

Niagara Region Growth Scenario Analysis, 2018 to 2041

October 2019



CANADIAN CENTRE FOR
ECONOMIC ANALYSIS

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1.0 INTRODUCTION

1.1 OBJECTIVES

As a follow-on study to the Niagara Region Housing Market Analysis, this study provides forecasts of Niagara Region's future housing stock up to the year 2041 under different growth scenarios. These scenarios are designed to present the implications of pursuing differing growth trends over the coming two decades for the population, housing stock and local economic development.

Growth scenarios are used to project the characteristics of Niagara Region's population and housing stock up to a defined planning horizon under different construction rates, including a baseline that represents the Region's status quo growth to determine the risks, benefits and potential pressures the Region could face under alternative growth paths. The results are intended to support evidence-based policy-making that considers the consequences of these different paths.

This growth scenario analysis was conducted to quantify the local socio-economic impacts of maintaining the current growth rate ("status quo growth"), growing at a slower pace than the status quo ("slow growth"), or alternatively, at a rate that will lead to the achievement of the population targets generated by the Municipal Comprehensive Review¹ ("target growth"). The findings of this analysis and their implications for Niagara Region are presented in this report.

1.2 METHODOLOGY

The growth scenarios were built on the basis of historical construction rates as measured by CMHC completion rates at the local municipal level². More detail on historical construction rates at the local municipal level can be found in Appendix 0. The three scenarios considered are as follows:

- Status Quo Growth – maintains the average construction rates seen in Niagara Region over the last five years.
- Slow Growth – is the average construction rate over the last five years less two standard deviations, with a minimum threshold equal to half the average.
- Target Growth – is the growth required to achieve the number of dwellings needed to house the target population based on the MCR "strategic growth". The split of build types or density mix in new residential construction in Niagara Region as a whole³ under target growth was defined as follows: 30% single-detached houses; 40% middle-density (of which 25% is semi-detached housing and 75% is row housing) and 30% apartments.

¹ A municipal comprehensive review (MCR) is a new official plan or official plan amendment initiated by an upper- or single-tier municipality under section 26 of the Planning Act that comprehensively applies the policies and schedules of the Provincial Growth Plan.

² Completion rates were not available for West Lincoln and were therefore estimated.

³ At the local municipal level, the density mix was allowed to vary in accordance with historical trends, e.g. a larger share of the higher-density buildings in the Region were allocated to the cities of St. Catharines, Niagara Falls and Welland.

2.0 GROWTH SCENARIO ANALYSIS

2.1 HOUSING STOCK

Currently, Niagara Region's housing stock primarily consists of low-density dwelling types, with single-detached homes as the most common dwelling type, followed by low-rise apartments and row houses. The composition of Niagara Region's housing stock by dwelling type is presented in Table 1. The number of additional units to be constructed in order to hit target growth by 2041 in 5-year increments (with the exception of the first 2018-2021 period) is given in Table 2.

Table 1 Housing stock by dwelling type, 2016

| Dwelling Type | Number of Dwellings | Percentage of Total Stock |
|-----------------------------|---------------------|---------------------------|
| Single-detached | 126,208 | 68% |
| Semi-detached | 9,734 | 5% |
| Duplex Apartment | 6,050 | 3% |
| Row house | 13,701 | 7% |
| Apartment 5 stories or less | 19,975 | 11% |
| Apartment over 5 stories | 9,864 | 5% |
| Other | 486 | 0% |
| Total | 186,018 | 100% |

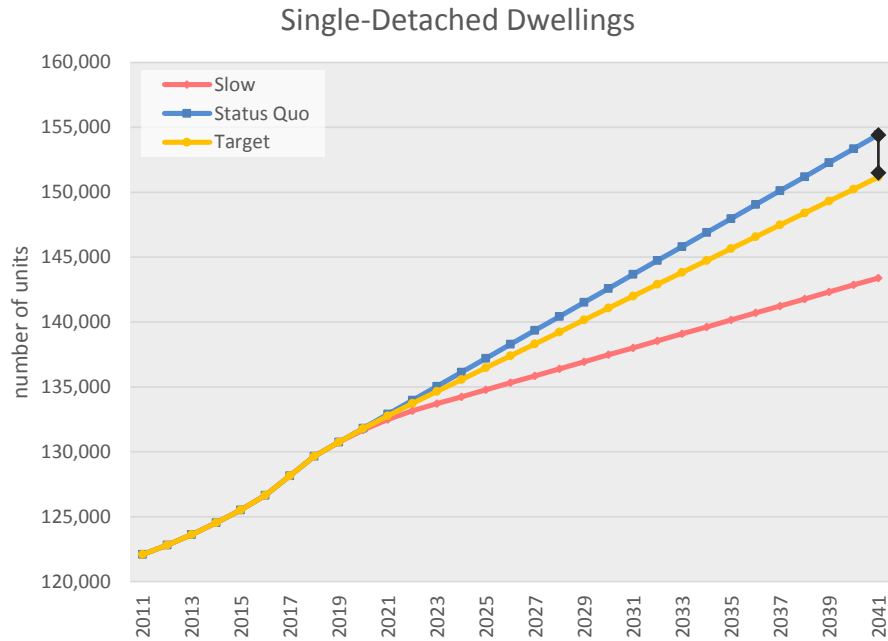
Table 2 Additional units required to reach target growth, 2018-2041

| | 2018-2021 | 2022-2026 | 2027-2031 | 2032-2036 | 2037-2041 | 2018-2041 Total |
|---------------|--------------|---------------|---------------|---------------|---------------|-----------------|
| Single | 3,110 | 4,625 | 4,584 | 4,586 | 4,586 | 21,491 |
| Semi-Detached | 463 | 1,486 | 1,535 | 1,537 | 1,535 | 6,556 |
| Row | 1,720 | 4,465 | 4,578 | 4,578 | 4,578 | 19,919 |
| Apartment | 1,162 | 4,408 | 4,585 | 4,584 | 4,586 | 19,325 |
| Total | 6,455 | 14,984 | 15,282 | 15,285 | 15,285 | 67,291 |

There is a greater share of medium- and higher-density dwellings in the target mix of dwellings defined by Niagara Region compared with the share in the current housing stock. As evidenced by the completion rates of the last decade, the preference for building single-detached housing continues. Figure 1 shows that if trends were to persist, there could be almost 3,200 more single-detached dwellings than would be required to hit target growth by 2041.⁴ However, under a slow growth scenario, there could be almost 7,800 fewer single-detached dwellings than required by the target in 2041.

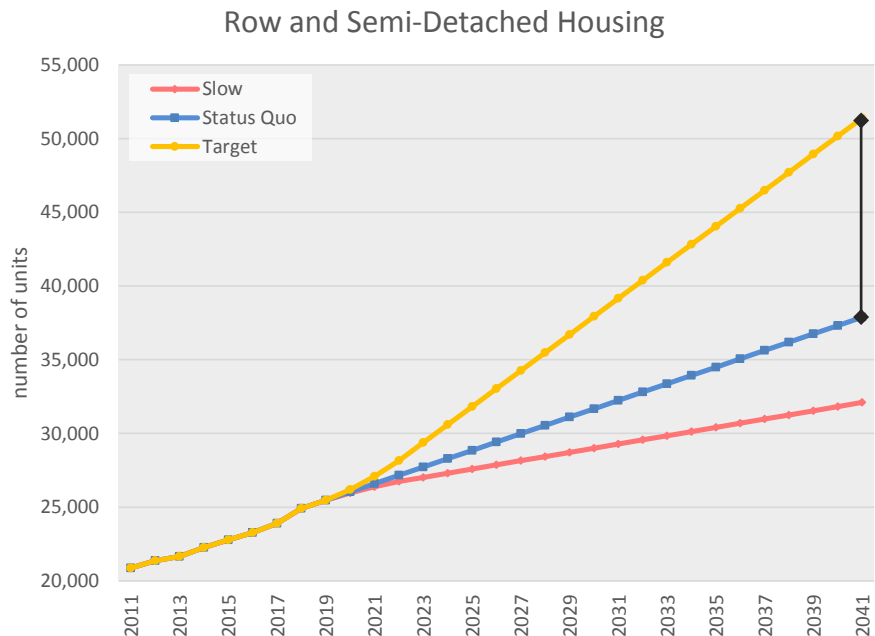
⁴ Under the given set of target assumptions.

Figure 1 Single-detached housing stock, historical and scenario projections



In order to achieve the target number and mix of dwellings, the construction rates for apartments, semi-detached and row housing will have to increase considerably from their historical rates. This can be seen in the size of the gap (represented by a black line segment) between the line representing status quo growth and the one representing target growth in Figure 2 and Figure 3, which represent the stock of medium-density and high-density dwelling, respectively, under each growth scenario.

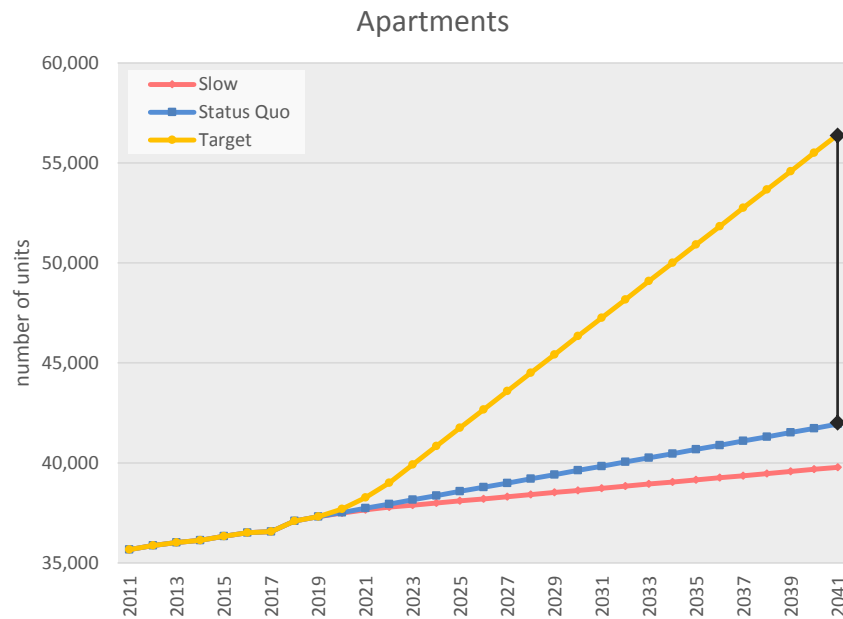
Figure 2 Row and semi-detached housing stock, historical and scenario projections



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If the Region is to follow a slow growth trend, the gap between the number of row- and semi-detached dwellings and the target number could widen to 19,300 units in 2041. For apartments, the gap between the number of units in a slow growth scenario by 2041 and the target could reach 16,700. If current trends persist, the size of the semi-detached and row housing gap could be 13,500 units and the apartment gap could be 14,500 units.

Figure 3 Apartment housing stock, historical and scenario projections



To increase today's supply of apartments to the target growth level would require building an additional 19,115 units total or 870 units annually. To put this number in context, this would be equivalent to building, on average:

- Between eight and nine 100-unit apartment buildings a year; or
- Fifteen 60-unit apartment buildings a year; or
- Twenty-five 35-unit buildings a year.

At the local level, some smaller municipalities are already overshooting their growth targets for all housing types combined due to the high level of single-detached housing construction activity. Only one local municipality is building semi-detached and row housing at a rate exceeding that required to hit the target level by 2041, and the rate of apartment construction is well under the target growth rate in all municipalities.

2.2 HOUSED POPULATION

Different housing types can accommodate different household configurations (see Table 3). For example, a single person can comfortably live in a bachelor or one-bedroom apartment, while a couple with children or a lone-parent household will require a dwelling with at least two bedrooms. Housing types tend to

correlate with dwelling size and the number of bedrooms. For instance, although it is technically possible to build a one-bedroom single-detached house, it is much more common for these dwellings to have at least three bedrooms. On the other hand, apartment buildings are generally built to accommodate smaller household sizes. Middle-density type housing, such as semi-detached and row housing, tend to fall somewhere in between and can accommodate a variety of household types. For these reasons, the housing stock that is built in Niagara over the next two decades will influence the type of population that area attracts and retains.

Table 3 Suitable dwelling size by household type

| Household Composition | Suitable Housing |
|---------------------------|-----------------------|
| Single-Person Households | Bachelor or 1 bedroom |
| Lone-Parent Households | 2 or more bedrooms |
| Couples without Children* | 1 bedroom |
| Couples with Children | 2 or more bedrooms |

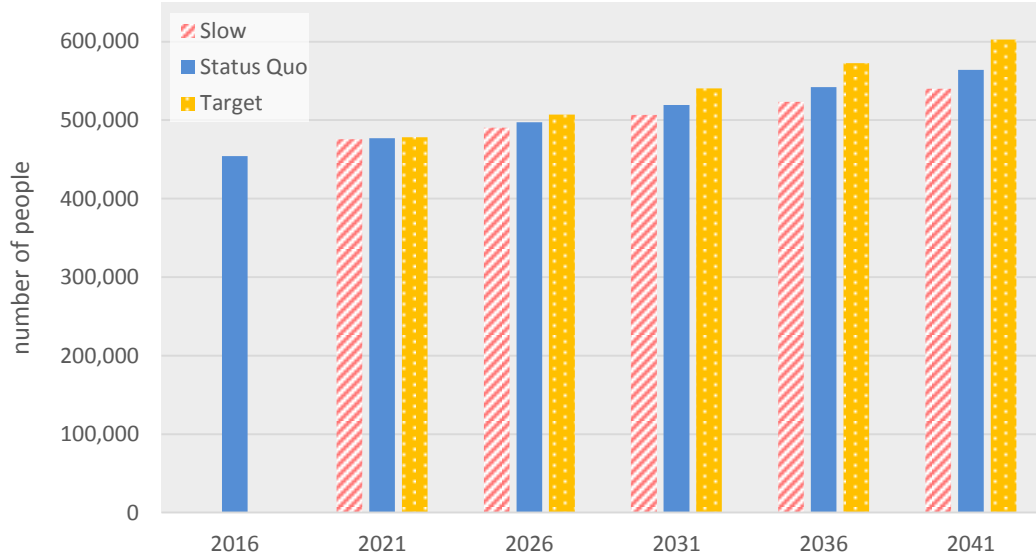
Given that the model used in this analysis takes into account household formation and migration patterns both in and outside of Niagara Region, this analysis can reveal the likely characteristics of households in Niagara Region under different growth scenarios. Using historical demographic data, additional characteristics such as age, occupations and incomes can also be inferred. The converse is also true; scenario analyses can reveal the characteristics of people and households that may not be able to live in Niagara Region in the future, due to the constraints imposed by the number and type of dwellings available.

2.2.1 TOTAL POPULATION

Under the target growth scenario, Niagara Region’s population could reach 602,700⁵ by 2041 (which is equal to 256,800 households). The target represents a population growth of 33% over the current population (38% household growth). The total population that can be achieved under different growth scenarios is presented in Figure 4.

⁵ The target scenario reaches the target number of dwellings defined in the MCR for Niagara Region by 2041. Due to different modelling assumptions regarding the rate of household formation and household sizes, the population projection in the target scenario differs slightly from the Growth Plan target projection of 610,000.

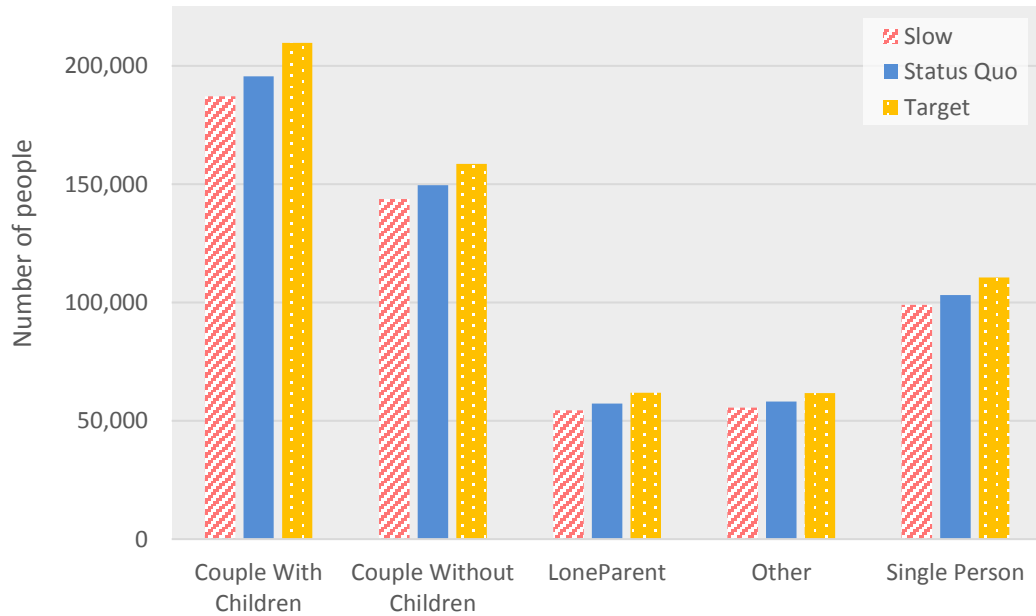
Figure 4 Total population growth, 2016-2041



If Niagara were to follow a slow growth trajectory it would land 62,600 people under the target scenario population. At status quo, would land 38,600 under target, which is slightly larger than the combined population of Port Colborne and Thorold in 2016, for reference.

2.2.2 POPULATION CHARACTERISTICS

Figure 5 Population by household type, 2041

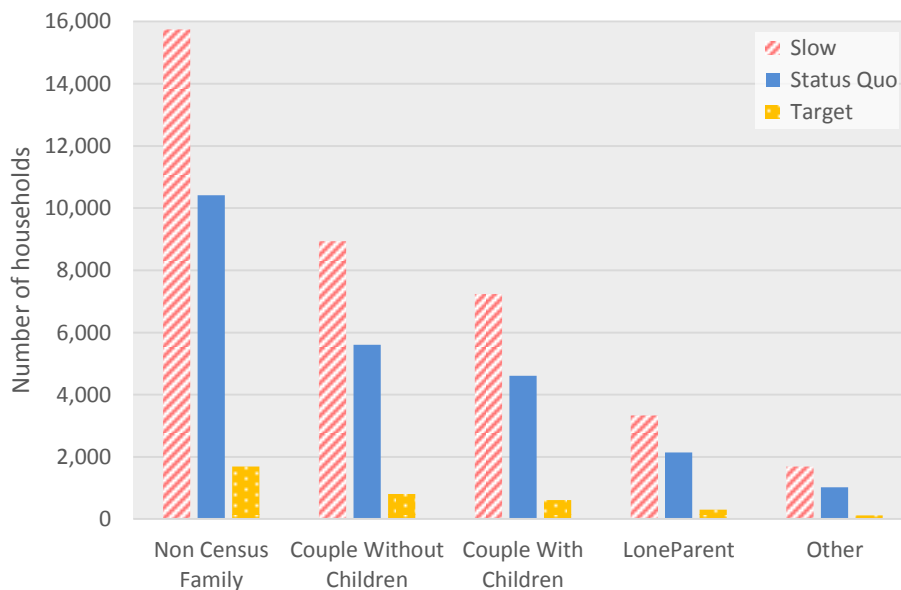


Under slow and status quo growth, there are far fewer single-person households than under target growth. At 17,100 fewer households in 2041 (20% lower than target growth) in the slow growth scenario

than in the target scenario, the difference is the largest for single-person households than for any other type of household. In the status quo scenario, there could be 10,500 fewer single-person households in 2041 than in the target scenario (12% lower). However, in terms of the number of people, the largest difference is in members of couple with children households, since these consist of three or more individuals. In the slow growth scenario, there could be 22,600 fewer people in these household types in 2041 than in the target scenario (11% lower). Comparatively, in the status quo growth scenario, there would be 14,000 fewer household members of this type than in the target (7% lower).

Looking to the future, it is also helpful to consider the demand pressures from outside Niagara Region. Depending on the its future housing stock, Niagara Region may not be able to accommodate all households who would like to live in the Region, which would put pressure on local housing prices and rents. Under all growth scenarios, unmet demand would consist primarily of single-person households, followed by couples without children and couples with children, as shown in Figure 6 (note that couples with and without children make up more people in total than the single-person households). Unmet demand could reach almost 37,000 households under the slow growth scenario or 24,000 households under status quo growth.

Figure 6 Unmet demand by household type, 2041

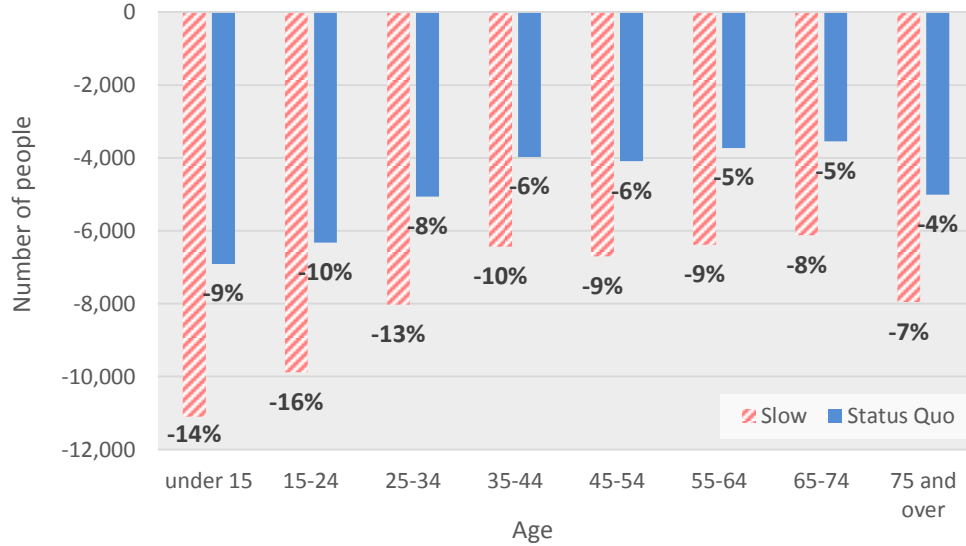


Similarly, the rate of growth can affect the future age composition of the population of Niagara Region. Slower growth tends to skew the population older. The difference between the number of people in each age cohort by 2041 in the slow growth and status quo scenarios compared to the target scenario is shown in Figure 7, along with the percentage by which each cohort’s size is smaller than the target. This shows that a slower growth rate would precipitate the demographic aging of the population. Under the status quo and slow growth scenarios, there is a greater difference in the number of people fewer in the under 25 age category than in any other age group compared with the target growth scenario. Specifically, under slow growth, there could be 14% fewer people aged 15 and under and 16% fewer people between the

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ages of 15 and 24 than in the 2041 target population. Under status quo growth, there could be 9% fewer people aged 15 and under and 10% fewer people aged 15 to 24 than in the target population.

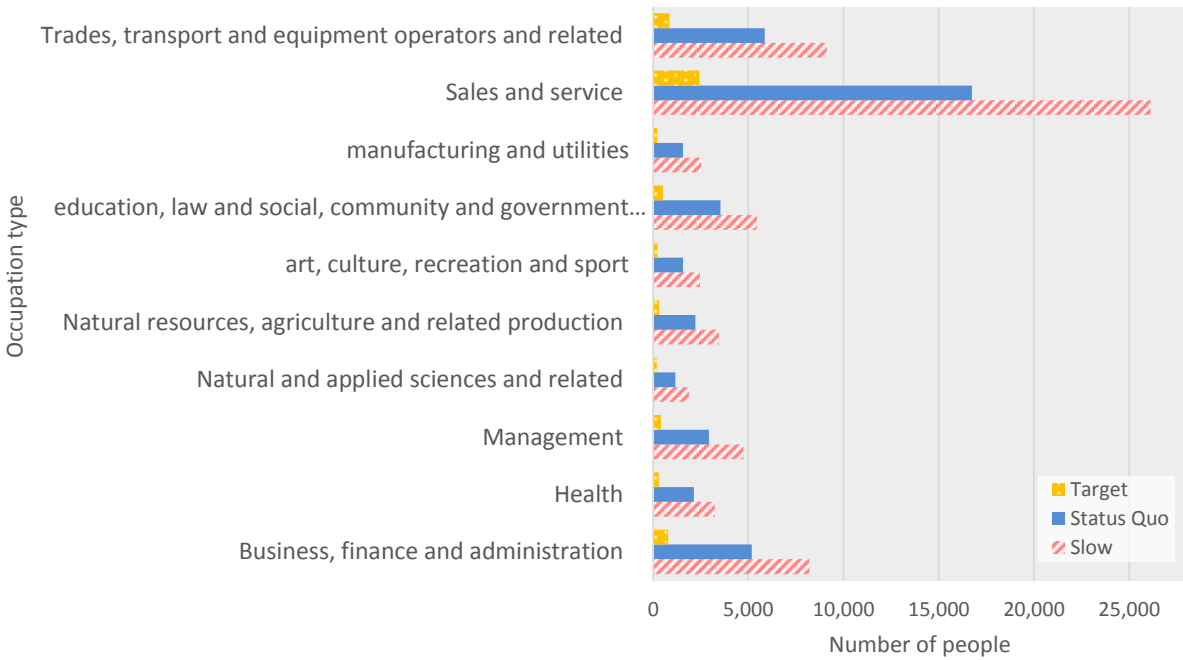
Figure 7 Difference in population compared to target scenario by number and percentage, 2041



2.2.3 INCOMES AND OCCUPATIONS OF THE HOUSED POPULATION

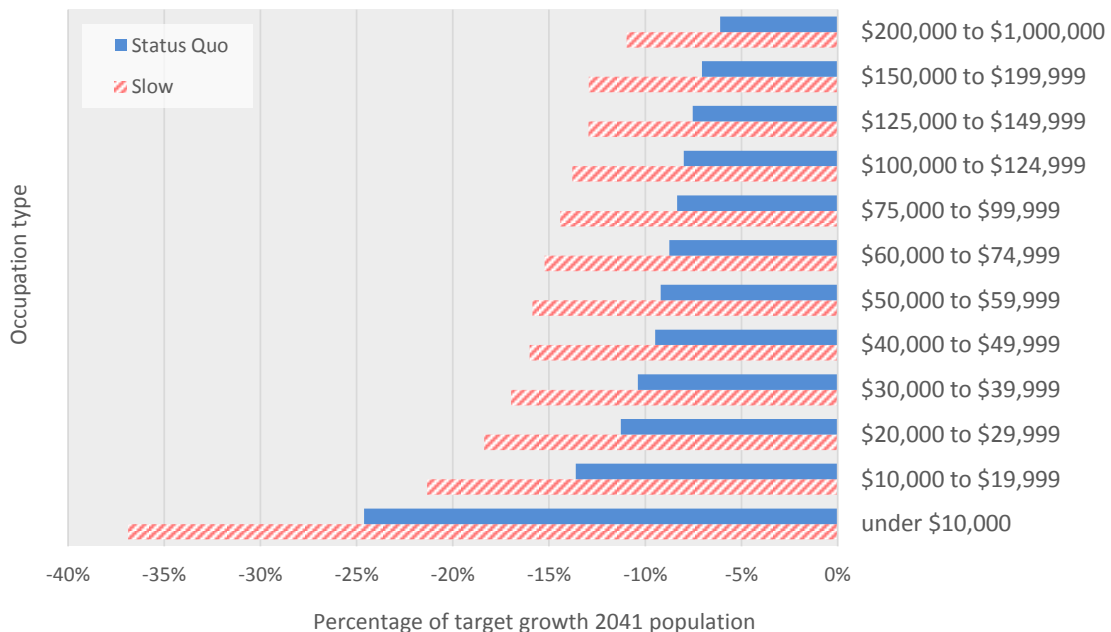
Growth policy can have an impact both on the Region's household income distribution and its labour supply because income, and relatedly, the ability to afford housing, tends to be correlated with occupation type. For instance, many service jobs are paid minimum wage, while occupations in education, law and government tend to be salaried. In the status quo and slow growth scenarios, the largest unmet demand for housing in Niagara Region will come from those in sales and service occupations, as shown in Figure 8. This is because sales and service occupations are generally associated with lower wages in Niagara Region, as presented in the Niagara Region Housing Market Analysis study. Sales and services occupations are the most common occupation type in Niagara Region, and a shortage of these types of labourers could have implications for the Region's tourism-based economy.

Figure 8 Unmet housing demand by occupation type, 2041



Comparing the slow growth and status quo growth scenarios to the target scenario shows that the largest difference is in the number of households whose total income is under \$40,000, and especially those with incomes lower than \$10,000, as can be seen in Figure 9. Households in this income range are primarily single-person households and may include students and young people at the beginning of their professional lives.

Figure 9 Difference in number of households by income compared to target scenario, 2041

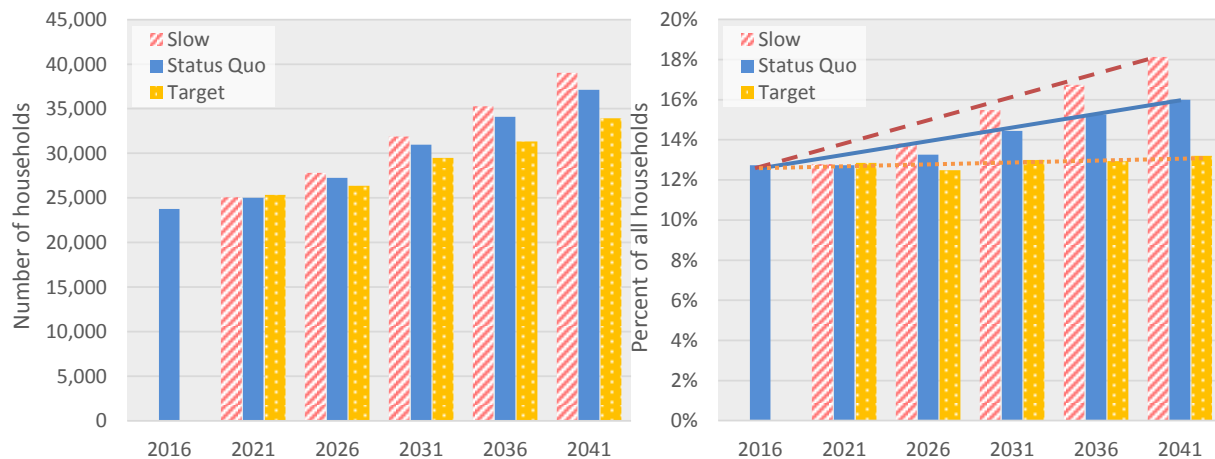


2.3 CORE HOUSING NEED

Core housing need is the standard indicator of housing need in Canada used by CMHC and Statistics Canada. A household is considered to be in core housing need if its dwelling does not acceptably meet its needs, i.e. it is either too small⁶, in a major state of disrepair or too expensive given its budget, and there is no alternative acceptable housing that would cost less than 30% of total household income. Core housing need affected a total of 23,830 of Niagara’s households in 2016, of which 84% are single-person households and 14% are lone-parent households.

The number of households in core housing need is expected to increase along with Niagara Region’s population. The only scenario in which the rates of core housing need in each local municipality and the Region as a whole remain relatively constant from now up until 2041 is the target growth scenario. The expected number and percentage of households in core housing need in Niagara Region from now until 2041 is shown in Figure 10. This shows that under status quo growth, the Regional rate of core housing need could increase from its current level of 13% to 17% and could even reach 18% under the slow growth scenario.

Figure 10 Number and percentage of households in core housing need



Core housing need varies significantly across local municipalities in Niagara Region. In general, the rate is higher in the larger cities and lower in smaller towns and townships. A main reason for this is that a household that is at risk of being in core housing need is more likely to be priced out entirely of smaller townships that have a more limited and homogenous housing supply than of larger cities that have a

⁶ This is calculated based on the National Occupancy Standard. The number of bedrooms required by a household is derived according to the following (if household members meet more than one criteria, the first conditions listed take precedence over the subsequent): a maximum of two persons per bedroom; household members living as part of a married or common-law couple share a bedroom; lone parents have a separate bedroom; household members aged 18 or over have a separate bedroom; household members under 18 years of the same sex share a bedroom; household members under 5 years of the opposite sex share a bedroom if doing so would reduce the number of required bedrooms. The exception to the above is a household consisting of one person living alone. Such a household would not need a bedroom, i.e. they may live suitably in a bachelor apartment.

Niagara Region Growth Scenario Analysis, 2018 to 2041

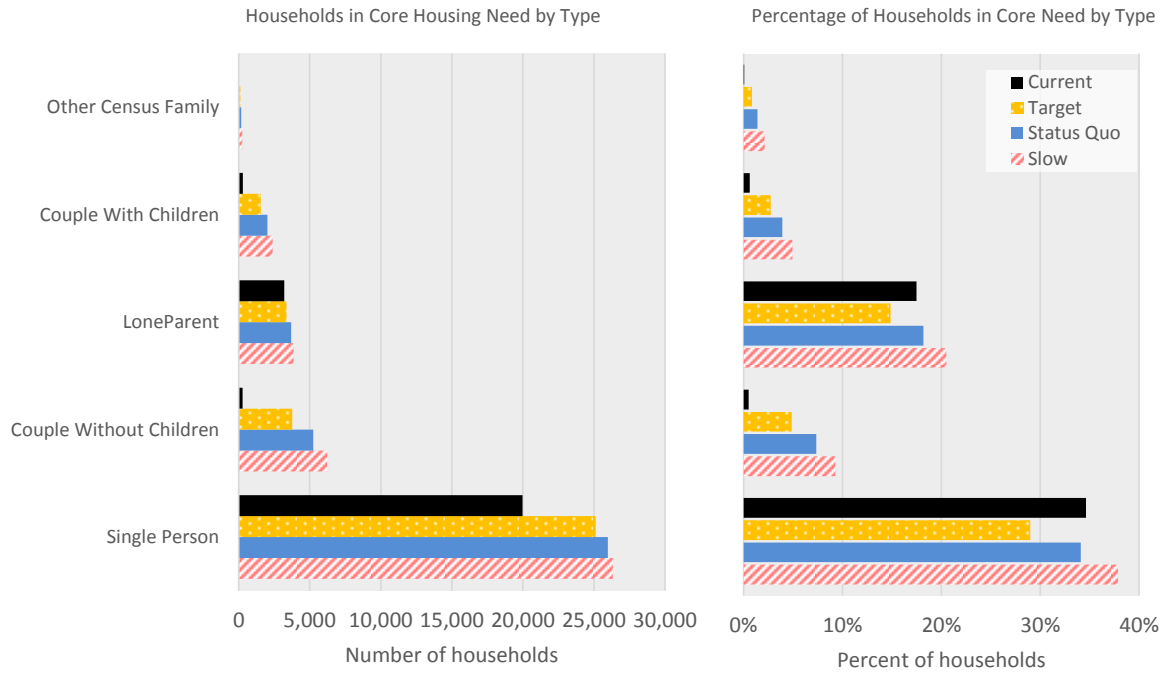
greater variety of housing options available (i.e. more variety in housing prices and housing types). Table 4 lists Niagara Region’s local municipalities from largest to smallest percentage of the population currently living in core housing need and shows the expected number and percentage of households in core housing need in 2041 under the different growth scenarios. Under slow growth, five local municipalities could see their core housing need reach or surpass 20% by 2041.

Table 4 Number and percentage of households in core housing need by local municipality

| | 2016 | | 2041 Target | | 2041 Status Quo | | 2041 Slow | |
|---------------------|--------|------------|-------------|------------|-----------------|------------|-----------|------------|
| | Number | Percentage | Number | Percentage | Number | Percentage | Number | Percentage |
| Port Colborne | 1,336 | 18% | 1,721 | 19% | 1,826 | 23% | 1,899 | 24% |
| Welland | 3,540 | 16% | 4,999 | 18% | 5,278 | 21% | 5,523 | 23% |
| St. Catharines | 8,665 | 16% | 10,788 | 15% | 12,003 | 19% | 12,296 | 21% |
| Fort Erie | 1,809 | 14% | 2,944 | 16% | 3,345 | 21% | 3,473 | 24% |
| Niagara Falls | 5,135 | 14% | 7,337 | 14% | 7,840 | 16% | 8,233 | 19% |
| Niagara Region | 23,747 | 13% | 33,915 | 13% | 37,117 | 16% | 39,047 | 18% |
| Thorold | 945 | 12% | 1,916 | 16% | 1,997 | 18% | 2,048 | 20% |
| Grimsby | 727 | 6% | 847 | 5% | 803 | 5% | 1,055 | 7% |
| Niagara-on-the-Lake | 413 | 6% | 979 | 9% | 986 | 9% | 1,184 | 12% |
| Wainfleet | 139 | 5% | 224 | 7% | 201 | 7% | 227 | 8% |
| Pelham | 372 | 5% | 669 | 6% | 776 | 8% | 980 | 11% |
| Lincoln | 433 | 4% | 844 | 6% | 1,123 | 9% | 1,183 | 11% |
| West Lincoln | 233 | 4% | 647 | 5% | 939 | 10% | 946 | 12% |

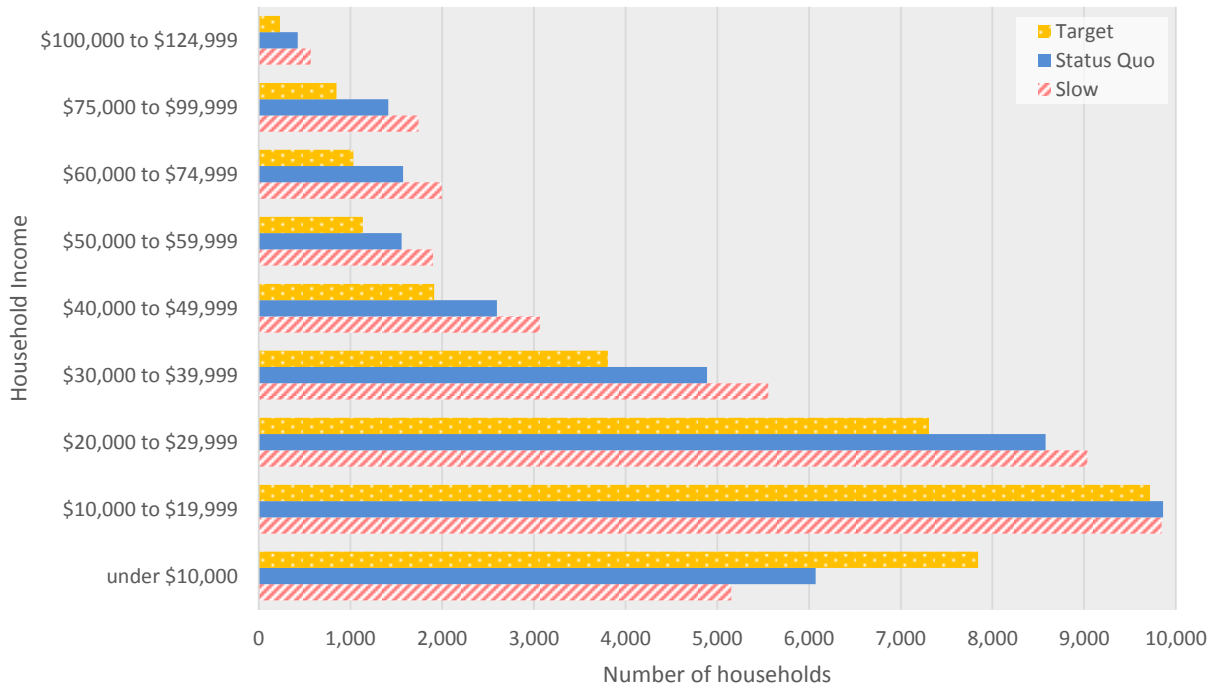
Single-person households will continue to be the household type with the greatest rate of core housing need, followed by lone-parent households in all scenarios, as shown in Figure 11. Under target growth, the rate of housing need of the two household types most vulnerable to core housing need could decrease relative to their current levels. However, under slow growth, the rate of core housing need among these households could increase beyond their current levels to 38% for single-person households and 21% for lone parents.

Figure 11 Number and percentage of households in core housing need by type, 2041



Growth policy can also affect how core housing need affects households of different income levels. In scenarios where the stock of housing is lower, prices tend to increase due to the demand for housing being higher than the supply. This results in households with higher incomes falling into the core housing need category, while lower-income households may be displaced from or unable to move to the Region. This could also increase the risk of low-income households becoming homeless or entering precarious housing arrangements that are not captured in census data or by the homelessness point-in-time count, such as couch surfing, living in cars or residing in low-cost hotel accommodations ill-suited to their needs on a long-term basis. The change in the income level of households in core housing need is shown in Figure 12.

Figure 12 Number of households in core housing need by income bracket, 2041



3.0 CONCLUSIONS

The growth scenario analysis exercise demonstrates that Niagara Region's current growth rate, if maintained over the coming two decades, could result in the Region falling short of the 2041 target population by over 6%. The rate at which Niagara Region builds new housing will not only affect the future population that the Region is able to accommodate, but also the ability of that population to live in dwellings that suit their needs and fit their budgets. If housing supply does not keep pace with the demand for housing in Niagara, housing prices and rents could increase significantly and further exacerbate existing affordability challenges. Consequently, the risk to the Region of continuing on the same trajectory includes a 26% increase in the rate of core housing need.

Results of this analysis also highlight how the features of the local housing market can affect Niagara Region's economic base. Prices and available housing types can affect the Region's ability to attract labour, especially for industries such as tourism that rely upon minimum-wage labour and to retain young people and growing families. If current growth trends are to persist, there will be far fewer households with incomes below \$40,000, which are primarily single-person households and young people at the beginning of their professional lives, and the largest unmet demand for housing would come from individuals in sales and services occupations.

To reach the population growth targets in the Growth Plan and to minimize overall levels of core housing need, Niagara Region can consider adopting policies that incentivize the development of a mix of housing to accommodate the future population, including a variety of housing densities, tenure and affordability levels, as well as right-sizing and maximizing the productivity of Niagara Region's existing housing stock. By providing a wider range of options to households, a more diversified housing stock can help mitigate some of the demographic trends identified in this report and make it easier for people of all ages and income levels to live in Niagara Region.

APPENDIX A. HISTORICAL GROWTH

Figure 13 Historical annual completions by housing type and market, 1990-2018

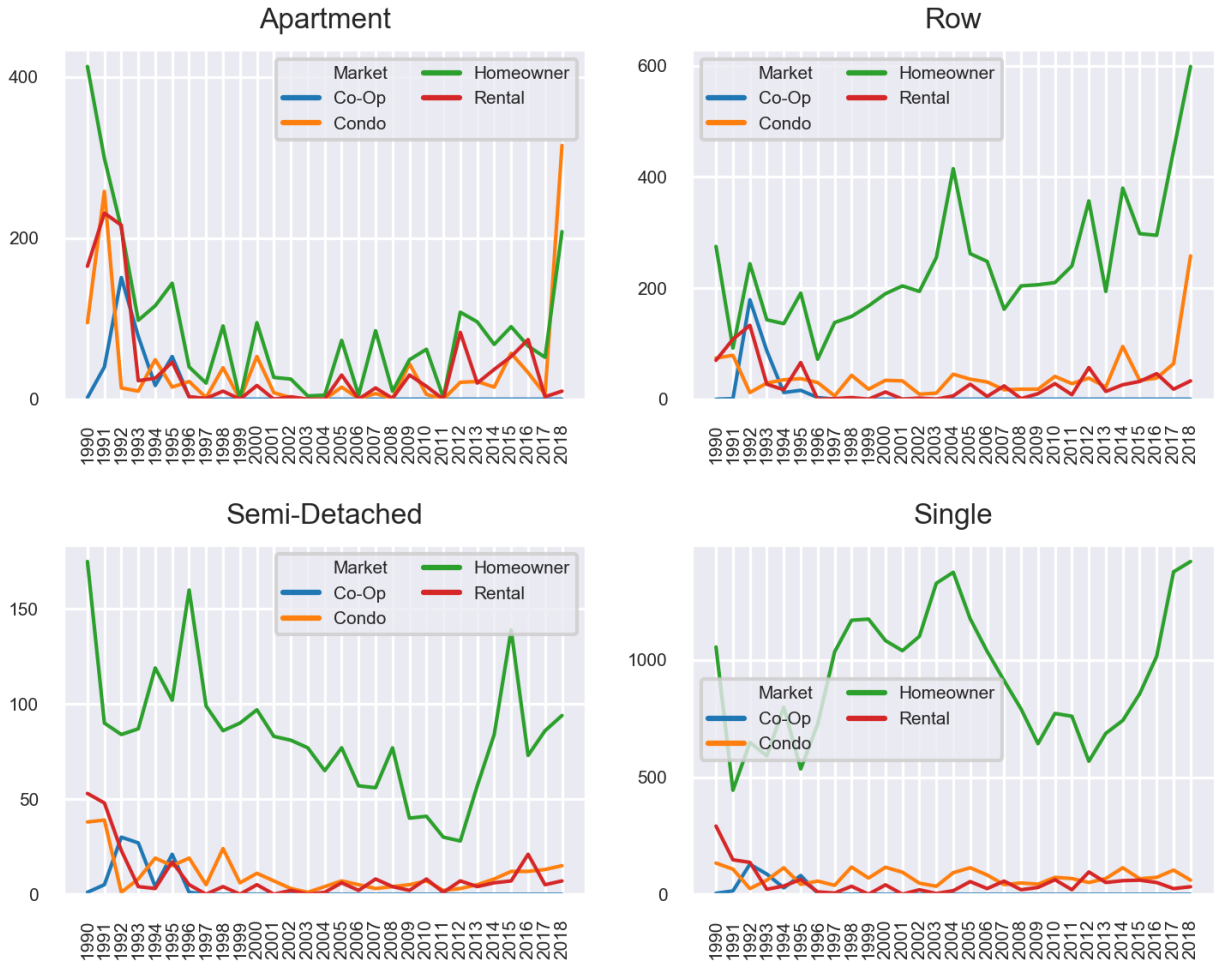


Figure 14 Cumulative completions by housing type and market, 1990-2018

