,200	4,530	80	160	170	4,920	2.76	2.68
Forecast	2021	14,600	14,100	4,890	80	160	170	5,290	2.76	2.67
	2026	15,800	15,300	5,550	90	170	170	5,970	2.65	2.56
	2031	16,800	16,300	6,090	90	190	170	6,540	2.57	2.49
	2036	17,400	16,800	6,420	110	190	170	6,900	2.52	2.43
	2041	18,000	17,400	6,750	120	230	170	7,270	2.48	2.39
	2046	18,500	17,900	7,020	130	260	170	7,570	2.44	2.36
Incremental	2001 to 2006	600	600	180	20	20	50	260		
	2006 to 2011	0	-100	140	-10	-20	10	130		
	2011 to 2016	100	200	170	0	50	-10	200		
	2016 to 2021	1,000	900	360	0	0	0	370	0	0
	2016 to 2026	2,200	2,100	1,020	10	10	0	1,050	0	0
	2016 to 2031	3,200	3,100	1,560	10	30	0	1,620	0	0
	2016 to 2036	3,800	3,600	1,890	30	30	0	1,980	0	0
	2016 to 2041	4,400	4,200	2,220	40	70	0	2,350	0	0
2016 to 2046	4,900	4,700	2,490	50	100	0	2,650	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-12
Municipality of Thames Centre
Population and Housing Growth, 2016 to 2046
High Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	12,910	12,470	4,040	70	110	120	4,330	2.98	2.88
	2006	13,540	13,090	4,220	90	130	170	4,590	2.95	2.85
	2011	13,450	13,000	4,360	80	110	180	4,720	2.85	2.75
	2016	13,650	13,190	4,530	80	160	170	4,920	2.77	2.68
Forecast	2021	14,720	14,230	4,950	80	160	170	5,350	2.75	2.66
	2026	16,220	15,680	5,710	90	170	170	6,130	2.65	2.56
	2031	17,410	16,820	6,310	90	190	170	6,760	2.58	2.49
	2036	18,340	17,730	6,770	120	200	170	7,260	2.53	2.44
	2041	19,030	18,390	7,160	130	240	170	7,690	2.47	2.39
	2046	19,630	18,980	7,460	140	280	170	8,040	2.44	2.36
Incremental	2001 to 2006	630	620	180	20	20	50	260		
	2006 to 2011	-90	-90	140	-10	-20	10	130		
	2011 to 2016	200	190	170	0	50	-10	200		
	2016 to 2021	1,070	1,040	420	0	0	0	430	0	0
	2016 to 2026	2,570	2,490	1,180	10	10	0	1,210	0	0
	2016 to 2031	3,760	3,630	1,780	10	30	0	1,840	0	0
	2016 to 2036	4,690	4,540	2,240	40	40	0	2,340	0	0
	2016 to 2041	5,380	5,200	2,630	50	80	0	2,770	0	0
2016 to 2046	5,980	5,790	2,930	60	120	0	3,120	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-13
Municipality of Middlesex Centre
Population and Housing Growth, 2016 to 2046
Low Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	14,800	14,200	4,570	30	120	10	4,720	3.14	3.01
	2006	16,200	15,600	4,820	290	110	20	5,230	3.10	2.98
	2011	16,900	16,500	5,410	150	90	10	5,650	2.99	2.92
	2016	17,800	17,300	5,710	140	140	0	5,990	2.97	2.89
Forecast	2021	19,300	18,700	6,250	160	140	0	6,550	2.95	2.85
	2026	20,100	19,400	6,760	190	160	0	7,110	2.83	2.73
	2031	21,100	20,400	7,250	240	210	0	7,690	2.74	2.65
	2036	22,700	22,000	7,820	330	280	0	8,430	2.69	2.61
	2041	24,600	23,800	8,460	480	370	0	9,310	2.64	2.56
	2046	26,600	25,700	9,060	630	490	0	10,180	2.61	2.52
Incremental	2001 to 2006	1,400	1,400	250	260	-10	10	510		
	2006 to 2011	700	900	590	-140	-20	-10	420		
	2011 to 2016	900	800	300	-10	50	-10	340		
	2016 to 2021	1,500	1,400	540	20	0	0	560	0	0
	2016 to 2026	2,300	2,100	1,050	50	20	0	1,120	0	0
	2016 to 2031	3,300	3,100	1,540	100	70	0	1,700	0	0
	2016 to 2036	4,900	4,700	2,110	190	140	0	2,440	0	0
	2016 to 2041	6,800	6,500	2,750	340	230	0	3,320	0	0
2016 to 2046	8,800	8,400	3,350	490	350	0	4,190	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).



Figure B-14
Municipality of Middlesex Centre
Population and Housing Growth, 2016 to 2046
Reference Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	14,800	14,200	4,570	30	120	10	4,720	3.14	3.01
	2006	16,200	15,600	4,820	290	110	20	5,230	3.10	2.98
	2011	16,900	16,500	5,410	150	90	10	5,650	2.99	2.92
	2016	17,800	17,300	5,710	140	140	0	5,990	2.97	2.89
Forecast	2021	19,600	18,900	6,350	170	140	0	6,650	2.95	2.84
	2026	22,900	22,100	7,290	220	170	0	7,680	2.98	2.88
	2031	25,500	24,700	8,210	310	250	0	8,770	2.91	2.82
	2036	27,800	26,900	8,920	440	350	0	9,700	2.87	2.77
	2041	30,200	29,200	9,660	630	470	0	10,760	2.81	2.71
	2046	32,700	31,600	10,310	810	630	0	11,750	2.78	2.69
Incremental	2001 to 2006	1,400	1,400	250	260	-10	10	510		
	2006 to 2011	700	900	590	-140	-20	-10	420		
	2011 to 2016	900	800	300	-10	50	-10	340		
	2016 to 2021	1,800	1,600	640	30	0	0	660	0	0
	2016 to 2026	5,100	4,800	1,580	80	30	0	1,690	0	0
	2016 to 2031	7,700	7,400	2,500	170	110	0	2,780	0	0
	2016 to 2036	10,000	9,600	3,210	300	210	0	3,710	0	0
	2016 to 2041	12,400	11,900	3,950	490	330	0	4,770	0	0
2016 to 2046	14,900	14,300	4,600	670	490	0	5,760	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-15
Municipality of Middlesex Centre
Population and Housing Growth, 2016 to 2046
High Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	14,800	14,240	4,570	30	120	10	4,720	3.14	3.02
	2006	16,200	15,590	4,820	290	110	20	5,230	3.10	2.98
	2011	16,900	16,490	5,410	150	90	10	5,650	2.99	2.92
	2016	17,800	17,260	5,710	140	140	0	5,990	2.97	2.88
Forecast	2021	20,080	19,400	6,440	170	140	0	6,760	2.97	2.87
	2026	23,420	22,640	7,530	230	170	0	7,930	2.95	2.85
	2031	26,670	25,770	8,560	330	260	0	9,160	2.91	2.81
	2036	29,560	28,570	9,510	490	380	0	10,390	2.85	2.75
	2041	32,900	31,800	10,380	720	530	0	11,630	2.83	2.73
	2046	35,490	34,300	11,120	930	710	0	12,760	2.78	2.69
Incremental	2001 to 2006	1,400	1,350	250	260	-10	10	510		
	2006 to 2011	700	900	590	-140	-20	-10	420		
	2011 to 2016	900	770	300	-10	50	-10	340		
	2016 to 2021	2,280	2,140	730	30	0	0	770	0	0
	2016 to 2026	5,620	5,380	1,820	90	30	0	1,940	0	0
	2016 to 2031	8,870	8,510	2,850	190	120	0	3,170	0	0
	2016 to 2036	11,760	11,310	3,800	350	240	0	4,400	0	0
	2016 to 2041	15,100	14,540	4,670	580	390	0	5,640	0	0
2016 to 2046	17,690	17,040	5,410	790	570	0	6,770	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-16
Municipality of North Middlesex
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	7,100	6,900	2,180	70	80	20	2,330	3.05	2.96
	2006	7,000	6,700	2,160	20	100	30	2,310	3.03	2.90
	2011	6,900	6,700	2,190	10	130	10	2,340	2.95	2.86
	2016	6,600	6,400	2,180	10	120	30	2,330	2.83	2.75
Forecast	2021	6,600	6,400	2,220	10	120	30	2,370	2.78	2.70
	2026	6,800	6,600	2,390	10	140	30	2,560	2.66	2.58
	2031	6,800	6,600	2,450	10	150	30	2,630	2.59	2.51
	2036	6,800	6,500	2,500	10	170	30	2,700	2.52	2.41
	2041	6,700	6,500	2,550	10	190	30	2,770	2.42	2.35
	2046	6,700	6,500	2,570	20	200	30	2,810	2.38	2.31
Incremental	2001 to 2006	-100	-200	-20	-50	20	10	-20		
	2006 to 2011	-100	0	30	-10	30	-20	30		
	2011 to 2016	-300	-300	-10	0	-10	20	-10		
	2016 to 2021	0	0	40	0	0	0	40	0	0
	2016 to 2026	200	200	210	0	20	0	230	0	0
	2016 to 2031	200	200	270	0	30	0	300	0	0
	2016 to 2036	200	100	320	0	50	0	370	0	0
	2016 to 2041	100	100	370	0	70	0	440	0	0
2016 to 2046	100	100	390	10	80	0	480	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-17
Municipality of North Middlesex
Population and Housing Growth, 2016 to 2046
Reference Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	7,100	6,900	2,180	70	80	20	2,330	3.05	2.96
	2006	7,000	6,700	2,160	20	100	30	2,310	3.03	2.90
	2011	6,900	6,700	2,190	10	130	10	2,340	2.95	2.86
	2016	6,600	6,400	2,180	10	120	30	2,330	2.83	2.75
Forecast	2021	6,600	6,400	2,230	10	120	30	2,380	2.77	2.69
	2026	7,100	6,900	2,490	10	150	30	2,680	2.65	2.57
	2031	7,200	7,000	2,610	10	180	30	2,830	2.54	2.47
	2036	7,200	6,900	2,660	20	190	30	2,890	2.49	2.39
	2041	7,100	6,900	2,710	20	220	30	2,960	2.40	2.33
	2046	7,000	6,800	2,720	20	230	30	3,000	2.33	2.27
Incremental	2001 to 2006	-100	-200	-20	-50	20	10	-20		
	2006 to 2011	-100	0	30	-10	30	-20	30		
	2011 to 2016	-300	-300	-10	0	-10	20	-10		
	2016 to 2021	0	0	50	0	0	0	50	0	0
	2016 to 2026	500	500	310	0	30	0	350	0	0
	2016 to 2031	600	600	430	0	60	0	500	0	0
	2016 to 2036	600	500	480	10	70	0	560	0	0
	2016 to 2041	500	500	530	10	100	0	630	0	0
2016 to 2046	400	400	540	10	110	0	670	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-18
Municipality of North Middlesex
Population and Housing Growth, 2016 to 2046
High Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	7,140	6,900	2,180	70	80	20	2,330	3.06	2.96
	2006	6,970	6,740	2,160	20	100	30	2,310	3.02	2.92
	2011	6,890	6,660	2,190	10	130	10	2,340	2.94	2.85
	2016	6,570	6,350	2,180	10	120	30	2,330	2.82	2.73
Forecast	2021	6,610	6,390	2,230	10	120	30	2,380	2.78	2.68
	2026	7,240	7,000	2,540	10	160	30	2,730	2.65	2.56
	2031	7,370	7,130	2,670	10	190	30	2,900	2.54	2.46
	2036	7,390	7,140	2,750	20	210	30	3,000	2.46	2.38
	2041	7,330	7,080	2,800	20	230	30	3,080	2.38	2.30
	2046	7,210	6,970	2,810	20	250	30	3,110	2.32	2.24
Incremental	2001 to 2006	-170	-160	-20	-50	20	10	-20		
	2006 to 2011	-80	-80	30	-10	30	-20	30		
	2011 to 2016	-320	-310	-10	0	-10	20	-10		
	2016 to 2021	40	40	50	0	0	0	50	0	0
	2016 to 2026	670	650	360	0	40	0	400	0	0
	2016 to 2031	800	780	490	0	70	0	570	0	0
	2016 to 2036	820	790	570	10	90	0	670	0	0
	2016 to 2041	760	730	620	10	110	0	750	0	0
2016 to 2046	640	620	630	10	130	0	780	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-19
Township of Adelaide-Metcalfe
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	3,300	3,100	940	10	20	0	960	3.44	3.23
	2006	3,200	3,100	970	10	10	0	980	3.27	3.16
	2011	3,100	3,000	1,010	10	10	0	1,020	3.04	2.94
	2016	3,100	3,000	980	0	10	0	990	3.13	3.03
Forecast	2021	3,100	3,000	1,010	0	10	0	1,020	3.04	2.94
	2026	3,300	3,200	1,100	0	10	0	1,110	2.97	2.88
	2031	3,300	3,200	1,130	0	10	0	1,150	2.87	2.78
	2036	3,300	3,200	1,170	0	20	0	1,190	2.77	2.69
	2041	3,300	3,200	1,210	0	20	0	1,230	2.68	2.60
	2046	3,300	3,200	1,240	0	20	0	1,260	2.62	2.54
Incremental	2001 to 2006	-100	0	30	0	-10	0	20		
	2006 to 2011	-100	-100	40	0	0	0	40		
	2011 to 2016	0	0	-30	-10	0	0	-30		
	2016 to 2021	0	0	30	0	0	0	30	0	0
	2016 to 2026	200	200	120	0	0	0	120	0	0
	2016 to 2031	200	200	150	0	0	0	160	0	0
	2016 to 2036	200	200	190	0	10	0	200	0	0
	2016 to 2041	200	200	230	0	10	0	240	0	0
2016 to 2046	200	200	260	0	10	0	270	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

**Figure B-20
Township of Adelaide-Metcalfe
Population and Housing Growth, 2016 to 2046
Reference Scenario**

Year	Population		Housing Units					Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
	Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴	Total Households			
Historical	2001	3,300	3,100	940	10	20	0	960	3.44	3.23
	2006	3,200	3,100	970	10	10	0	980	3.27	3.16
	2011	3,100	3,000	1,010	10	10	0	1,020	3.04	2.94
	2016	3,100	3,000	980	0	10	0	990	3.13	3.03
Forecast	2021	3,200	3,000	1,010	0	10	0	1,020	3.14	2.94
	2026	3,400	3,300	1,150	0	10	0	1,170	2.91	2.82
	2031	3,500	3,400	1,230	0	20	0	1,250	2.80	2.72
	2036	3,500	3,400	1,270	0	20	0	1,290	2.71	2.64
	2041	3,600	3,400	1,310	0	30	0	1,330	2.71	2.56
	2046	3,600	3,400	1,330	0	30	0	1,360	2.65	2.50
Incremental	2001 to 2006	-100	0	30	0	-10	0	20		
	2006 to 2011	-100	-100	40	0	0	0	40		
	2011 to 2016	0	0	-30	-10	0	0	-30		
	2016 to 2021	100	0	30	0	0	0	30	0	0
	2016 to 2026	300	300	170	0	0	0	180	0	0
	2016 to 2031	400	400	250	0	10	0	260	0	0
	2016 to 2036	400	400	290	0	10	0	300	0	0
	2016 to 2041	500	400	330	0	20	0	340	0	0
2016 to 2046	500	400	350	0	20	0	370	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-21
Township of Adelaide-Metcalfe
Population and Housing Growth, 2016 to 2046
High Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	3,260	3,150	940	10	20	0	960	3.40	3.28
	2006	3,230	3,120	970	10	10	0	980	3.30	3.18
	2011	3,130	3,030	1,010	10	10	0	1,020	3.07	2.97
	2016	3,090	2,990	980	0	10	0	990	3.12	3.02
Forecast	2021	3,170	3,070	1,020	0	10	0	1,030	3.08	2.98
	2026	3,500	3,380	1,180	0	20	0	1,200	2.92	2.82
	2031	3,610	3,490	1,270	0	20	0	1,290	2.80	2.71
	2036	3,680	3,550	1,320	0	30	0	1,350	2.73	2.63
	2041	3,690	3,570	1,370	0	30	0	1,390	2.65	2.57
	2046	3,690	3,570	1,390	0	30	0	1,420	2.60	2.51
Incremental	2001 to 2006	-30	-30	30	0	-10	0	20		
	2006 to 2011	-100	-90	40	0	0	0	40		
	2011 to 2016	-40	-40	-30	-10	0	0	-30		
	2016 to 2021	80	80	40	0	0	0	40	0	0
	2016 to 2026	410	390	200	0	10	0	210	0	0
	2016 to 2031	520	500	290	0	10	0	300	0	0
	2016 to 2036	590	560	340	0	20	0	360	0	0
	2016 to 2041	600	580	390	0	20	0	400	0	0
2016 to 2046	600	580	410	0	20	0	430	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-22
Township of Lucan Biddulph
Population and Housing Growth, 2016 to 2046
Low Scenario

	Year	Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	4,300	4,200	1,290	10	130	10	1,440	2.99	2.92
	2006	4,300	4,200	1,340	20	150	10	1,510	2.85	2.78
	2011	4,500	4,300	1,470	30	100	10	1,600	2.81	2.69
	2016	4,900	4,700	1,630	40	110	20	1,790	2.74	2.63
Forecast	2021	5,400	5,200	1,810	40	110	20	1,970	2.74	2.64
	2026	5,500	5,300	1,920	40	110	20	2,080	2.64	2.55
	2031	5,700	5,500	2,050	40	110	20	2,210	2.58	2.49
	2036	6,000	5,800	2,220	40	110	20	2,380	2.52	2.44
	2041	6,500	6,200	2,400	40	110	20	2,560	2.54	2.42
	2046	7,000	6,800	2,620	40	110	20	2,780	2.52	2.45
Incremental	2001 to 2006	0	0	50	10	20	0	70		
	2006 to 2011	200	100	130	10	-50	0	90		
	2011 to 2016	400	400	160	10	10	10	190		
	2016 to 2021	500	500	180	0	0	0	180	0	0
	2016 to 2026	600	600	290	0	0	0	290	0	0
	2016 to 2031	800	800	420	0	0	0	420	0	0
	2016 to 2036	1,100	1,100	590	0	0	0	590	0	0
	2016 to 2041	1,600	1,500	770	0	0	0	770	0	0
2016 to 2046	2,100	2,100	990	0	0	0	990	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-23
Township of Lucan Biddulph
Population and Housing Growth, 2016 to 2046
Reference Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	4,300	4,200	1,290	10	130	10	1,440	2.99	2.92
	2006	4,300	4,200	1,340	20	150	10	1,510	2.85	2.78
	2011	4,500	4,300	1,470	30	100	10	1,600	2.81	2.69
	2016	4,900	4,700	1,630	40	110	20	1,790	2.74	2.63
Forecast	2021	5,500	5,300	1,840	40	120	20	2,010	2.74	2.64
	2026	5,900	5,700	2,070	40	110	20	2,230	2.65	2.56
	2031	6,400	6,200	2,310	40	110	20	2,470	2.59	2.51
	2036	6,900	6,600	2,520	40	110	20	2,690	2.57	2.45
	2041	7,400	7,100	2,740	40	120	20	2,910	2.54	2.44
	2046	8,100	7,800	3,000	40	120	20	3,160	2.56	2.47
Incremental	2001 to 2006	0	0	50	10	20	0	70		
	2006 to 2011	200	100	130	10	-50	0	90		
	2011 to 2016	400	400	160	10	10	10	190		
	2016 to 2021	600	600	210	0	10	0	220	0	0
	2016 to 2026	1,000	1,000	440	0	0	0	440	0	0
	2016 to 2031	1,500	1,500	680	0	0	0	680	0	0
	2016 to 2036	2,000	1,900	890	0	0	0	900	0	0
	2016 to 2041	2,500	2,400	1,110	0	10	0	1,120	0	0
2016 to 2046	3,200	3,100	1,370	0	10	0	1,370	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).

Figure B-24
Township of Lucan Biddulph
Population and Housing Growth, 2016 to 2046
High Scenario

Year		Population		Housing Units				Persons Per Unit (P.P.U.) with undercount	Persons Per Unit (P.P.U.) without undercount	
		Including Census undercount ¹	Excluding Census undercount	Singles & Semi-Detached	Multiple Dwellings ²	Apartments ³	Other ⁴			Total Households
Historical	2001	4,350	4,200	1,290	10	130	10	1,440	3.02	2.92
	2006	4,330	4,190	1,340	20	150	10	1,510	2.87	2.77
	2011	4,490	4,340	1,470	30	100	10	1,600	2.81	2.71
	2016	4,860	4,700	1,630	40	110	20	1,790	2.72	2.63
Forecast	2021	5,570	5,390	1,880	40	120	20	2,040	2.73	2.64
	2026	6,060	5,860	2,130	40	110	20	2,300	2.63	2.55
	2031	6,640	6,420	2,400	40	110	20	2,570	2.58	2.50
	2036	7,320	7,080	2,690	40	120	20	2,850	2.57	2.48
	2041	7,920	7,660	2,940	40	120	20	3,110	2.55	2.46
	2046	8,710	8,410	3,240	40	120	20	3,410	2.55	2.47
Incremental	2001 to 2006	-20	-10	50	10	20	0	70		
	2006 to 2011	160	150	130	10	-50	0	90		
	2011 to 2016	370	360	160	10	10	10	190		
	2016 to 2021	710	690	250	0	10	0	250	0	0
	2016 to 2026	1,200	1,160	500	0	0	0	510	0	0
	2016 to 2031	1,780	1,720	770	0	0	0	780	0	0
	2016 to 2036	2,460	2,380	1,060	0	10	0	1,060	0	0
	2016 to 2041	3,060	2,960	1,310	0	10	0	1,320	0	0
2016 to 2046	3,850	3,710	1,610	0	10	0	1,620	0	0	

Source: Watson & Associates Economists Ltd., 2020.

¹ Census undercount estimated at approximately 3.5%. Note: Figures may not add precisely due to rounding.

² Includes townhouses and apartments in duplexes.

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

⁴ Statistics Canada defines this category as a single dwelling that is attached to another building and that does not fall into any of the other categories, such as a single dwelling attached to a non-residential structure (e.g. store or church) or occasionally to another residential structure (e.g. apartment building).



Committee of the Whole

Meeting Date: July 17, 2018
Submitted by: Stephanie Poirier, Planner, and Durk Vanderwerff, Director of Planning
SUBJECT: POPULATION PROJECTIONS FOR MIDDLESEX COUNTY

BACKGROUND:

Population Projections for Middlesex County and the local municipalities are included within the County's Official Plan and are intended to be used by the County and local municipalities to assist in managing growth and development. With the release last year of the 2016 Census population information it is timely to update the County's Projections.

This report reviews at a high-level past growth trends and provides an overview of five projection methods (Ministry of Finance, Employment Land Needs Study, Geometric, Geometric Adjusted and Cohort Survival) that have been examined. In the end, staff recommend that Council endorse a Projected Population Range, which includes low and high numbers, as being the most likely to represent the future population for Middlesex County.

ANALYSIS:

Past Growth Trends

Statistics Canada population data provides the most complete available picture of the County's population and typically Census numbers are relied upon for population projections. Table One presents the Census Population by Municipality for the past 20 years. Overall the County's population has grown by a straight line average annual growth rate of 0.8%, however the population growth has not occurred evenly across the municipalities within the County.

It is noted that the 2016 Census numbers included within Table One (and within this report generally) have been adjusted upward by 3.5% for an assumed undercount rate. Whenever a Census is undertaken some people are not counted or are otherwise missed. As such, Statistics Canada conducts postcensal coverage studies to determine

how many individuals were missed and then adjusts Census numbers. Statistics Canada has not yet released the postcensal coverage studies so, as an interim measure, a historical undercount adjustment within Ontario of 3.5% has been utilized.

Although the Census is the best available information, Staff believe that recent Census numbers do not accurately reflect the growth that is occurring within the County. For example, the 2011 Census showed a population decline for Thames Centre and the 2016 Census (before the undercount adjustment) showed a population decline for Strathroy-Caradoc whereas we know that both municipalities are experiencing growth.

While there are factors such as declining household size that can limit population expansion while still having growth in household numbers and therefore development activity, the experience 'on the ground' of rapid development in many settlement areas leaves staff to conclude that the Census numbers are not as accurate for our current population. It is also clear that the 2016 Census has not recognized the recent surge in building activity that has occurred within the County.

	Population					Change	
	1996	2001	2006	2011	2016*	# of people	average growth
Adelaide Metcalfe	3,128	3,149	3,125	3,028	3,095	-33	-0.05%
Lucan Biddulph	4,166	4,201	4,187	4,338	4,865	699	0.84%
Middlesex Centre	12,985	14,275	15,589	16,487	17,869	4,884	1.88%
Newbury	430	422	439	447	481	51	0.60%
North Middlesex	6,978	6,901	6,740	6,658	6,572	-406	-0.29%
Southwest Middlesex	6,204	6,144	5,890	5,860	5,920	-284	-0.23%
Strathroy-Caradoc	18,100	19,114	19,977	20,978	21,600	3,500	0.97%
Thames Centre	12,149	12,473	13,085	13,000	13,657	1,508	0.62%
Middlesex County	64,140	66,635	69,032	70,796	74,059	9,919	0.77%

* 2016 numbers assume a 3.5% adjustment for anticipated Census undercount

Household Size

Statistics Canada household size data by Municipality for the last 20 years is included in Table Two. The average household size or persons per unit (PPU) has steadily

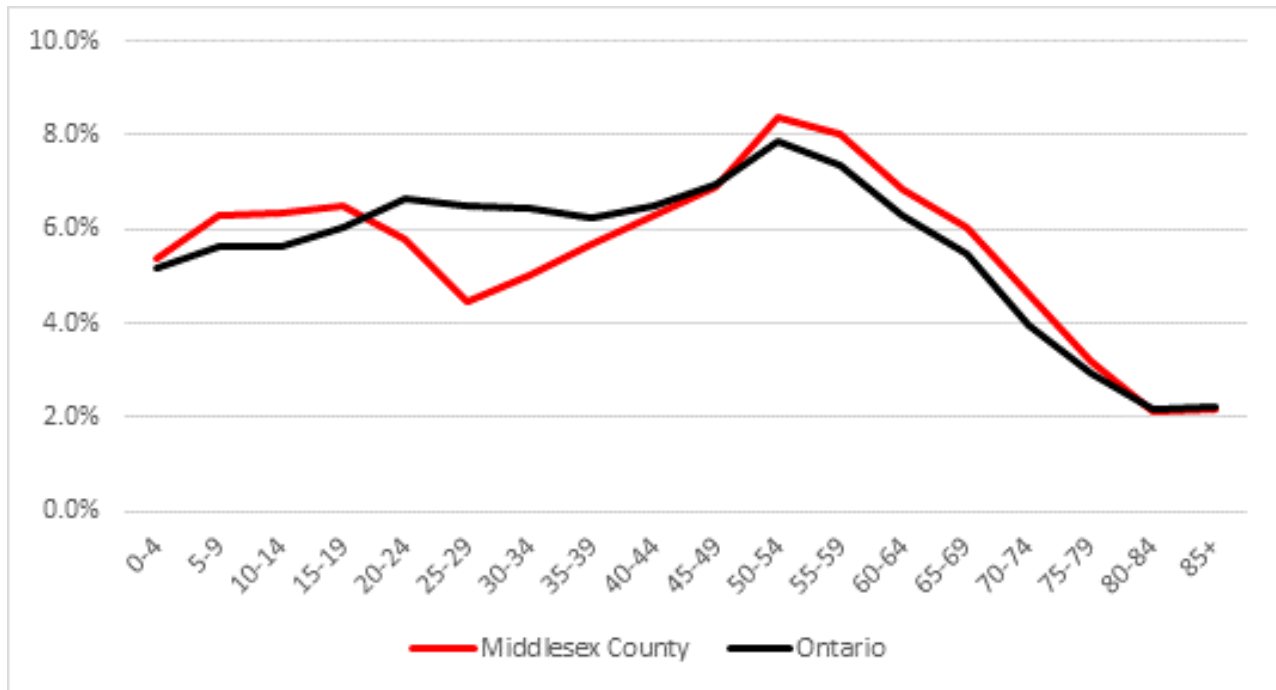
decreased across the County. This can be attributed to several factors including the aging of the County's population and overall household composition trends of less children per household and more single-person households. The County's trends are consistent with other parts of Southwestern Ontario and the Province in general which has a 2016 average PPU of 2.59. It is important to note that a declining PPU can be expected to translate into continuing demand for new dwelling construction even where a municipality is projected to have a stable population.

Table Two – Census Household Size for Middlesex County 1996 to 2016

	Average Household Size (PPU)					Change PPU
	1996	2001	2006	2011	2016	
Adelaide Metcalfe	3.2	3.1	3	3	2.9	-0.3
Lucan Biddulph	2.9	2.9	2.8	2.7	2.6	-0.3
Middlesex Centre	3.1	2.9	2.9	2.9	2.8	-0.3
Newbury	2.7	2.6	2.4	2.4	2.5	-0.2
North Middlesex	3	2.9	2.8	2.7	2.6	-0.4
Southwest Middlesex	2.8	2.7	2.6	2.5	2.4	-0.4
Strathroy-Caradoc	2.8	2.7	2.6	2.6	2.5	-0.3
Thames Centre	3	2.9	2.8	2.8	2.7	-0.3
Middlesex County					2.63	

Figure One graphically shows the 2016 Census Population Distribution for Middlesex County compared to Ontario. In general, compared to Ontario, Middlesex has less young adults and a somewhat more senior population. Middlesex County as a whole also has a smaller working-age population, especially within the 20 to 40 year-olds, which is not inconsistent with other Southwestern Ontario Counties.

Figure One – 2016 Census Population Distribution for Middlesex County and Ontario



Introduction to Projections

Staff have examined five projection methods (Ministry of Finance, Employment Land Needs Study, Geometric, Geometric Adjusted and Cohort Survival) for Middlesex County and each is briefly addressed below. It is important to note that population projections are intended to be approximate forecasts that demonstrate general trends and are not to be interpreted as exact targets or as predictions of what will occur – this is especially true for municipalities with smaller populations.

Projections are based on certain assumptions that can be significantly impacted by external factors such as declining birth rates, changes in migration patterns, the aging of the population, increases in life expectancy, and differences in commuting patterns. While such changes generally reflect broader Provincial or National trends, they do have an impact on local populations.

The recent upward trend in building and development within the Middlesex – London region may signal increasing population growth as a result of changing economic factors that is not reflective of past population growth rates and which may not show-up in the Census for another five or ten years. Planning staff believe that we may be in a period of change where we are experiencing greater development activity than the historic numbers show.

It is also recognized that population growth within Middlesex is not occurring evenly across the County and therefore depending on the projection method utilized some may

show a decline in population for some municipalities. In the past, whenever projections have been undertaken there has been concern raised that a declining projection could impact a municipality's ability to justify development proposals, to attract economic development and to justify the retention of educational facilities.

Cohort-Survival Projection

The Economic Development Department utilizes a consultant (Manifold Data Mining Inc.) to provide population data for use within economic profiles and various promotional publications. Manifold recently completed a cohort-survival projection for Middlesex which is summarized in Table Three.

A cohort survival analysis uses a computer model to age the population of a municipality one year at a time using age specific fertility, mortality and migration rates. In other words, the future population = current population + births - deaths + in-migration – out-migration. The analysis was based on a 'bottom up' cohort survival method whereby population forecasts were completed for each local municipality. The County population therefore simply represents an aggregation of these individual populations.

After reviewing the cohort survival projection, planning staff are of the opinion that while this analysis does what it is supposed to do – ages the existing population – it does not sufficiently account for the in-migration that appears to be occurring within the County.

In other words, the cohort survival analysis ages the County's existing population and includes some in-migration of people based upon historic migration rates, however it does not appear to capture the recently increasing in-migration of people from the region to the County that is occurring, especially within Lucan Biddulph, Middlesex Centre, Thames Centre and Strathroy-Caradoc.

As such, planning staff consider the Cohort Survival Method numbers to be low but nevertheless useful because they are broken down by age cohorts (available but not included in this report).

Table Three – Cohort-Survival Projections for Middlesex County 2016 to 2036

	Population					Change	
	2017*	2021	2026	2031	2036	# of people 2017 to 2036	average growth
Adelaide Metcalfe	3,109	3,086	3,056	3,027	2,998	-111	-0.18%
Lucan Biddulph	5,025	5,402	5,871	6,378	6,931	1,906	1.90%
Middlesex Centre	18,230	19,000	19,921	20,886	21,899	3,669	1.05%
Newbury	488	498	509	520	531	43	0.46%
North Middlesex	6,592	6,406	6,179	5,960	5,749	-843	-0.67%
Southwest Middlesex	5,948	5,865	5,760	5,658	5,557	-391	-0.34%
Strathroy-Caradoc	21,706	21,648	21,563	21,478	21,394	-312	-0.07%
Thames Centre	13,794	13,991	14,226	14,466	14,710	916	0.34%
Middlesex County	74,892	75,896	77,085	78,373	79,769	4,877	0.34%

*An adjusted 2017 base population was utilized instead of a 2016 Census population

Employment Land Needs Assessment Projection

The County completed an Employment Land Needs Study (Millier, Dickinson, Blais 2012) which undertook a high-level population and employment forecast based upon a housing forecast model. This study examined anticipated growth and concluded that a projected population and employment growth rate of approximately 0.9% annually would be likely. It is noted that the Study only projected to 2031 so for the sake of consistency within this report the numbers were calculated for 2036 using a straight-line extrapolation.

A summary of the Employment Land Needs Study projection is included in Table Four. The Employment Land Needs Study projections are considered by staff to be reasonably reflective of both the historic population growth and closer (than the cohort survival analysis) to the amount of development that is currently being experienced within the County.

Table Four – Employment Land Needs Assessment Projections for Middlesex County 2016 to 2036

	Population					Change	
	2016	2021	2026	2031	2036*	# of people 2016 to 2036	average growth
Adelaide Metcalfe	3,095	3,050	3,080	3,120	3,147	52	0.18%
Lucan Biddulph	4,865	4,770	5,030	5,320	5,632	767	1.15%
Middlesex Centre	17,866	19,310	20,750	22,210	24,007	6,141	1.57%
Newbury	482	470	490	500	515	33	0.58%
North Middlesex	6,574	6,800	6,900	7,020	7,125	551	0.30%
Southwest Middlesex	5,923	5,920	5,980	6,050	6,109	186	0.19%
Strathroy- Caradoc	21,597	22,610	23,550	24,580	25,660	4,063	0.86%
Thames Centre	13,653	13,960	14,460	14,970	15,534	1,881	0.74%
Middlesex County	74,059	76,890	80,240	83,770	87,729	13,670	0.87%

*2036 numbers are an extrapolation of the ELNS numbers using a straight-line growth rate

Geometric Projection Technique

A geometric projection technique was used to project growth based upon a constant growth rate that was derived from the historic growth rates of each municipality. Essentially, this technique estimates the future population by assuming that the trends of the past twenty years will continue. Although past trends do not always continue without change, they generally provide a reasonable forecast of the future. Table Five is a summary of the geometric projection technique.

Table Five - Geometric Projection for Middlesex County 2016 to 2036

	Population					# of people	
	2016	2021	2026	2031	2036	# of people 2016 to 2036	average growth
Adelaide Metcalfe	3,095	3,086	3,078	3,070	3,062	-33	-0.05%
Lucan Biddulph	4,865	5,057	5,257	5,464	5,680	816	0.84%
Middlesex Centre	17,869	19,354	20,962	22,704	24,591	6,721	1.88%
Newbury	481	495	509	524	539	57	0.60%
North Middlesex	6,572	6,475	6,378	6,283	6,190	-382	-0.29%
Southwest Middlesex	5,920	5,851	5,783	5,716	5,649	-271	-0.23%
Strathroy- Caradoc	21,600	22,577	23,597	24,663	25,778	4,177	0.97%
Thames Centre	13,657	14,062	14,480	14,909	15,352	1,695	0.62%
Middlesex County	74,059	76,957	80,044	83,334	86,840	12,781	0.77%

The geometric projection technique is intended to reflect the growth experienced over the last 20 years. This does however result in some municipalities projected to have a declining population. In order to adjust for this, Table Six is an update of the geometric projection technique that sets an assumed minimum threshold of 0.15% average annual increase for all municipalities.

This small adjustment would result in projected positive growth for all municipalities and would not significantly increase the overall projected population for the County. Planning staff prefer the growth adjusted geometric projection technique (over the non-growth adjusted technique) as it provides a modest positive projection for all municipalities.

Table Six - Geometric Projection for Middlesex County with Growth Adjustment 2016 to 2036

	Population					# of people	
	2016	2021	2026	2031	2036	# of people 2016 to 2036	average growth
Adelaide Metcalfe	3,095	3,118	3,141	3,165	3,189	94	0.15%
Lucan Biddulph	4,865	5,057	5,257	5,464	5,680	816	0.84%
Middlesex Centre	17,869	19,354	20,962	22,704	24,591	6,721	1.88%
Newbury	481	495	509	524	539	57	0.60%
North Middlesex	6,572	6,622	6,672	6,722	6,772	200	0.15%
Southwest Middlesex	5,920	5,965	6,010	6,055	6,100	180	0.15%
Strathroy- Caradoc	21,600	22,577	23,597	24,663	25,778	4,177	0.97%
Thames Centre	13,657	14,062	14,480	14,909	15,352	1,695	0.62%
Middlesex County	74,059	77,249	80,627	84,206	88,001	13,941	0.94%

Ontario Ministry of Finance Projections

The Ontario Ministry of Finance undertook population projections for the Province in 2011 and updated those numbers last year to reflect the 2016 Census. The Ministry of Finance numbers are for the Census Division which includes Middlesex County with the City of London and also does not provide a breakdown by local municipality.

In order to split out the County's population from the City of London, the historic percentage of the County's population within the Census Division was examined. Over the past 20-years Middlesex has represented approximately 16 percent of the Census Division and therefore that same split of population was projected forward.

To further break down the Ontario Ministry of Finance projections for each local municipality, a straight-line growth rate was utilized where each municipality's share of the County population was calculated based upon their percentage of the total population. This was undertaken to recognize that growth within the County is not occurring at the same rate within all municipalities such that the percentage of each municipality's share of the population does not remain constant.

Table Seven is a summary of the calculated Ministry of Finance Population Projections. Overall, the Ministry of Finance numbers are the highest of the projection techniques examined and, based upon the local municipal allocation method utilized, provides a positive projection for each municipality.

Table Seven – Calculated Ministry of Finance Population Projections for Middlesex County 2016 to 2036

	Population					Change	
	2016	2021	2026	2031	2036	# of people 2016 to 2036	average growth
Adelaide Metcalfe	3095	3284	3309	3317	3303	208	0.34%
Lucan Biddulph	4865	5378	5648	5901	6124	1259	1.29%
Middlesex Centre	17869	20430	22324	24262	26197	8328	2.33%
Newbury	481	523	543	561	575	94	0.98%
North Middlesex	6572	6869	6834	6763	6648	76	0.06%
Southwest Middlesex	5920	6191	6177	6129	6042	122	0.10%
Strathroy-Caradoc	21600	23900	25218	26463	27590	5989	1.39%
Thames Centre	13657	14825	15397	15904	16321	2664	0.98%
Middlesex County	74,059	81,400	85,450	89,300	92,800	18741	1.27%

*larger increase 2016 to 2021 due to Provincial 2016 base being higher than Census 2016 numbers

Projected Household Size

As noted above, the average household size / persons per unit (PPU) has steadily decreased across the County. Using a straight-line projection, it is anticipated that the PPU will continue to decline within the County over the next twenty-years such that it is projected to fall to 2.3 PPU by 2036. This is in-line with Provincial and nearby municipal projections. Table Eight is a summary of the County-wide projected PPU.

Table Eight - Projected Household Size (PPU) for Middlesex County 2016 to 2036

2016	2021	2026	2031	2036
2.63	2.55	2.47	2.38	2.30

Conclusion

Five projection methods were examined in support of this report including the Ministry of Finance, Employment Land Needs Study, Geometric, Geometric Adjusted and Cohort Survival techniques. Table Nine summarizes the various projected populations for 2036 by municipality.

Table Nine – Summary of Population Projections for Middlesex County 2016 to 2036

	2016	2036				
	Census	Cohort	ELNS	Geometric Base	Geometric Adjusted	Provincial
Adelaide Metcalfe	3,095	2,998	3,147	3,062	3,189	3,303
Lucan Biddulph	4,865	6,931	5,632	5,680	5,680	6,124
Middlesex Centre	17,866	21,899	24,007	24,591	24,591	26,197
Newbury	482	531	515	539	539	575
North Middlesex	6,574	5,749	7,125	6,190	6,772	6,648
Southwest Middlesex	5,923	5,557	6,109	5,649	6,100	6,042
Strathroy-Caradoc	21,597	21,394	25,660	25,778	25,778	27,590
Thames Centre	13,653	14,710	15,534	15,352	15,352	16,321
Middlesex County	74,059	79,769	87,729	86,840	88,001	92,800

After reviewing the various projection techniques, planning staff would recommend that a ranged approach to the projections be used for planning purposes. The low population projection could be based upon the Geometric Projection with Growth Adjustment and the high population projection could be based upon the Calculated Ministry of Finance Population Projections.

The ranged approach would provide the County and the local municipalities with some flexibility to select projections that suit local purposes while maintaining positive projections for all municipalities. Table Ten summarizes the resultant Population Projection Range for 2016 to 2036.

Table Ten - Middlesex County Projected Population Range 2016 to 2036

	Population									Change			
	2016	2021		2026		2031		2036		# of people 2016 to 2036		Average Growth	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Adelaide Metcalfe	3,095	3,120	3280	3,140	3310	3,170	3320	3,190	3300	100	210	0.15%	0.34%
Lucan Biddulph	4,865	5,060	5380	5,260	5650	5,460	5900	5,680	6120	820	1,260	0.84%	1.29%
Middlesex Centre	17,869	19,350	20430	20,960	22320	22,700	24260	24,590	26200	6,720	8,330	1.88%	2.33%
Newbury	481	500	520	510	540	520	560	540	580	60	100	0.60%	0.98%
North Middlesex	6,572	6,620	6870	6,670	6830	6,720	6760	6,770	6650	200	80	0.15%	0.06%
Southwest Middlesex	5,920	5,960	6190	6,010	6180	6,050	6130	6,100	6040	180	120	0.15%	0.10%
Strathroy-Caradoc	21,600	22,580	23900	23,600	25220	24,660	26460	25,780	27590	4,180	5,990	0.97%	1.39%
Thames Centre	13,657	14,060	14820	14,480	15400	14,910	15900	15,350	16320	1,690	2,660	0.62%	0.98%
Middlesex County	74,059	77,250	81400	80,630	85450	84,210	89300	88,000	92800	13,940	18,740	0.94%	1.27%

Building upon the Projected Population Range, the anticipated number of housing units as a result of the anticipated population growth can be estimated by taking the Projected Population from Table Ten and dividing by the Projected Household Size PPU from Table Eight. The results are summarized in Table Eleven. It is noted that the forms that the households will take (single-detached, attached, apartments, etc) will vary from municipality to municipality.

Table Eleven - Middlesex County Household Projection Range 2016 to 2036

	Households									Change	
	2016	2021		2026		2031		2036		# of households 2016 to 2036	
		Low	High	Low	High	Low	High	Low	High	Low	High
Adelaide Metcalfe	1045	1220	1290	1270	1340	1330	1390	1390	1430	345	385
Lucan Biddulph	1837	1980	2110	2130	2290	2290	2480	2470	2660	633	823
Middlesex Centre	6139	7590	8010	8490	9040	9540	10190	10690	11390	4551	5251
Newbury	184	200	200	210	220	220	240	230	250	46	66
North Middlesex	2399	2600	2690	2700	2770	2820	2840	2940	2890	541	491
Southwest Middlesex	2505	2340	2430	2430	2500	2540	2580	2650	2630	145	125
Strathroy-Caradoc	8455	8850	9370	9550	10210	10360	11120	11210	12000	2755	3545
Thames Centre	5162	5510	5810	5860	6230	6260	6680	6670	7100	1508	1938
Middlesex County	27726	30290	31910	32640	34600	35360	37520	38250	40350	10524	12624

In summary, it is recommended that Council endorse a Projected Population Range and a Household Projection Range as being the most likely to represent the future population for Middlesex County and that they be included during the consultation phase of a future amendment to the County Official Plan.

Finally, it is recognized that the projections should be reviewed again in a couple of years to evaluate if the recent upswing in development continues and therefore requires an adjustment to the anticipated population.

RECOMMENDATION:

That the ‘Middlesex County Household Projected Population Range 2016 to 2036’ and the ‘Middlesex County Household Projection Range 2016 to 2036’ be selected as the growth scenario that is most likely to occur over the 20-year planning horizon and that this be included in the draft amendment to the County Official Plan for the purposes of consultation.

Table Ten - Middlesex County Projected Population Range 2016 to 2036

	Population									Change			
	2016	2021		2026		2031		2036		# of people 2016 to 2036		Average Growth	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Adelaide Metcalfe	3,095	3,120	3280	3,140	3310	3,170	3320	3,190	3300	100	210	0.15%	0.34%
Lucan Biddulph	4,865	5,060	5380	5,260	5650	5,460	5900	5,680	6120	820	1,260	0.84%	1.29%
Middlesex Centre	17,869	19,350	20430	20,960	22320	22,700	24260	24,590	26200	6,720	8,330	1.88%	2.33%
Newbury	481	500	520	510	540	520	560	540	580	60	100	0.60%	0.98%
North Middlesex	6,572	6,620	6870	6,670	6830	6,720	6760	6,770	6650	200	80	0.15%	0.06%
Southwest Middlesex	5,920	5,960	6190	6,010	6180	6,050	6130	6,100	6040	180	120	0.15%	0.10%
Strathroy-Caradoc	21,600	22,580	23900	23,600	25220	24,660	26460	25,780	27590	4,180	5,990	0.97%	1.39%
Thames Centre	13,657	14,060	14820	14,480	15400	14,910	15900	15,350	16320	1,690	2,660	0.62%	0.98%
Middlesex County	74,059	77,250	81400	80,630	85450	84,210	89300	88,000	92800	13,940	18,740	0.94%	1.27%

Table Eleven - Middlesex County Household Projection Range 2016 to 2036

	Households									Change	
	2016	2021		2026		2031		2036		# of households 2016 to 2036	
		Low	High	Low	High	Low	High	Low	High	Low	High
Adelaide Metcalfe	1045	1220	1290	1270	1340	1330	1390	1390	1430	345	385
Lucan Biddulph	1837	1980	2110	2130	2290	2290	2480	2470	2660	633	823
Middlesex Centre	6139	7590	8010	8490	9040	9540	10190	10690	11390	4551	5251
Newbury	184	200	200	210	220	220	240	230	250	46	66
North Middlesex	2399	2600	2690	2700	2770	2820	2840	2940	2890	541	491
Southwest Middlesex	2505	2340	2430	2430	2500	2540	2580	2650	2630	145	125
Strathroy-Caradoc	8455	8850	9370	9550	10210	10360	11120	11210	12000	2755	3545
Thames Centre	5162	5510	5810	5860	6230	6260	6680	6670	7100	1508	1938
Middlesex County	27726	30290	31910	32640	34600	35360	37520	38250	40350	10524	12624