FINAL REPORT

PREPARED BY HEMSON FOR THE CITY OF GREATER SUDBURY

POPULATION PROJECTIONS REPORT

May 15, 2023

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EXECUTIVE SUMMARY

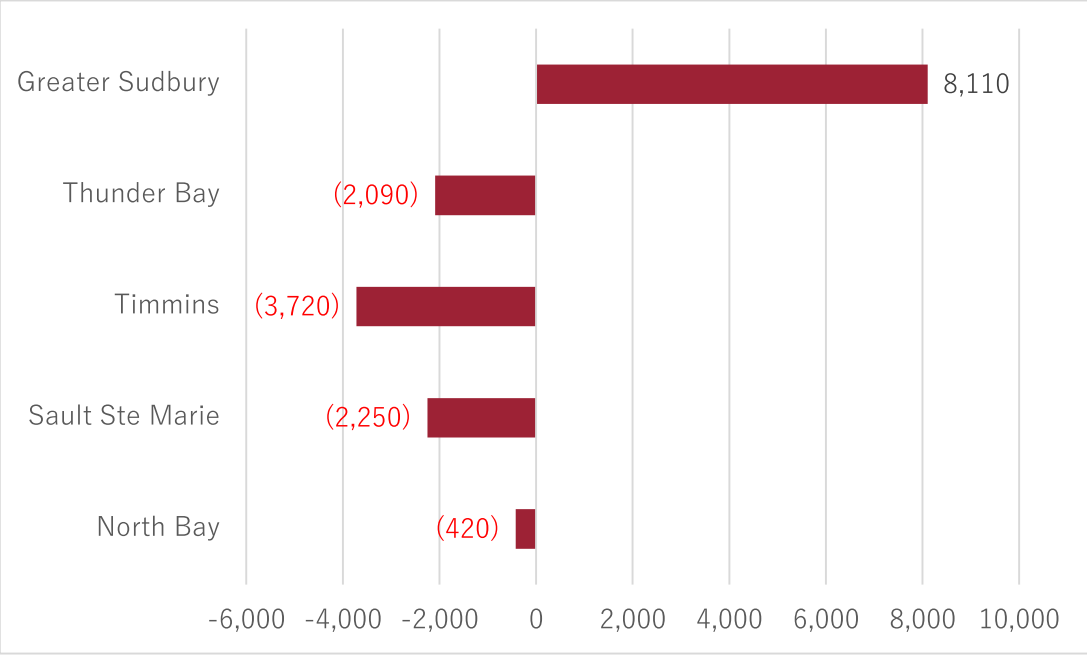
Each municipality has a unique set of characteristics in terms of population – age, gender, family and non-family – housing and households and employment. Understanding these dynamics in the City of Greater Sudbury (CGS) is essential for municipal planning and land budgeting. Forecasts of population, occupied households, place of work employment and the resident employed labour force should be reviewed regularly as economic conditions change and new data become available. Hemson Consulting has been retained to prepare new long-range growth forecasts and a development charges background study for the CGS.

The CGS's population will grow by 18,300 permanent residents, from 170,210 in 2021 to 188,510 in 2051. The nominal population growth will be greater over the next 30 years than it was over the last 20 years (2001-21 = 454 new residents annually; 2021-51 = 610 new residents annually). Much of this growth will be attributed to International and intra-provincial migration.

With the recent release of the 2021 Census by Statistics Canada, the outlook for the CGS's future growth has changed quite pointedly since the last forecasts were prepared, by Hemson, in 2019. In addition to the 2021 census data, updates to fertility and mortality rates have been made by the Ministry of Finance that have been incorporated in these updated projections. The Ministry has also released an updated outlook for all Census Divisions in Ontario, which indicates that the CGS will have a much more robust growth pattern than previously envisioned. Combined with insights from the recent Global Pandemic and subsequent recovery, these updates and new data influence these new forecasts that will be the basis for financial planning and growth management policy review. These forecasts also incorporate a longer planning horizon, providing population, housing and employment estimates to 2051.

According to Statistics Canada's Annual Demographic Estimates released in January 2023, the CGS has out preformed all major population centres in Northern Ontario and can be seen in Figure 1.

Figure 1: Change in Total Population between 2001 and 2021



Source: Statistics Canada, Annual Demographic Estimates.

The underlying conditions that were identified as key influences on growth prospects in 2019 continue to shape the results presented here:

- The CGS is a Regional service centre that provides economic stability for the surrounding areas and this role is directly tied to the variability of the mining sector, which between 2016 and 2021 grew by 1,180 jobs; a 3.7% annual rate of growth.
- Since 2016, the amount of natural population increase has slowed and this negative impact on population growth will need to be addressed by increased levels of all types of migration.
- Like many other municipalities in Ontario, the CGS has an aging population, many of whom will eventually leave the labour force. This has a wide range influence on the growth forecast for the City and is a direct determinant of the how the City will grow to 2051. The forecast scenarios are based, primarily on, different levels of migration to the City.

In accordance with the terms of reference for the project, three different growth scenarios are presented:

- The low scenario reflects a return to pre-pandemic thinking of live and work dynamics and the level of international migration not being as robust as current trends suggest it

will be. This scenario also factors in what will happen to the City if the aging population is not replaced adequately by new, younger residents.

- The reference scenario represents a sustained number of International migrants. As policy set at the Federal and Provincial levels of government currently indicate that the CGS should plan for increased levels of all forms of migration (International, Inter-Provincial > those coming from within Ontario, and Intra-Provincial > those coming from other Provinces. These new residents will only reside in the City if there are suitable housing types, opportunities for employment and access to essential services. All of which the City should continue to provide and plan for.

- The high scenario increases the share of the population represented by young adults, and adds to the economic outlook of the reference scenario by incorporating influences from investment in the Ring of Fire area.

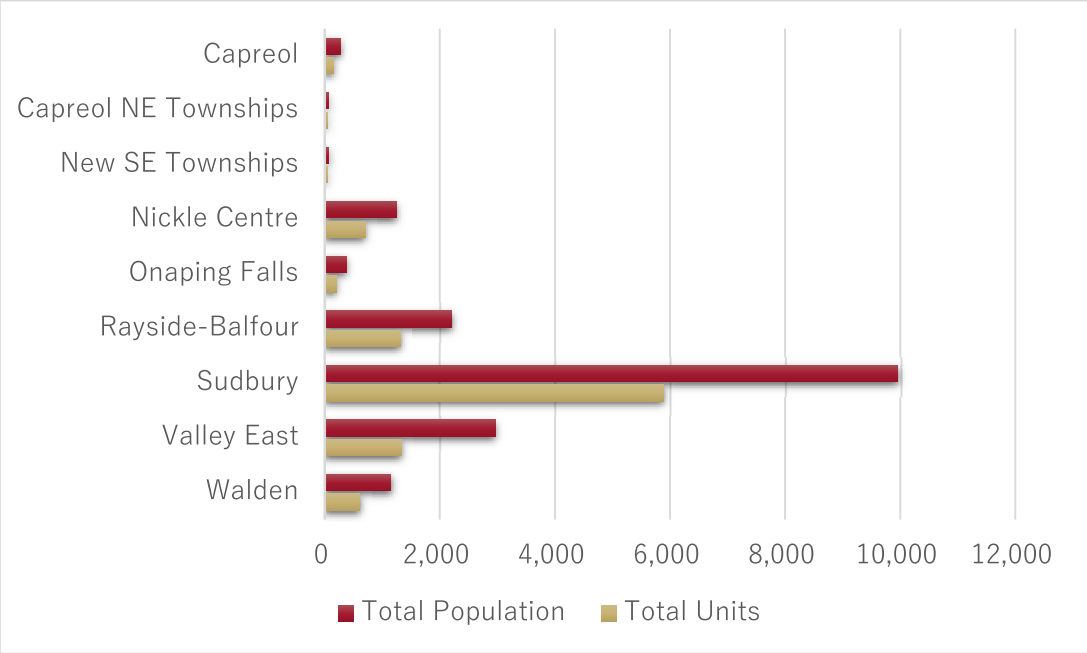
The City's current population, including census net undercoverage is estimated to be 170,210. This includes a 2021 census result of 166,115 and a 2.4% undercoverage rate. The City's population in 2051 will range from a low of 182,700 to a mid-range total of 188,510 under the reference scenario, or even to a high of 200,000 should economic conditions and migration increase substantially.

Occupied household growth will outpace population. The CGS will add 7,100 new households under the low scenario, which is less than the amount between 2001 and 2021. The reference scenario projects the addition of 10,330 new households, which continues the recent surge in household growth as seen with the 2021 census results. Under the high scenario, the CGS could expect to see the addition of 12,010 new households, which would bring the total number of households to 83,540 in 2051.

Similarly, from a total of 79,330 jobs in 2021, employment could experience modest growth to 87,330 under the low scenario, increase under the reference scenario to 90,750, or possibly as high as 97,500 under the high growth scenario. It is our view that the reference scenario should be used for financial planning and growth management policy purposes.

From the standpoint of municipal servicing, it is important to understand not only how much growth there could be, but also where that growth may take place. For this exercise, the reference scenario is provided on a geographic basis for communities (former municipalities) of Greater Sudbury. The forecasts have also been disseminated to specific geographic boundaries as set forth in the RFP. Geographically, the reference scenario population growth is forecast to be in Sudbury (54%), Valley East (16%), Rayside-Balfour (12%), Nickle Centre (7%) and Walden (6%).

Figure 2: Total Population and Unit Growth in CGS Former Census Subdivisions, 2021 - 2051



Source: Hemson Consulting

1. INTRODUCTION

Hemson Consulting Ltd. has been retained by the City of Greater Sudbury to prepare long-range forecasts and a development charges background study for the CGS. Population, housing and employment forecasts have been prepared from 2021 to a 2051 planning horizon. The forecasts update those prepared by Hemson for the City in 2019 and take into account the most currently available information regarding the demographic and economic outlook in the Greater Sudbury region, including information from the 2021 Census. The forecasts will provide a key input to the recently initiated development charges background study, updates to *The City of Greater Sudbury Official Plan* and a range of other growth planning and infrastructure initiatives. This report provides a reference scenario of citywide population, housing and employment forecasts, which is a representation of the most likely vision of the CGS's growth pattern for the next 30 years. A low and high scenario have also been prepared to consider two different, yet possible growth outlooks for the CGS to 2051. A local distribution of growth is also presented at the community level. It is important to note the tables contained within this report may not add or match exactly due to rounding.

The main purpose of the report is to determine:

- the long-term growth outlook for the City, based on a 30-year time horizon and population and employment forecasts;
- to provide a range of growth outlooks (scenarios) that could be achieved.

A. GENERAL OVERVIEW

A citywide growth forecast has been prepared that incorporates Hemson's well established cohort-survival modelling techniques as well as its new single-year age and sex model that applies estimates of fertility, mortality and single-year aged migration to and from the City. The three scenarios prepared are based on key demographic assumptions that have been discussed with City staff. All outputs produced through the modelling will be provided to the City as an Excel based package.

This assignment has been completed with access to the full 2021 census results. In addition to special runs ordered by Hemson that inform housing occupancy, employment commuting and employment by the North American Industry Classification System (NAICS) Canada 2017 Version 3.0, the results contained herein in utilized the Statistics Canada Labour Force survey, building permits and annual demographic estimates. Secondary

sources have also contributed to the scenario results such as the Ministry of Finance Summer 2022 population outlook and the Canadian Mortgage and Housing Corporation (CMHC) completions data.

The three forecast scenarios are based on varying assumptions about future social and economic conditions. As well, the newly released Federal and Provincial policies concerning the number of intended International migrants and what the CGS's share of this will be.

B. DATA SOURCES

The growth forecasts rely on Statistics Canada's 2021 Census, Statistics Canada's *Annual Demographic Estimates* (to 2022), Canadian Mortgage Housing Corporation (CMHC) housing market data, as well as information from the City such as building permits, residential, employment and mixed-use land supply data, and development expectations for areas of growth. The data involved is current up to 2021 and up to the end of 2021 for some municipal data and end of 2022 for the CMHC housing completions. The analysis initially adjusts all data and statistics to a common estimated mid-2021 base. The estimated mid-2021 base aligns with the Census that Statistics Canada conducted in May of 2021, which marks the beginning of the forecast period extending for 30 years to 2051.

C. IMPACT OF THE COVID-19 PANDEMIC

This report is being prepared after stay-at-home orders and business closures arising from the COVID-19 pandemic. Employment figures released from Statistics Canada show an overwhelming increase in the number of home based workers at the time of the 2021 Census. Table 2 outlines the work-at-home Census employment figurers historically for the CGS.

Table 1: Sudbury Residents Reporting Working from Home, 2021 Census

Census Year	Work at Home	Total Employment	Share of Work at Home
2001	3,040	71,290	4.3%
2006	3,330	76,900	4.3%
2011	2,550	77,740	3.3%
2016	3,170	78,480	4.0%
2021	**14,405**	**79,330**	**18.2%**

Source: Hemson Consulting based on Statistics Canada data

The 2021 Census was conducted on May 11, 2021. On that day, Ontario was under its third province-wide shut down due to rapidly rising COVID-19 infections, which took the form of mandatory business and non-essential retail closures and, from April 19, the closure of schools to in-person classes. This situation had a significant effect on the way people reported their employment status on the Census forms. Of particular importance for the CGS's employment forecasts was:

- the high number of respondents who reported their status as unemployed, even if their work had only been temporarily suspended (e.g. people who worked in retail stores and restaurants); and
- the high number of respondents who reported their status as employed, but working at home rather than at their usual place of work. The percentage of people working from home in the CGS rose from 3.3% in 2011, to 4.0% in 2016, to 18.2% in 2021.

The Reference Scenario forecasts preformed a "screening out" of COVID-related impacts. These impacts are estimated by comparing how the distribution of employment would otherwise be expected with the actual sectoral distribution of employment recorded by the Census. The reference scenario assumes the following:

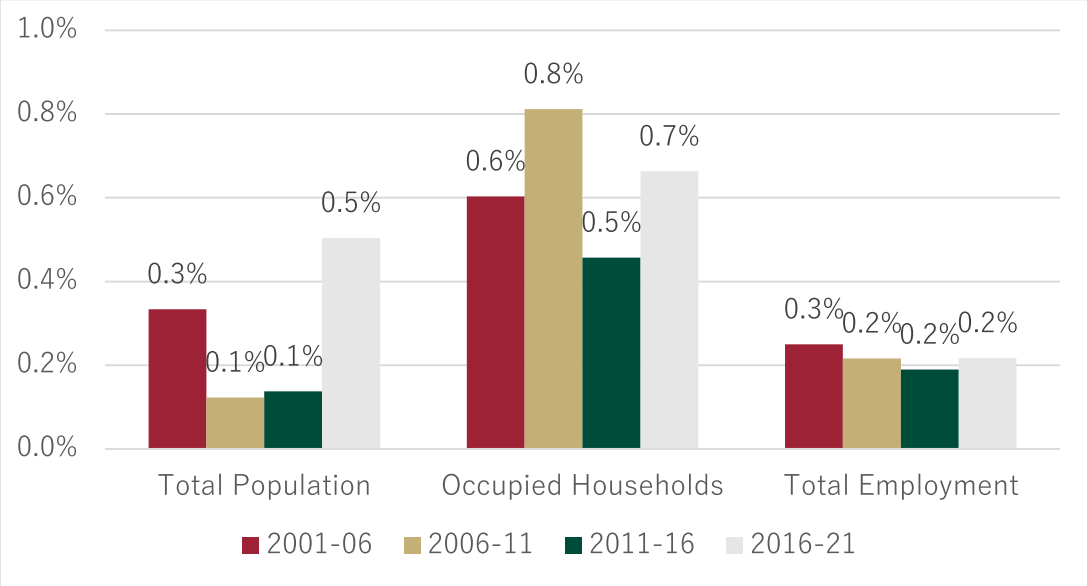
- Industries normally associated with office-type work such as public administration and administrative support services are reverted back to a usual place of work;
- Education services and health care and social assistance would, two sectors that historically had very little work from home, but saw an extreme increase according to the Census would also generally revert back to their usual place of work;
- Of particular significance, the mining sector, one that had 0 people work from home in 2016 shot up to over 900 are assumed to be back working at their usual place of work.

2. HISTORICAL GROWTH PATTERNS AND FUTURE ASSUMPTIONS

A. 2021 CENSUS DATA IS THE NEW BASE FOR THE FORECASTS

Since the previous forecasts were prepared in 2019, results from the 2021 Census have become available, yielding a different picture of growth in the CGS due in part to post-pandemic trends. This section compares the population, household and employment Census observations for 2021 and the significance these results have on the growth projections to 2051. Figure 3 shows the historical growth rates in the CGS since 2001.

Figure 3: Census Growth in the City of Greater Sudbury

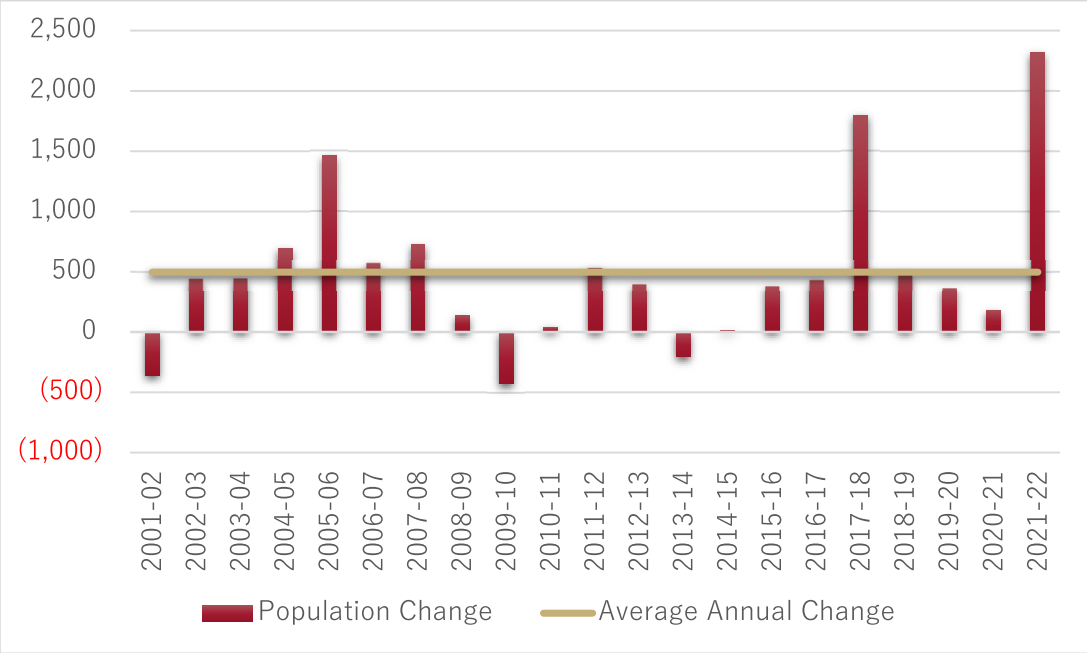


Source: Hemson Consulting based on Statistics Canada data

According to the 2021 Census, the CGS has a population of just over 170,000 residents (including the census net-undercoverage), a substantial increase of nearly 4,500 people since 2016. Over the same period residential growth kept pace, with the addition of 2,320 occupied households.

Figure 4 illustrates the population growth pattern for the City over the last 20 years. The City experienced an extended period of growth until 2008 and then remained quite stable until 2016. Since then it has grown at an average annual rate of 0.6%. It is also shown that the City's growth is continuing post-pandemic as the highest growth year on record has occurred in this past period according to Statistics Canada.

Figure 4: Annual Population Change in the City of Greater Sudbury



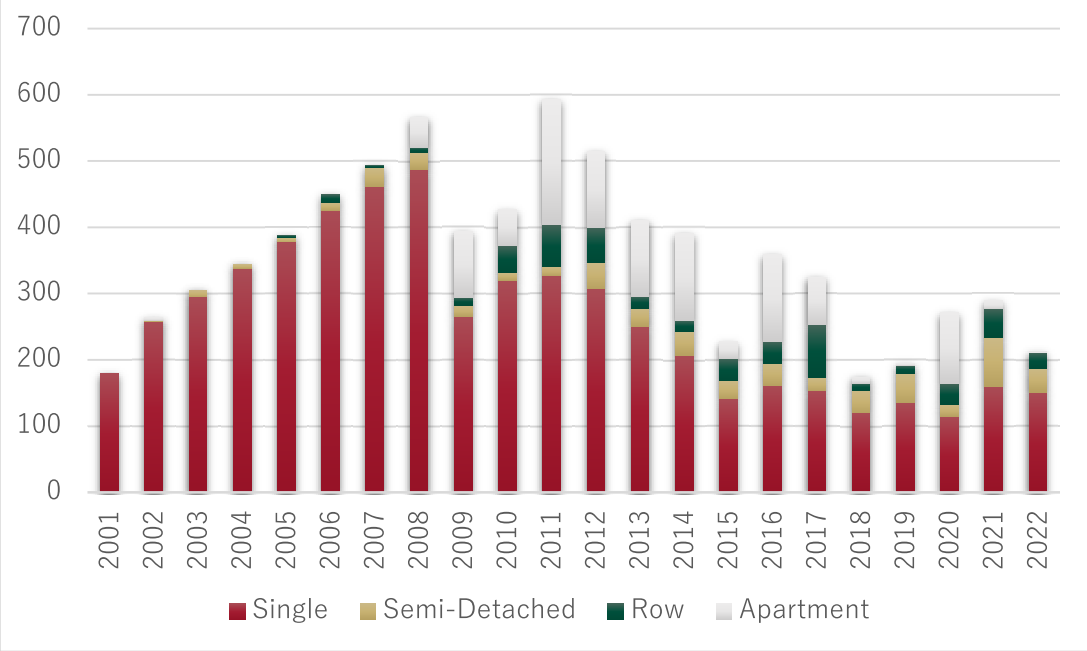
Source: Hemson Consulting based on Statistics Canada data

However, what is an interesting observation is that the number of housing completions as reported by CMHC and shown in Figure 5 have not peaked at or near the same time as the population. This suggests a number of socio-economic occurrences are presently taking place:

- The number of units that can be considered vacant or seasonal has fallen. According to the 2021 census, this number was 4,491 or 6% of all units. Whereas in 2016, that same metric was 8% or 5,877 units. Therefore, a reasonable conclusion to the lack of housing completions to the increased population growth could be that many people are now occupying once vacant/seasonal units permanently.

- The housing mix of recent completions does not seem to relate to the census results either. That is, between 2016 and 2021, according to the Census, there is now 1,610 more apartment units. Whereas, over the same period, CMHC reported only 330 units completed. To account for the typical delay between completion and occupancy, if you were to add all the completions of apartments from 2015 to 2020 the total would only be 350 units. Therefore, there is a substantial disconnect between the nominal population growth and housing construction and the two should not be always thought of a growing at the same rate.

Figure 5: CMHC Historical Housing Completions in the City of Greater Sudbury

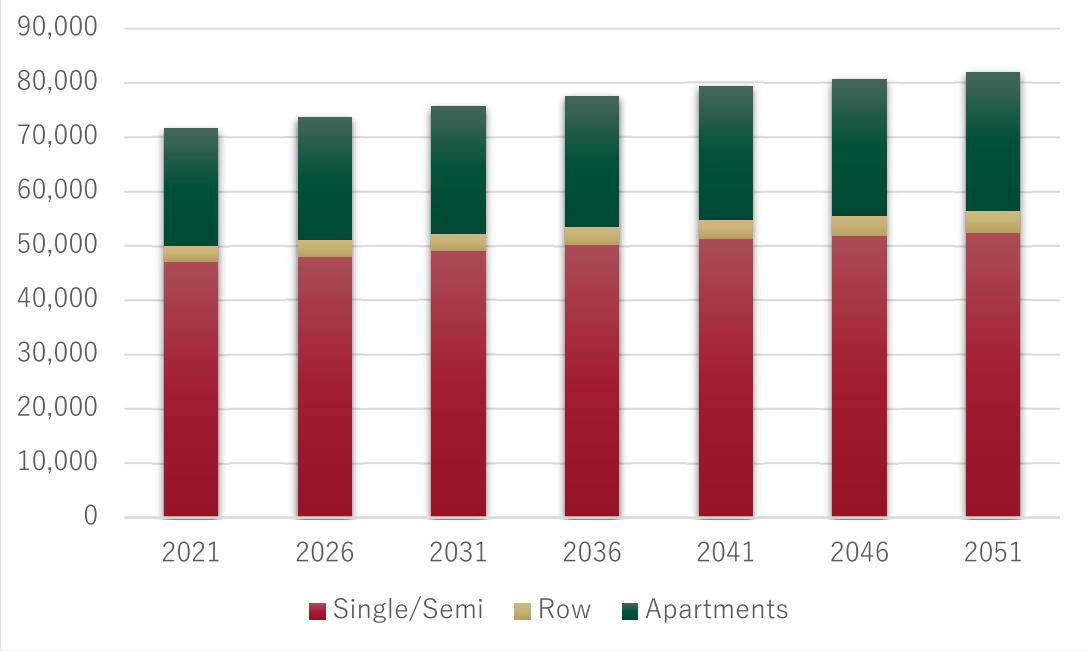


Source: Hemson Consulting based on Statistics Canada data

Even though it appears the population growth is outpacing the housing construction on an average rate basis, it actually is not. Households growing at a faster rate than the population is the result of an aging population. More empty nesters and single elderly people, and fewer families with children at home, mean more housing is required to house the same population. This also results in a gradual decline in the average household size. New housing construction still takes place during periods when the number of occupied housing units declines overall.

The new construction data indicate a preponderance of single detached dwellings in the City with 65% of units completed or under construction being of this type since 2011. The overall CGS housing stock is quite similar. As seen in Figure 6, single-detached housing units make up about 60% of all units in the City. Semi-detached and row house units comprise 10% of the stock while the remaining 30% are apartments.

Figure 6: Total Number of Occupied Households by Structure Type in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

B. FACTORS AFFECTING GROWTH IN THE AREA

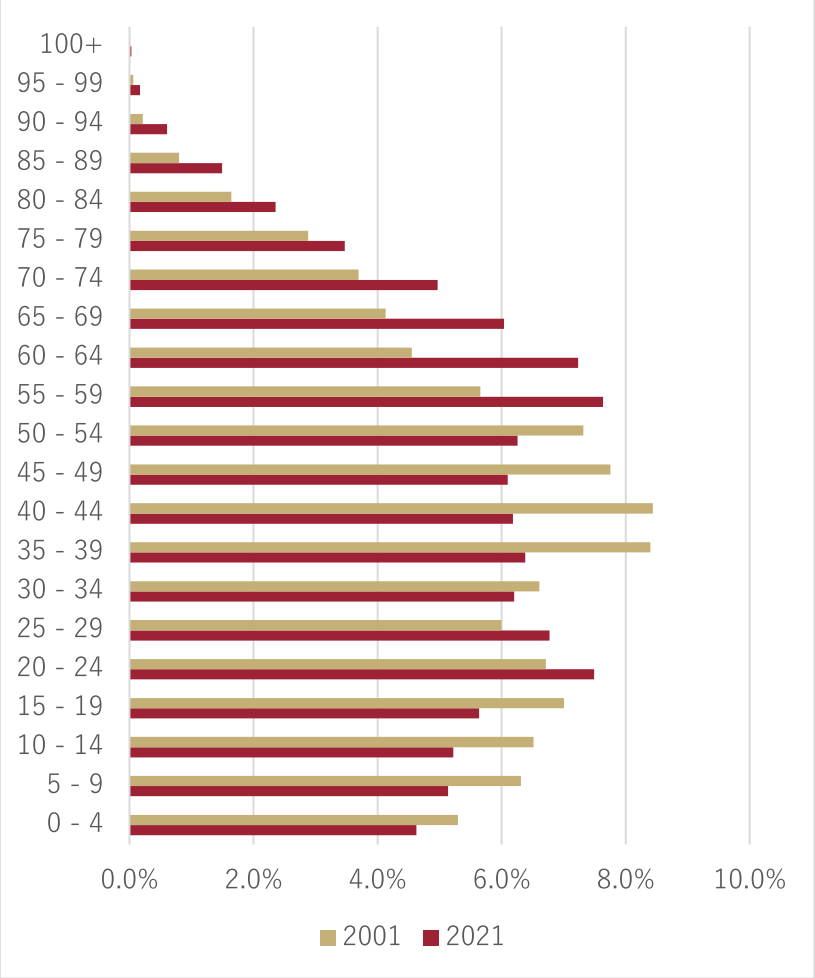
Greater Sudbury is a unique community comprised of one large centre and a number of smaller centres interspersed with rural development. The basis and structure of these communities is the exceptionally large, high quality nickel ore deposits contained in the Sudbury Basin. While mining of this resource continues to be a major component of Greater Sudbury's economy, the city has steadily evolved into the regional service centre for northeastern Ontario.

The growth projections are long term in nature and need account both current conditions and broader issues and challenges that will affect the City. Like many medium sized Ontario cities, Greater Sudbury has experienced an extended period of limited population growth and consequently, has an aging population (see Figure 7). In large part, this is attributable to the changing nature of the Canadian economy that is increasingly focused on the service sector and tends to draw growth and employment to the larger centres. This is especially evident in the Greater Toronto Area. To a lesser degree, Greater Sudbury has itself benefitted from this pattern in relation to smaller communities in northern Ontario.

Migration will have to play an important role in helping to counteract this trend if the City's economy is to continue to grow. Given the City's age structure, a significant number of

residents will be retiring in the coming years and the positions they vacate will need to be filled. There is already evidence of a shortage of labour in Canada and this will grow unless new migrants arrive to fill the gap. The extent to which Greater Sudbury is able to attract immigrants to fill existing jobs that will open up and new ones created by growth will be an important challenge to be considered in the study.

Figure 7: Historical and Current Age Structure of City of Greater Sudbury Residents



Source: Hemson Consulting based on Statistics Canada data

The "bulge" in the population of those between 55 and 74 is the baby-boom population, who will be retiring in large numbers over the coming decade and, following that, will enter into the age of rising mortality rates. This aging population trend in the City was initially hastened (relative to other parts of the Province) by historically high levels of out-migration of younger-aged adults to employment and education opportunities elsewhere. The reduced population of those in their 30s and 40s relative to age groups older and younger is largely the result of the out-migration of young adults, mostly leaving in their 20s, over the past 20

years. The fewer adults in these age groups results in the reduced number of children at the bottom of the age "pyramid": fewer women in their 20s and 30s simply means fewer children. All of these factors contribute to an older average age relative to the Provincial average and to other communities in Ontario that have had more growth and been the recipients of the out-migrating young adults from Northern Ontario. An older population has numerous effects on housing demand, labour force and residential and employment growth prospects that affect the long-term outlook for the CGS.

C. FORECAST ASSUMPTIONS

1. Natural Increase

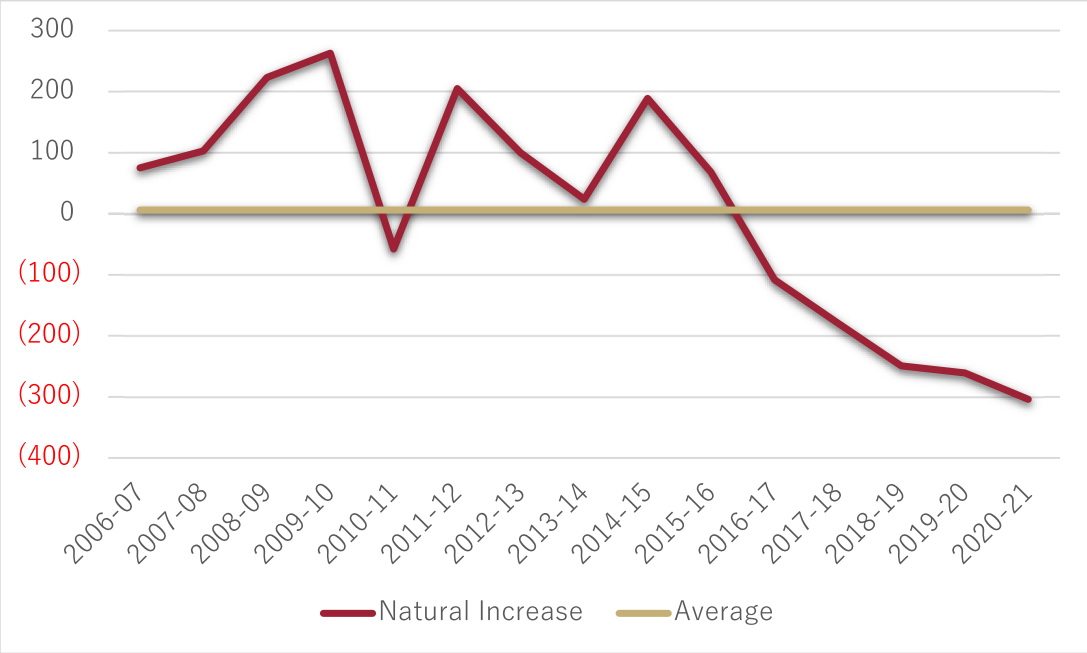
Natural increase is the difference between the number of births and the number of deaths in a population over a forecast period. To project the number of births and deaths, assumptions about future fertility rates by age of mother and mortality by age and sex are applied to yield the number of births and deaths in each cohort.

- Fertility rates measure the average number of children born per woman by the age of mother in a given year. They are usually expressed as the total fertility rate, which represents the average number of children to be born to a woman if current fertility rates prevail over her reproductive life. A slight increase in fertility rates over time is assumed for the CGS. This is consistent with the Province-wide trend.

- Life expectancy has risen more rapidly than anticipated and the life expectancy gap between men and women is narrowing. The increase in life expectancy is largely attributable to seniors becoming healthier and to improved medical treatment. In line with the recent national and provincial trends, life expectancy is forecast to increase slightly over the period to 2051 and will contribute to higher population.

The historical change in natural increase can be seen in Figure 8. The assumptions contained in the reference forecast are for the City to "rebound" and see a positive change to 2031, followed by slightly negative change between 2031 and 2051. The recent trend from 2015 is not expected to continue.

Figure 8: Change in Natural Increase in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

2. Migration

Net migration represents the cumulative result of all migration movements in and out of an area. Net migration is the key component of the forecasts as most growth in the CGS arises from migration and there is a close correlation between migration and employment opportunity. The three major components of migration are international, inter-provincial, and intra-provincial.

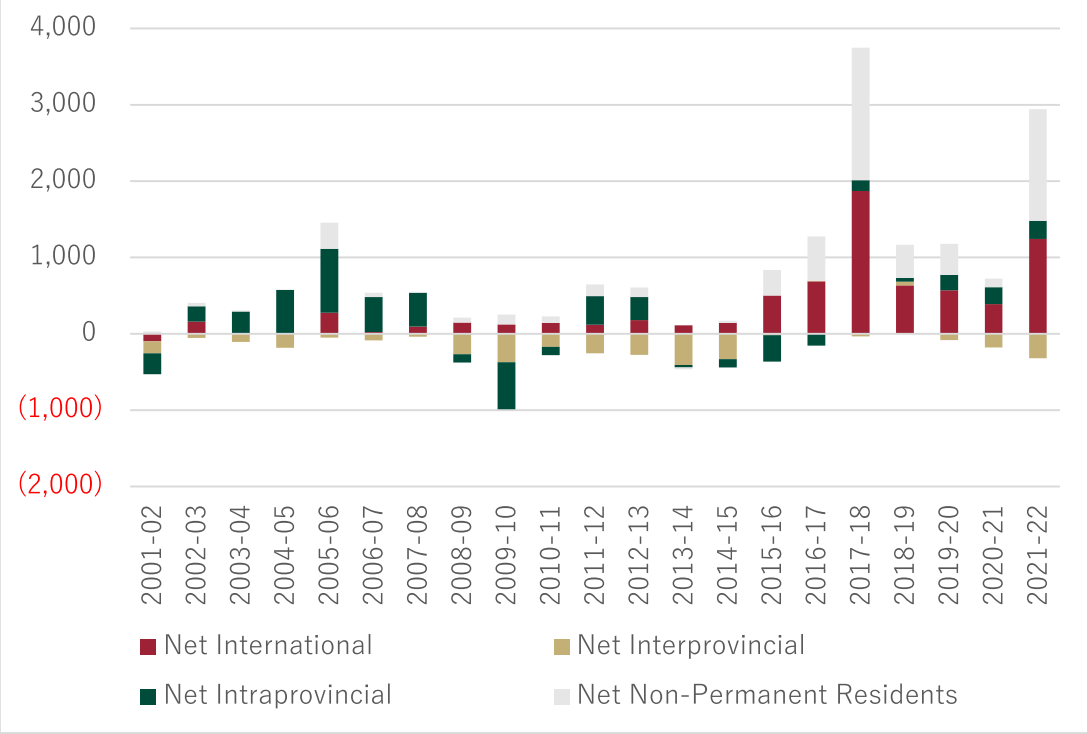
- International migration is the movement of people between Canada and other countries. International migration comprises: permanent immigration, or those people migrating from other countries with the intention of settling permanently in Canada; emigration, or those people leaving Canada with the intention of permanently settling in another country or temporarily living abroad (these statistics deduct Canadians who previously emigrated and then have moved back to Canada); and non-permanent residents, or those people who have come to Canada with a status other than as landed immigrants (those on student, work or other special visas and refugee claimants awaiting a hearing on their status). There has recently been a large uptick of international migrants to the CGS and the reference forecast assumes that this trend will continue.

- Inter-provincial migration is the movement of people between Canadian provinces. Inter-provincial migration has two components: those leaving Ontario to live in another province and those entering from another province to live in Ontario. There has always been little net inter-provincial out-migration from the CGS since 2001. The reference forecast assumes this trend to continue.

- Intra-provincial migration is defined as the movement of people within Ontario between Census Divisions. Intra-provincial migration also has two components: an in-migration movement to the CGS and an out-migration movement from the City. Historically, there has been a longstanding pattern of movement from rural areas in northern Ontario to urban centres, however in recent years that has not been the case for the CGS. The reference scenario is predicated on a resurgence of intra-provincial migration to the CGS.

The reference forecast is based on annual net in migration averaging about 700 persons per year. This assumption is supported by recent trends – annual net in-migration for the CGS has been 600 persons per year since 2001. While seen as a significant contributor to the migration estimates in 2017 and 2021, the number of non-permanent residents is expected to continue to be one of the primary main sources of the overall population growth to 2051.

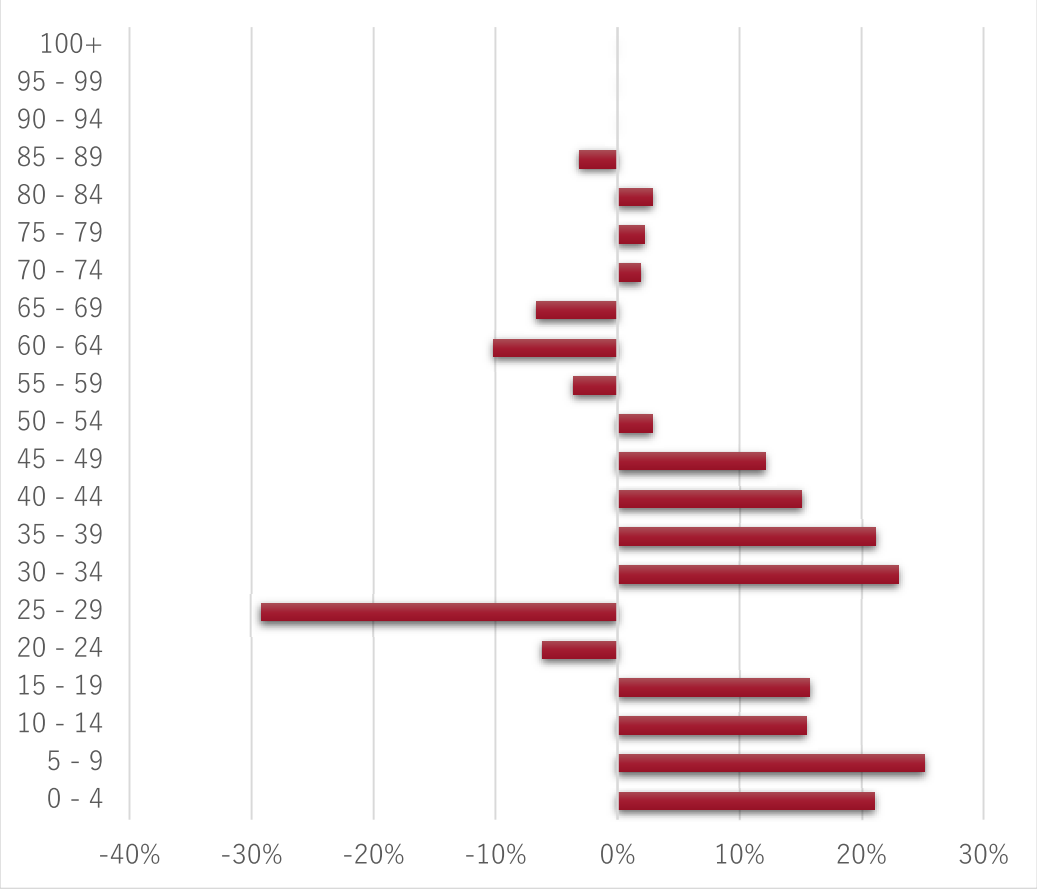
Figure 9: Historical Migration Pattern in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

The age structure of the migrant population is shown below in Figure 10. The net out-migration of young adults, those in their 20s, has been the largest migratory trend seen in the CGS since 2001. The pattern of net out-migration of these age groups from nearly all of Ontario, mainly to the Toronto and Ottawa areas, is likely too entrenched to be fully reversed. However, as seen below, to counter-act this trend, the relatively higher number of young adults, those in their 30s, along with their children, are choosing to return in some case or to migrate to the CGS. In order for this trend to continue, the CGS will need to continue to provide housing options that represent complete communities and are in close proximity to essential services, amenities and areas of employment.

Figure 10: Migrant Age Structure since 2001



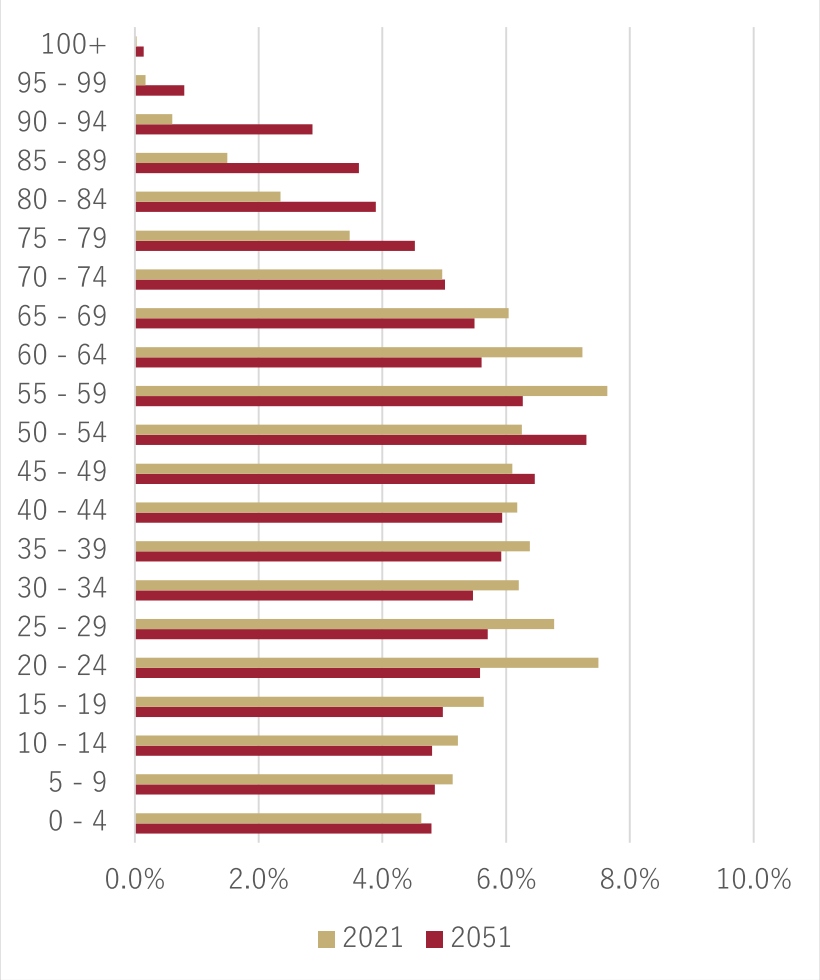
Source: Hemson Consulting based on Statistics Canada data

3. Age Structure and Housing Demand

The forecast age structure of the population is an important driver for the housing and the employment forecasts. The 2051 age structure for the reference scenario is shown in Figure 11. The pyramid indicates how the population is aging. Compared to 2021, the age groups over 75

make up a much larger share of the total population. At the same time, population in their 30s in 2001 are now the peak population age group in their late 50s.

Figure 11: Forecast Age Structure of the City of Greater Sudbury Residents



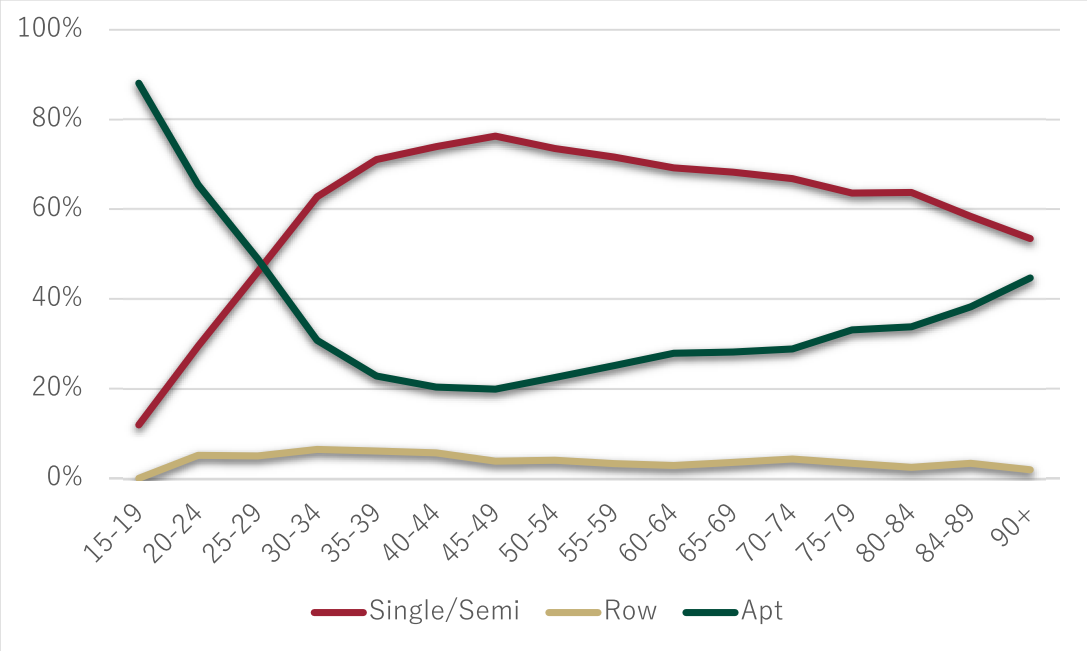
Source: Hemson Consulting based on Statistics Canada data

The City's population forecast is translated into a forecast of households. The household forecast is then converted into a forecast of housing units by type based on unit type preference by age of primary household maintainer. Four unit types are used – single-detached, semi-detached, rowhouse, and apartment – based on Census definitions.

The outlook for housing continues to be strongly tied to this aging population trend. An older population results in declining household size (persons per unit), which affects housing demand as more units are required to house fewer residents over time. The current occupancy pattern of the City's residents is shown in Figure 12. This pattern is expected to shift slightly as the aging of the population continues. It is expected that the number of elderly residents will need to move out of their single-detached home and into a more accessible apartment or rowhouse. One of the

assumptions that are part of all the forecast scenarios is that the percentage of the age of household head in apartments will eventually surpass those in single and semi detached units.

Figure 12: 2021 Occupancy Pattern in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

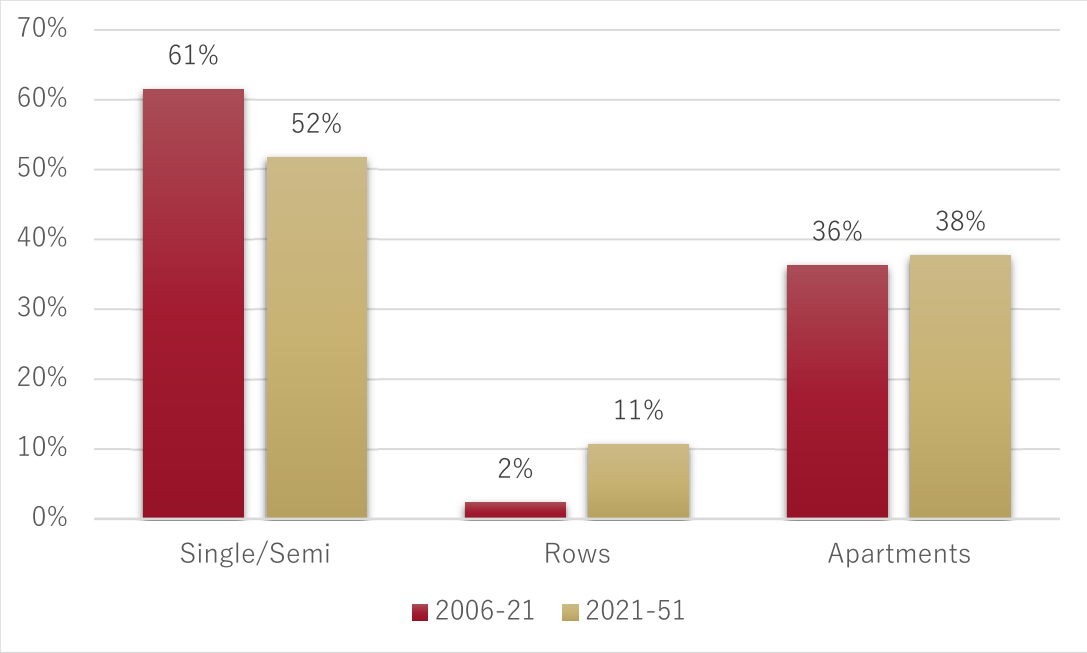
The 2016-2021 period witnessed a small increase in the overall rate of household formation in the CGS tied to the aging of the population. It is assumed that household formation will continue to increase slightly over the forecast period in small increments as the population ages.

As discussed in the previous section, historically the CGS real estate market has been dominated by a preference for "ground related" housing units, mainly single-detached homes, rather than apartments. Based on this longstanding trend and future demographic trends (to the extent that housing preferences are driven in part by age), it is anticipated that the overall preference for ground related housing will continue.

The demand for apartments is forecast to remain steady over the period at between 35% and 40% of all housing growth (somewhat higher than the recent trend, recognizing the increasing demand for apartments). While the main shift in housing type will be the emergence of many more row housing units as opposed to traditional single and semi detached. It is projected that over the next 30 years, over 10% of all housing unit growth will be in this form. This is a significant shift as in the last 15 years the row housing growth only accounted for less than 5% of all new units. As seen in Figure 13, the number of projected

new apartment units will remain at historic levels, not quite doubling the current housing stock. However, the number of row housing units will increase substantially offering new migrants to CGS a wider range of housing types and housing costs.

Figure 13: Historical and Forecast Housing Mix in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

4. Labour Force

The forecast method applies three factors to generate the employment forecast from the population forecast:

- participation rates, to derive the labour force from the resident population;
- unemployment rates, to determine what proportion of the resident labour force is employed; and
- net in-commuting, to determine the number of jobs occupied by non-residents through in-commuting and the number of jobs that are lost to other areas through out-commuting.

The result is a forecast of total employment for the City.

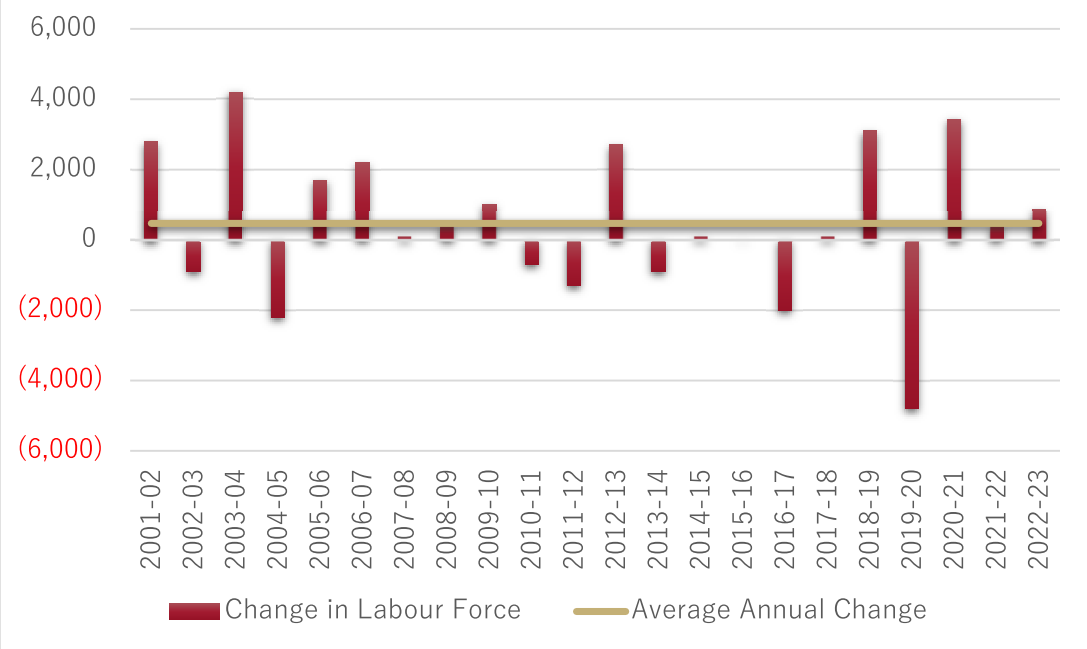
- Participation rates are the share of the total working age population that participates in the labour force (either employed or seeking employment). Labour force participation

rates by age are forecast to remain relatively stable except for some increase anticipated among older workers who decide to remain in the work force past what, in the past, had been normal retirement age. Applying participation rates to the population forecast results in the total labour pool available to fill jobs in the future.

- The aging population trend affects labour force participation, as an older population has relatively fewer working aged residents, which in turn affects the employment growth outlook. The change in overall labour force participation in the CGS between 2016 and 2021 – from 62.6% to 61.1% – reflected both the aging population and the reduced job prospects for much of that period. The overall labour force participation will continue to decrease very slowly over the forecast period due to a more elderly population and reduced proportions of population of regular working age.

- As seen in Figure 14, the change in the Sudbury CMA total labour force was generally stable pre-pandemic. Since the pandemic, the CMA has recouped all of the temporary job losses.

Figure 14: Change in Total Labour Force for the Greater Sudbury CMA



Source: Hemson Consulting based on Statistics Canada data

D. EMPLOYMENT TO KEEP PACE WITH POPULATION GROWTH

It is imperative that the CGS plan for employment areas that are well located to maximize employment opportunities and to allow new residents to the CGS to work relatively close to

where they live. Current industrial business parks are located on the periphery of the City centre. These are well-established industrial areas that provide suitable locations for additional employment land employment growth.

The future of the CGS's economy is one of the most important considerations underpinning the demographic outlook. For many years, the most important economic factor is the change in the mining-related sector. With the ever-increasing mechanized nature of mining and technological improvements, it is vital for the CGS to continue to attract new businesses to its business parks.

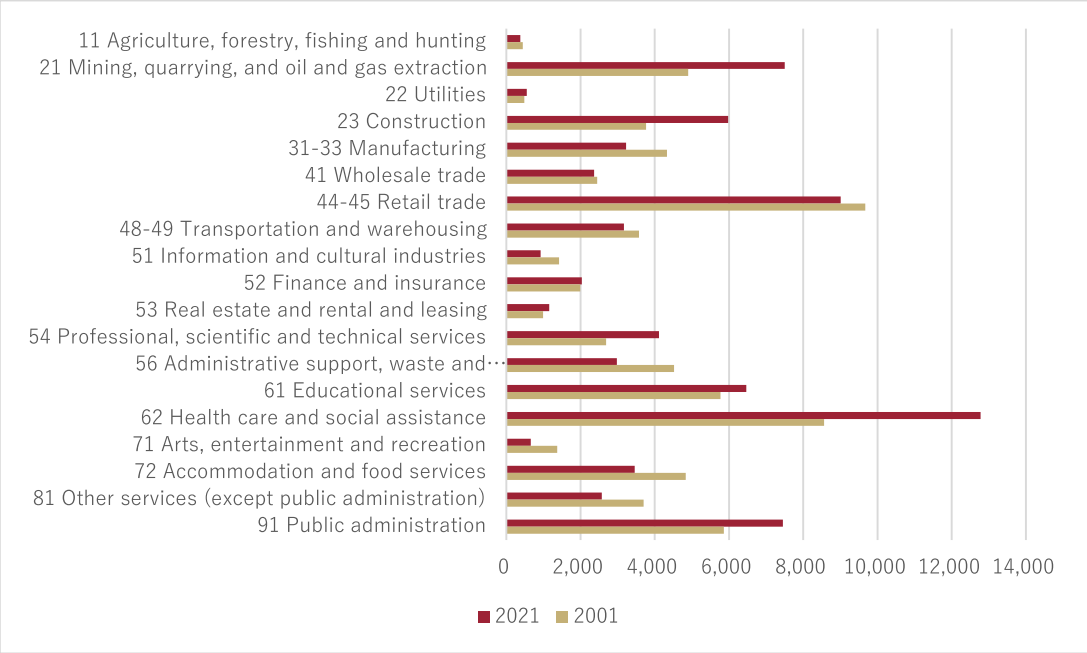
The outlook for the industry today is very positive as there are a number of factors contributing to the recent surge in growth since 2016; such as the demand for nickel relating to electric vehicles and uncertainties regarding the global supply chain, especially due to the conflict in the Ukraine; the recent COVID-19 pandemic, which was a catalyst for significant change in work practices particularly in office based sectors. Many smaller cities in Ontario have been experiencing an influx of residents who have decided to work remotely on a permanent basis. Others have also chosen to move in order to purchase a house, an option that was unaffordable elsewhere. If this trend persists, it may benefit Greater Sudbury.

A third factor that will affect the employment outlook is the extent to which Greater Sudbury will continue to grow as a regional centre. To do so it will need to continue growing its role as a centre of government, education and health services. It will also need to expand its offering in retailing, tourism, sports and culture.

1. City's Changing Employment Profile

The key data sources for employment generally categorize jobs according to the type of work being undertaken. Employment is organized into sectors, which are further broken down using a North American Standard Industry Classification System (NAICS) (see Figure 15). While sectoral data by NAICS coding provides detailed information about the activity and behaviour of the economy, it reveals little about the spatial arrangement of such activity. The overall City profile remains quite similar to that of 2001 barring a few exceptions:

Figure 15: Census Employment by NAICS, 2001 and 2021



Source: Hemson Consulting based on Statistics Canada data

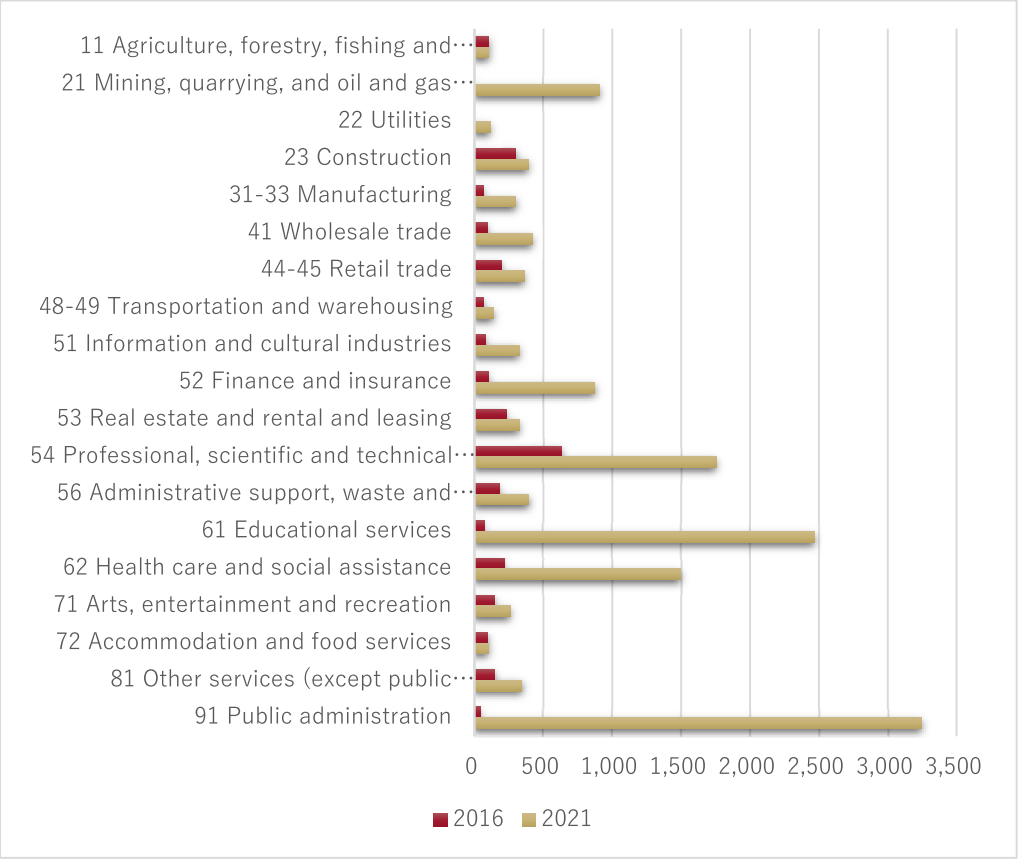
- Since 2001 there are now 2,600 more people working in the mining sector. 1,180 of that growth is since 2016. The mining sector now represents 10% of all usual place of work employment, the 3rd most in the City.
- The CGS's employment profile is diversifying as can be seen by the number of people working in the Professional Services sector. These jobs are typically located in office-type settings which suggests that a greater share of new non-residential construction could be of the office variety.
- The Construction sector has also seen a sharp rise in the number of people employed, however, its place in the CGS's overall profile remains as it was in 2001.
- Since the 2021 census employment figures were counted during the COVID-19 pandemic, the effect on the accommodation and food services sector is evident. The nominal employment count in this sector is 2,000 jobs fewer than it was in 2016.
- Manufacturing is another sector that has experienced a steady decline in employment since 2001. Part of this can be explained by the pandemic, however, the decline was evident before 2016 as well.

2. Work at Home and Commuting Trends

As stated above and shown in Table 2, the impact of the pandemic not only affected the number of people working, but where people have decided to work after. The 2021 census results show that 18% of respondents said that they are working primarily from their residence. Historically, the share of work at home in the CGS was only 4%. As seen in Figure 16, the change is not equally distributed between sectors. Public Administration, Educational Services, Professional Services and Health Care workers were the main sectors affected by the pandemic and confirmed by the census results. It is generally understood that the majority of these increases have now been reversed and that, while still possible that there have been some increase, the number of people working from home should be much closer to the historical averages.

It is noted that the 2021 census figures for employment are problematic. This is due to the fact that many people commuted to work pre-pandemic, often times to a municipality that they did not reside in. Since the CGS is a regional hub for employment, it can be concluded that a number of people working in neighbouring municipalities in these sectors would not be counted as CGS employment; that is they would be considered working from home in their home municipality.

Figure 16: Number of City of Greater Sudbury Residents Working Primarily From Home

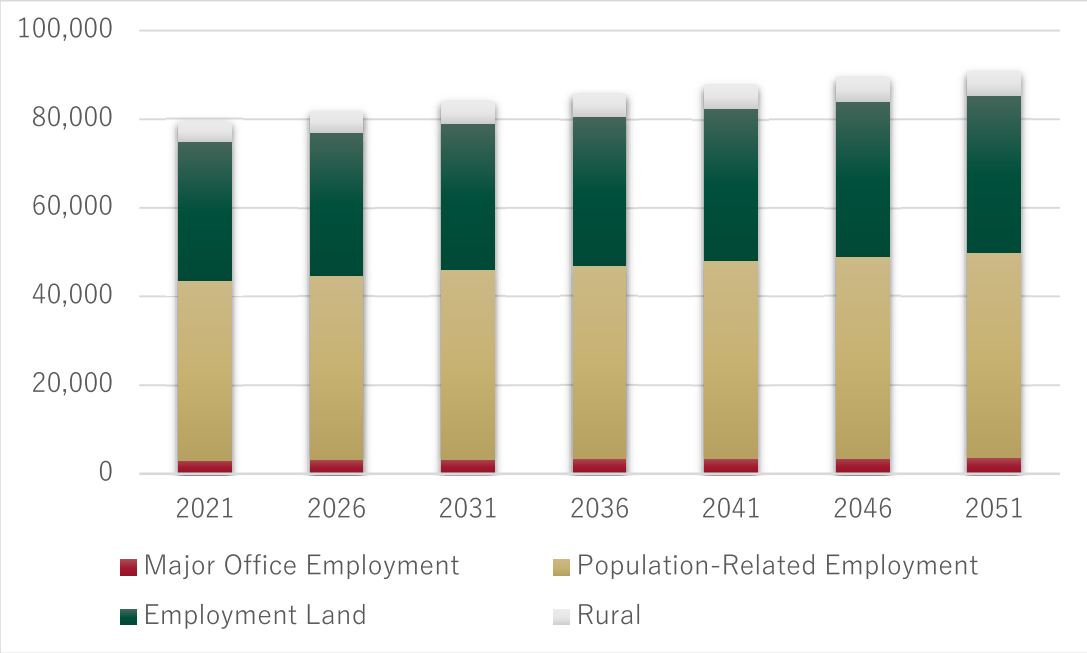


Source: Hemson Consulting based on Statistics Canada data

3. New Jobs Will Follow Population and Will Need Well-Located Employment Lands

The NAICS codes are translated to general employment land-use categories based on the characteristics of the sector, For example, as seen in Figure 17, the total employment land employment counts are primarily made-up of the manufacturing, wholesale trade and transportation and warehousing sectors, but other sectors are found within the City's industrial and business parks. As shown in Figure 17, the employment change by land-use areas has differed. The loss of manufacturing jobs is shown in the employment land employment count since 2016. Conversely, the gains seen in the construction, public administration and health care sectors are responsible for the positive change in major office and population related employment. For land use planning purposes, the employment by sector needs to be understood in order to properly allocate employment to different parts of the CGS.

Figure 17: Place of Work Employment by Land-Use Type in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

This is the reason for structuring the growth forecasts around four land use based categories of employment:

- **Major Office Employment**, is employment that is found in buildings greater than 20,000 sqm. The only sectors typically found in this category are those of professional services, health care and public administration. In 2021, major office employment only accounts for 4% of all jobs in the CGS.

- **Population Related Employment**, is employment that primarily serves local residents (permanent and seasonal). In the CGS, this category accounts for just over 50% of all employment and includes retail, accommodation, food, education, health care, local government and work-at-home jobs. Current population related employment in the CGS is concentrated around the New Sudbury Centre, RioCan Centre and Silver Hills Centre and are the main urban serviced locations of this employment type. Future population related employment will generally follow population growth, which implies that the areas of Val Therese, Hanmer and Val Caron can expect a significant increase in the number of population serving jobs.

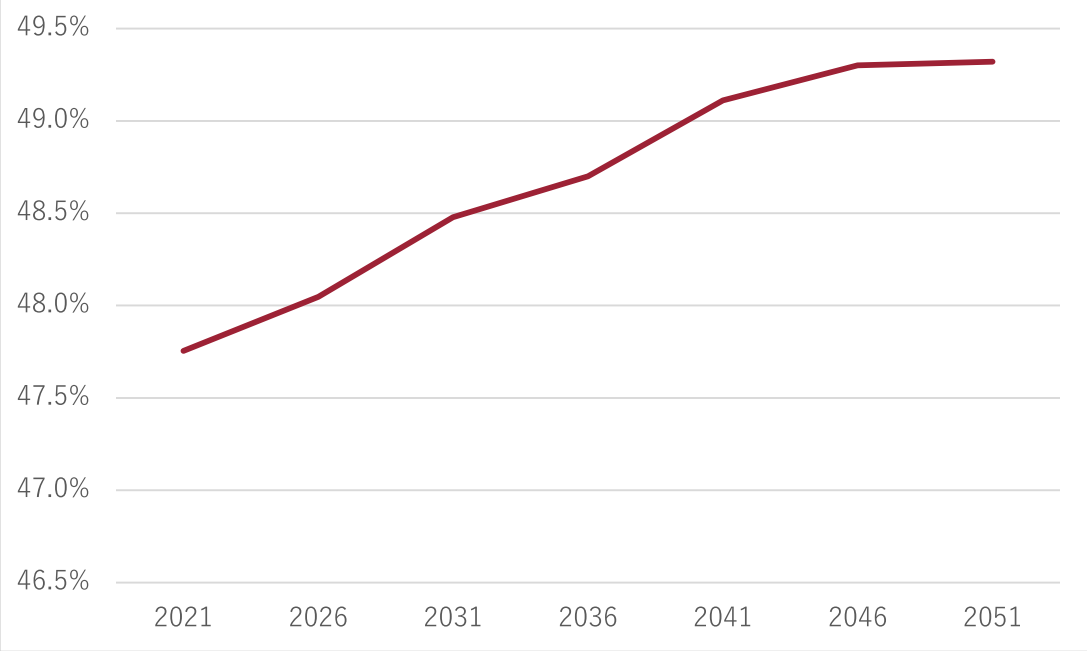
- **Employment Land Employment**, refers to employment accommodated primarily in low-rise industrial-type buildings, the vast majority of which are located within business parks and industrial areas. In 2021, this category comprised 39% of the

total employment base and includes manufacturing, construction, wholesale trade, transportation, warehousing, and logistics, as well as a range of professional support services. Lands accommodating these activities have very specific locational requirements including access to major highways and markets, proximity to a labour pool, and the ability to develop large land parcels on flat land and to cluster with similar businesses. Growth in employment land employment will be significant over the next 30 years – about 40% of total employment growth in the CGS – and will take place in areas with well-situated, vacant or under-utilized employment lands. Local areas presently designated that have land available for development such as those around Coniston are a prime example.

- **Rural Employment**, refers to all jobs located in rural areas, including agriculture, aggregates, small-scale manufacturing and construction. These jobs are often located on farms and in scattered retail or service properties and are not on urban land designated and serviced for industrial or commercial use. Rural employment comprises only 6% of the total employment base and growth in rural employment is anticipated to be low over the next 30 years as most growth continues to be focused in urban areas.

Another typical measure of completeness is the activity rate – the ratio of jobs to people in a municipality. The measure is a crude one, as it is highly influenced by the geography of a municipality. The CGS, as a regional hub, will see its employment growth generally keep pace with the spike in population, however, the activity rate is expected to rise at a steady pace over the forecast period. Figure 18 shows the projected activity rate to 2051.

Figure 18: City of Greater Sudbury Projected Activity Rate



Source: Hemson Consulting based on Statistics Canada data

The recently completed CGS Employment Land Strategy 2021 concluded that there is a need to protect areas of employment from possible residential or commercial conversion. The results indicate that the CGS will need to protect, at a minimum, 100 net hectares of industrial land. This is based on a growth of over 1,000 jobs in the manufacturing, wholesale trade and transportation and warehousing sectors at a density of 25 jobs per net hectare. The Growth Projections reference forecast incorporates all industrial type jobs in all sectors within the industrial and business parks in the City. It is therefore, that the number of jobs projected in this report is higher that what is concluded in the Employment Land Strategy.

3. THREE FORECAST SCENARIOS HAVE BEEN PREPARED

This report establishes a new outlook of increased population growth, steady residential construction and diverse employment types for the CGS. This report updates the forecasts by establishing a new base year of 2021 and extending the forecast horizon to 2051. The updated data from public sources along with data from the CGS, as well as the confirmation of the key social and economic trends underlying the forecasts helped to inform the preparation of three forecast scenarios – a low, reference and high – for consideration by City staff. The reference scenario is intended to be used for most planning and financial purposes. It is our view that the reference scenario represents the most likely outcome considering local and broader demographic and economic factors. The low and high scenarios are included here to illustrate the sensitivity of long-term growth prospects to changing economic conditions and migration trends.

A. REFERENCE SCENARIO

The reference scenario is predicated on robust growth in the residential and non-residential sectors. The reference scenario assumes anticipated investments in the mining and institutional sectors occur as planned, as well as, increased levels of all forms of migration to the CGS. The main assumptions of the reference scenario are listed below:

1. Key Assumptions

- Hemson forecast based on 2021 Census release, including: population, population age structure by sex, households, housing units, labour force, place of work employment, period of construction data, commuting patterns and age of household maintainer.
- Considers recent building permit activity up to and including 2022.
- Net migration to the City is positive, driven by a sustained increase in International and Intra-provincial migration over historical averages.
- Housing patterns to shift slightly to higher density ground related units, which is consistent with recent development; the housing mix of new unit construction is 52% single and semi-detached, 10% rows, and 38% apartments.

- Employment forecast is based on a stable, low unemployment rate throughout the forecast period. Approximately 30 per cent of future employment growth is population-related, as such forecast employment growth is linked closely to residential growth. While 60% of all employment growth is projected to be of the mining, warehousing and industrial in nature.

2. Reference Forecast Results

The CGS is expected to continue to experience above-average population growth to 2051. As seen in Table 3, the recently completed forecast period (2016-21) was the highest period of growth on record for the CGS. The CGS is expected to add approximately 600 new residents a year on average, whereas since 2001, the annual average increase of new residents was approximately 450. The 2051 population of 188,500 is approximately 5,500 more permanent residents than our previous estimate in 2019. This increase is driven by federal immigration targets, housing affordability. The CGS continuing as a regional hub and a place where people can live and work. Table 3 shows the forecast of total population and growth to 2051. The figures below include an estimate of census net-undercoverage.

Table 2: Total Population Forecast for the City of Greater Sudbury

Census Year	Total Population	Population Growth	Annual Growth Rate
2001	161,140		
2006	163,850	2,710	0.3%
2011	164,850	1,000	0.1%
2016	165,990	1,140	0.1%
2021	**170,210**	**4,220**	**0.5%**
2026	174,140	3,930	0.5%
2031	177,110	2,970	0.3%
2036	180,070	2,960	0.3%
2041	182,780	2,710	0.3%
2046	185,620	2,840	0.3%
2051	**188,510**	**2,890**	**0.3%**
2001-2021		**9,070**	**0.3%**
2021-2051		**18,300**	**0.3%**

Source: Hemson Consulting based on Statistics Canada data

As mentioned previously, the outlook for housing continues to be tied to the aging of the CGS's resident population. This older population results in a declining household size which directly affects housing demand. The annual rate of housing growth under the reference forecast will outpace the population growth as more units are required to house fewer residents. This pattern is not unique to the CGS or Northern Ontario; it is a phenomenon that is occurring throughout the entire province. As seen in table 4, the average number of new households has peaked in 2021 and growth will slow slightly to 2051, however it will remain at the historical average pace until 2041. The average household size 2001 was 2.43 people per unit. In 2021, the same metric produced a household size of 2.28 and the forecast 2051 household size is 2.21 persons per unit. The projected lowering of the household size is not expected to be as brisk as the past 20 years.

Table 3: Occupied Households Forecast for the City of Greater Sudbury

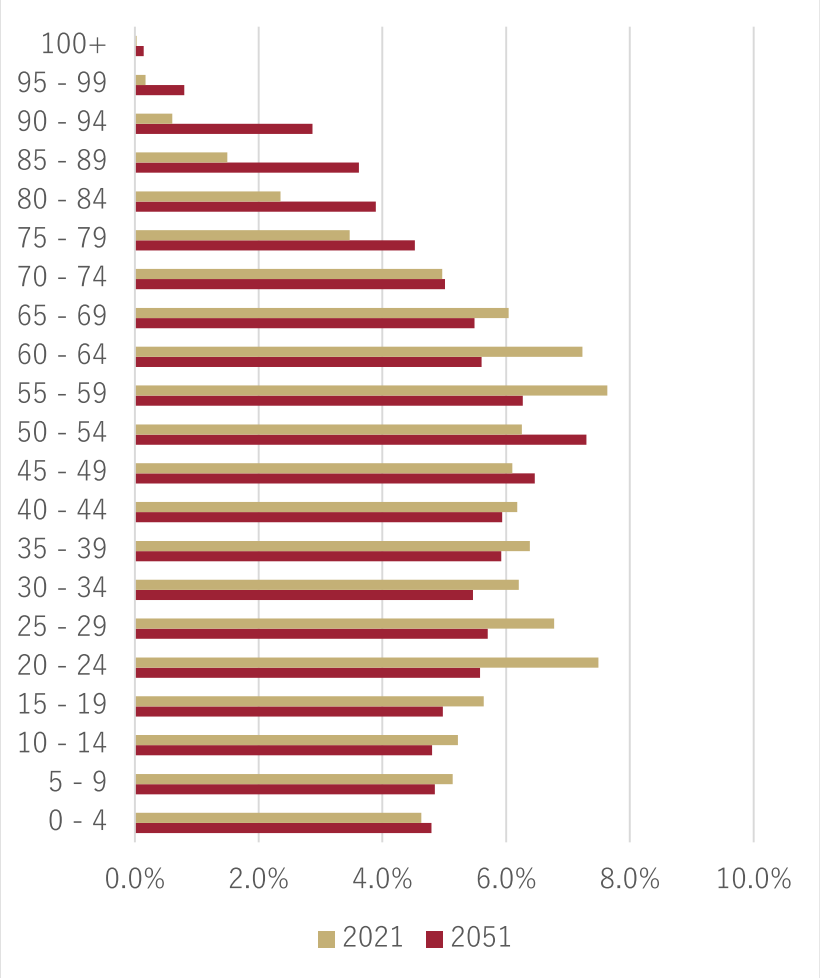
Census Year	Occupied Households	Household Growth	Annual Growth Rate
2001	63,040		
2006	64,960	1,920	0.6%
2011	67,640	2,680	0.8%
2016	69,200	1,560	0.5%
2021	**71,530**	**2,330**	**0.7%**
2026	73,610	2,080	0.6%
2031	75,710	2,100	0.6%
2036	77,550	1,840	0.5%
2041	79,400	1,850	0.5%
2046	80,630	1,230	0.3%
2051	**81,860**	**1,230**	**0.3%**
2001-2021		**8,490**	**0.6%**
2021-2051		**10,330**	**0.5%**

Source: Hemson Consulting based on Statistics Canada data

As an important driver for the housing and employment forecasts, the expected make-up of the CGS's population by age and sex is shown in Figure 19. Quite noticeable are the bulges in population in 2021 for the age groups 20-24, 55-59 and 60-64. In 30 years, the subtleties of the population will be quite different. The number of residents over the age of 50 will make-up nearly half the population, whereas today it is only 40%. The main concern for the CGS will be the number of young adults choosing to reside in the CGS as they will be the

ones that replenish the labour force. In 2051, the largest age groupings will be those aged 50-54, followed closely by 45-49 and 55-59. This indicates that in 2051 the aging of the population and its affect on the labour force and housing market will continue to be an issue to be monitored by CGS staff. It should be a top priority for the CGS to appropriately plan for a majority of the resident population that are retired from work or will be soon.

Figure 19: Forecast Age Structure of City of Greater Sudbury's Resident Population

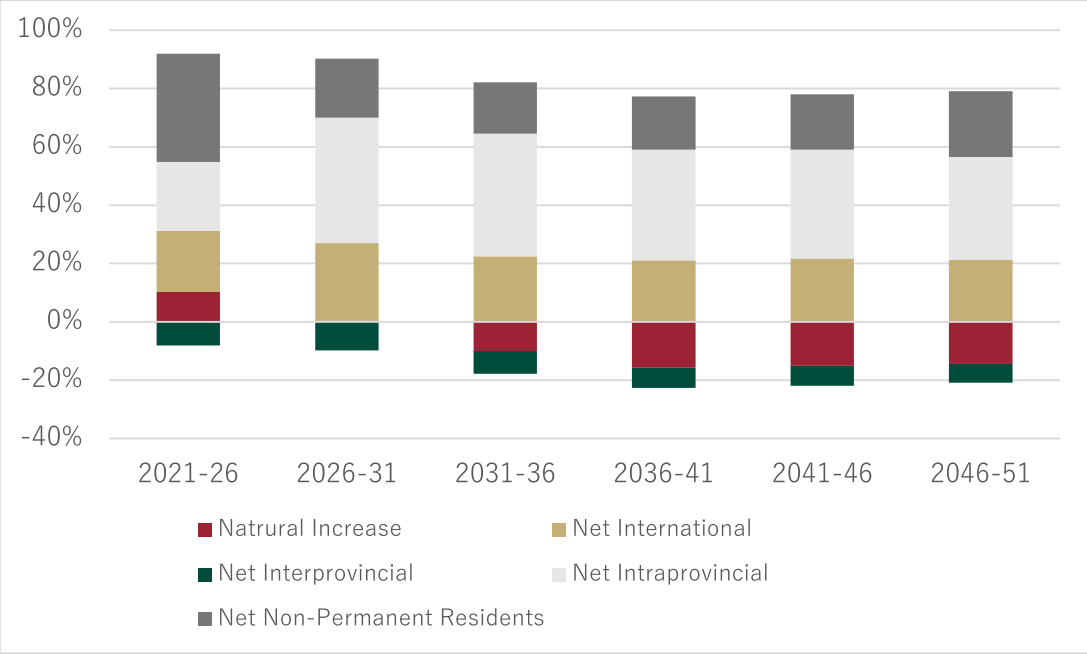


Source: Hemson Consulting based on Statistics Canada data

The sustained population growth projected for the CGS is primarily driven by increased levels of international and intra-provincial migration. The affects of a lower projected fertility rate is offset by new Canadians moving to the CGS. These new Canadians will require housing that is affordable, available, situated close to municipal amenities and close to places of employment. The CGS should implement policies that are focused on attracting new Canadians to decide to reside here. As seen in Figure 20, the positive increase in migration will continue through international migrants new to Canada, intra-provincial

migrants that move to the CGS from other parts of the province and non-permanent residents that arrive in the CGS for education or personal purposes and end up staying. It is of vital importance to the CGS's future population growth to maintain the levels of net International migrants to the CGS as was since 2015. It is, however, unrealistic to think that levels seen in 2017-18 (+1,800) and 2021-22 (+1,200) will be the norm moving forward. The reference scenario forecasts an annual average of +200 new international migrants, doubling the historical average between 2001 and 2016.

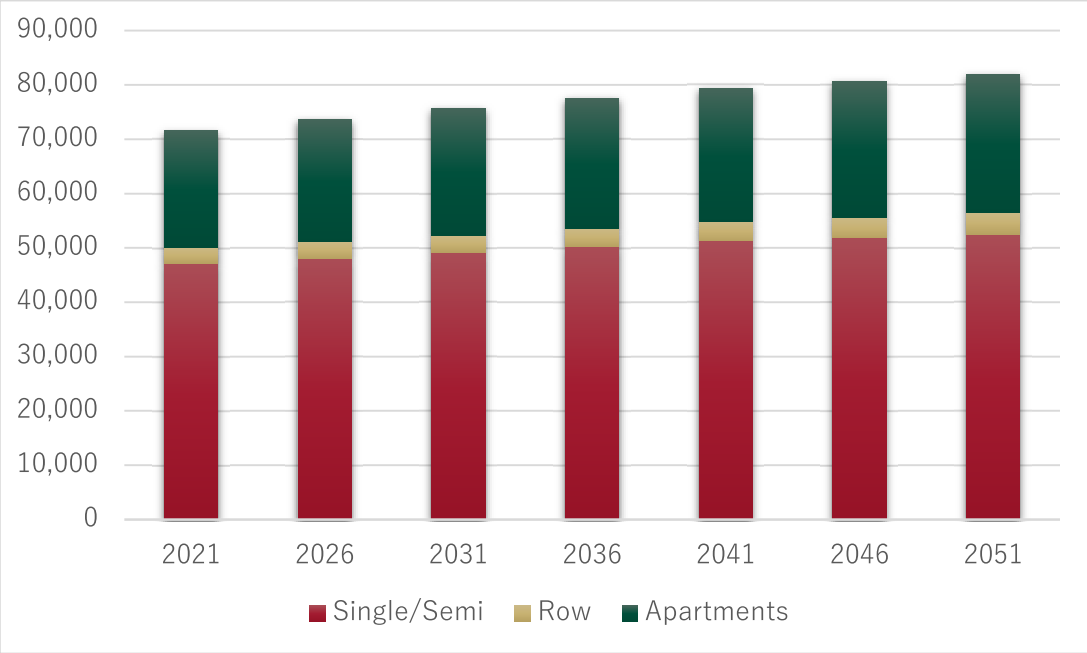
Figure 20: Components of the City of Greater Sudbury's Population Growth



Source: Hemson Consulting based on Statistics Canada data

Since the projected population growth will be driven by new migrants to the CGS, the future housing construction should be made up of all housing types and not just low density single detached units. Figure 21 shows the forecast of the housing units occupied by usual residents by 5-year census period. Recently, the planning term "missing middle" has garnered attention throughout Canada. It is a term that describes the need for all Canadians to be able to find the right size housing that is in a desirable neighbourhood at an affordable price. The reference scenario reflects the ambitions of the CGS's staff to implement policies and zoning to accommodate more row housing development than it ever has before. As stated above, the share of row housing structure type between 2021 and 2051 will be 10% that equates to approximately 1,100 new units. While it is recognized that the need for larger, single family dwellings will still be in high demand, the reference scenario represents a fundamental shift in the CGS's housing market. Row housing is a suitable alternative to mid-rise apartment buildings and may be preferable to newly widowed or retired individuals who want to keep the semblance of their family's home.

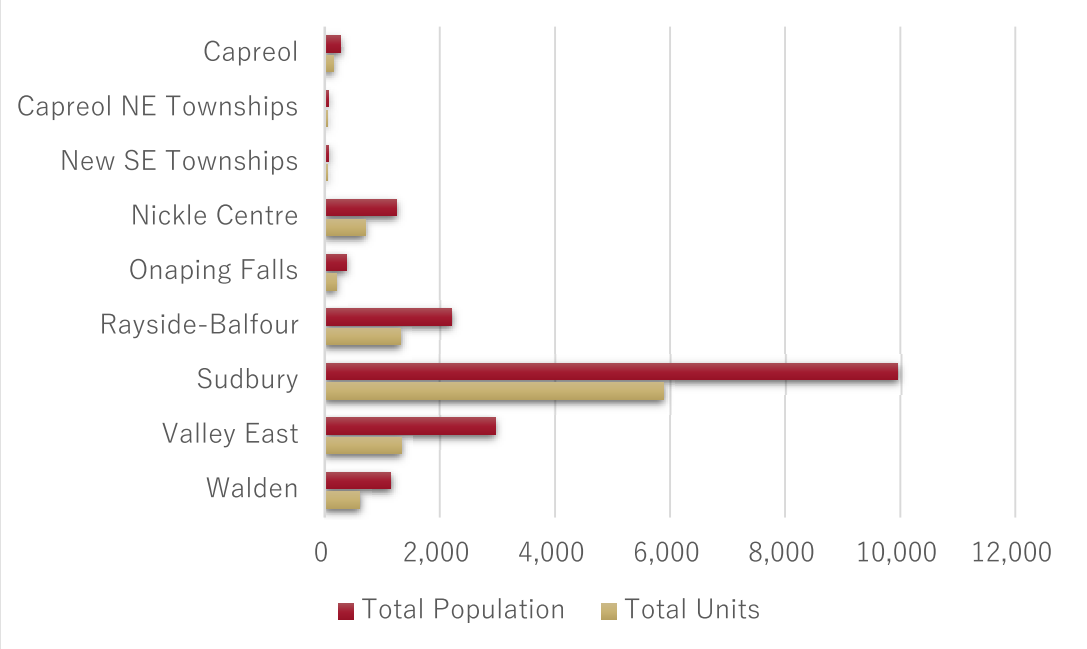
Figure 21: Forecast of Housing Units by Structure Type in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

Figure 22 shows our reference scenario forecast of the location of population growth between 2021 and 2051 for the CGS.

Figure 22: Location of Total Population Growth in the City of Greater Sudbury, 2021-51



Source: Hemson Consulting based on Statistics Canada data

The allocation of the population forecast is based on a number of assumptions, the main ones are listed below:

- Building permits by location since 2019 to the end of 2022.
- Assuming the community of Sudbury to be the main location for future development.
- Housing construction will be predominately in the former City of Sudbury as well as Valley East, Nickle Centre and Walden. The former Rayside-Balfour area is expected to also growth quite substantially, with growth centered in Chelmsford and Azilda.

Table 5 displays the forecast of total place of work employment for the CGS to 2051. As shown, the forecast of total employment is more robust, sustained growth for the next 30 years than it has seen since 2001. This increase in employment is partially driven by the increased population projected to occur. However, it is also driven by City led initiatives to attract new residents with the vision of living and working in a complete community. The CGS is projected to surpass 90,000 jobs by 2051, which is approximately 3,500 more jobs than previously anticipated in 2019.

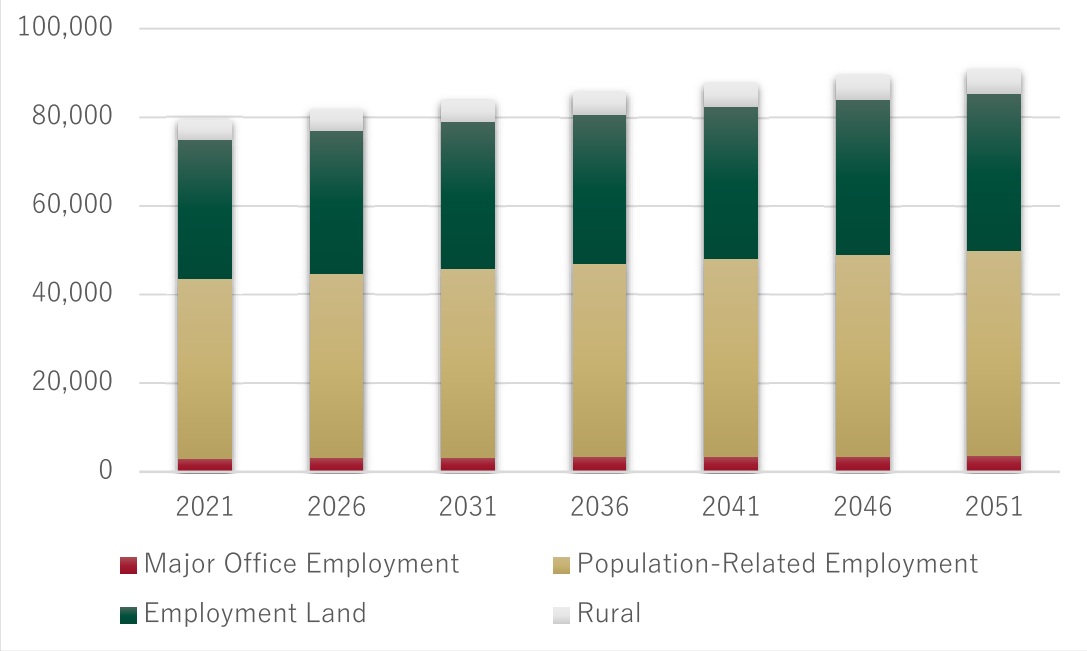
Table 4: Total Place of Work Employment Forecast for the City of Greater Sudbury

Census Year	Total Employment	Employment Growth	Annual Growth Rate
2001	71,290		
2006	76,900	5,610	1.5%
2011	77,740	840	0.2%
2016	78,480	740	0.2%
2021	**79,330**	**850**	**0.2%**
2026	81,660	2,330	0.6%
2031	83,810	2,150	0.5%
2036	85,600	1,790	0.4%
2041	87,620	2,020	0.5%
2046	89,320	1,700	0.4%
2051	**90,750**	**1,430**	**0.3%**
2001-2021		**8,040**	**0.5%**
2021-2051		**11,420**	**0.4%**

Source: Hemson Consulting based on Statistics Canada data

As mentioned previously, the forecast of place of work employment by land use area is an important metric to understand for planning purposes. The CGS, as a regional hub, must offer diverse opportunities of employment for the residents of the CGS and those living in the surrounding municipalities. Figure 23 displays the forecast of total employment by land-use category. The CGS is poised to add nearly 6,000 population related jobs that will be located in close proximity to new residential areas. This is greater than previously anticipated as it is directly tied to the increased level of population growth. With over 4,000 new employment land employment jobs, the CGS will need to ensure that there is an adequate supply of designated employment lands within their existing industrial business parks. This figure represents all industrial related jobs that will occur in existing industrial areas and businesses parks as well as in newly constructed buildings. The growth in major office and in rural areas is expected to be minimal, but it is not expected to decline.

Figure 23: Place of Work Employment Forecast by Land Use Area in the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

The reference scenario has been completed on a traffic zone basis and the results produce a forecast of population, households and total employment broken down by the CGS Official Plan land-use geographies: Urban Built Boundary (Intensification); Designated Growth Areas (between the built boundary and designated settlement areas) and Rural areas that are outside of defined settlements. Of the total 10,300 units projected to be built to 2051, 2,740 (27%) will be within the Built Boundary through intensification, 2,630 (26%) will be in

the rural areas that are outside of existing settlement areas and (48%) will be in the designated growth areas of existing settlements. It is important to note that the boundaries of the built-up areas and settlement areas often encompass only parts of a given traffic zone. While every effort has been made to accurately group the traffic zone growth to the correct land-use type a small margin of error can be anticipated. Therefore, the forecast numbers provided should be used a guide only for any additional work undertaken by the CGS.

B. LOW SCENARIO

The low scenario illustrates the CGS essentially maintaining its historic levels of population growth rates at 0.2% annually. This scenario forecasts an employment growth that is slightly slower than the historical average.

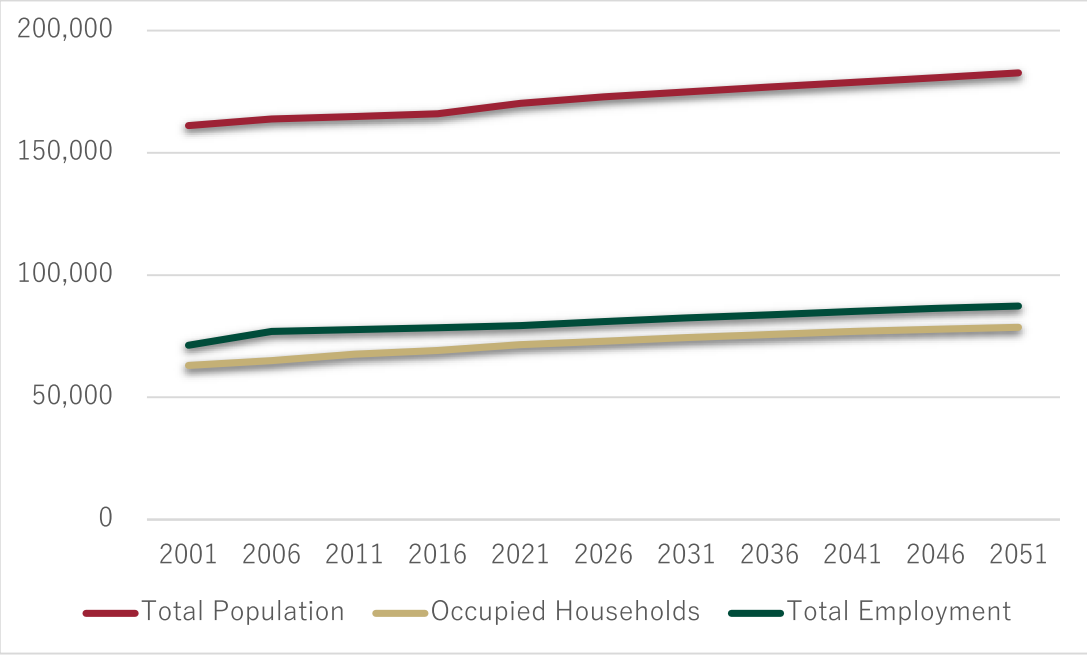
1. Key Assumptions

- Strictly based on historical averages from 2001 to 2021.
- Does not take into account recent building permit activity or housing completions or conversions.
- Migration levels remain flat and forecast a slightly higher out inter-provincial migration
- Aging population is not replaced by any young adults through migration.
- Housing construction remains stagnant.

2. Forecast Results

Under the low scenario the CGS would add nearly 12,500 permanent residents, 7,100 new occupied households and 8,000 jobs over 30 years. The low scenario would see the total population of the CGS achieve 182,700 people, 78,600 occupied households and 87,300 jobs in 2051.

Figure 24: Low Scenario Forecast for the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

C. HIGH SCENARIO

The high scenario was developed to test the effects of significant changes to in-migration that would lead to a larger share of young adults. This represents a best-case outcome reflecting substantial influence from Ring of Fire investment, which would lead to much higher population and employment growth rates than recent trends would generate.

As this Report was being prepared, the Province of Ontario released a news bulletin on March 2, 2023 titled "Ontario Building a Stronger Mining Sector". According to the bulletin, the legislation, if passed "will attract more investment in the province's mining sector while strengthening the made-in-Ontario critical minerals supply chains for batteries, electric vehicles, telecommunications, pharmaceuticals and other advanced manufacturing technologies".

As one of the largest mineral deposits in Ontario, the potential of a critical supply chain from the Ring of Fire to manufacturing companies in Greater Sudbury is of critical importance. This modification to the Mining Act is intended to "increase certainty for business planning and generate investment in Northern Ontario to provide significant economic development opportunities for northern and Indigenous communities".

Any additional modifications to this amendment should be closely monitored and passage may result in revisions to the forecast scenarios provided herein.

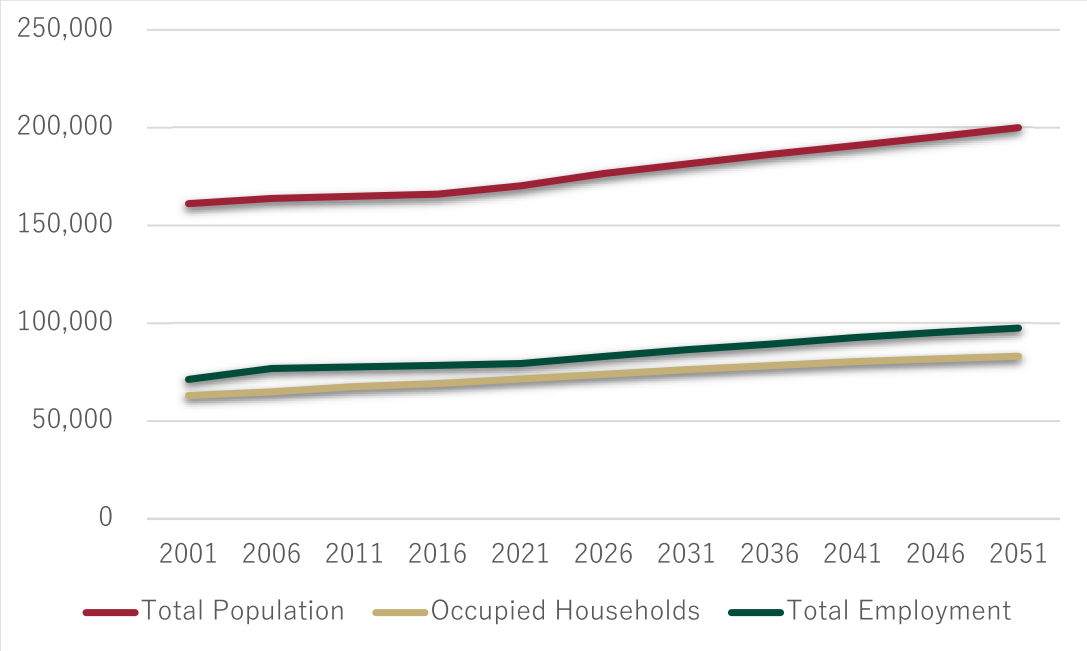
1. Key Assumptions

- Assumes a significant increase in net in-migration, which would include higher national immigration than has been experienced in the past.
- Young adults would occupy a larger share of CGS's population base than under the reference scenario.
- Considers all employment investments from the reference scenario plus substantial Ring of Fire investments within the forecast period.

2. Forecast Results

Under the high scenario the CGS would add nearly 30,000 permanent residents, 11,600 new occupied households and over 18,000 jobs in 30 years. The high scenario would see the total population of the CGS achieve 200,000 people, 83,100 occupied households and 97,500 jobs in 2051.

Figure 25: High Scenario Forecast for the City of Greater Sudbury



Source: Hemson Consulting based on Statistics Canada data

4. CONCLUSION

This report determines the long-term growth outlook for the CGS based on a 30-year time horizon and three forecast scenarios of population, occupied households and place of work employment.

The three scenarios developed intend to illustrate how the CGS may grow to 2051. In the reference scenario, the City's population will grow by 18,300, from 170,210 in 2021 to 188,510 in 2051. The rate of population growth will be faster over the next 30 years than it was over the last 30 years. Most growth will be generated by intra-provincial migration from other areas in Ontario as well as an assumption of sustained International migration. This report updated previous work completed by Hemson for the CGS in 2019. Although the broader economic trends have been confirmed, the recent impact of the COVID-19 pandemic has influenced the growth forecasts in a defining way. Our conclusions are as follows:

- The CGS population projections conclude that population growth will be higher than previously anticipated. The communities of Sudbury (54%), Valley East (16%), Rayside-Balfour (12%), Nickle Centre (7%) and Walden (6%) will see the largest amount of growth.
- The City of Greater Sudbury had its fastest growing census period on record between 2016 and 2021 in terms of population and 2nd fastest in terms of occupied households. Households will outpace population growth on an annual basis due to the aging of the population (more empty nesters and single elderly people, and fewer families with children at home).The CGS will therefore need to develop appropriate plans and policies to manage an aging resident population. With the number of people aged 75 plus doubling in share of population in 30 years, the need for affordable housing and appropriate housing choices should remain a City priority.
- Migration will play an increasingly important role in growing the CGS's economy. New international migrants are needed to help fill the gap in Canada's labour shortage. As well, to retain a population of young adults with families, CGS will need to continue providing housing options that represent complete communities and are near essential services and areas of employment.
- Demand for apartments is projected to remain steady (35%-40% of all housing development). The main shift in housing type is projected to be in the form of row housing (from 5% 10% of all housing development).

- While the City is experiencing fast and sustained population growth, it is imperative for CGS to plan for employment areas that are situated to maximize employment opportunities and allow new residents to work relatively close to where they live. Nearly 40% of the projected 11,400 new jobs projected will be in designated employment areas.

APPENDIX A

FORECAST METHODOLOGY

A. METHODOLOGY

The population, housing and employment forecasts have been undertaken in three phases:

- The first phase established the future growth outlook, and in particular the Citywide and sub-municipal outlooks for population, household and employment growth over the period to 2051.
- The second phase entailed an overview of the residential and employment lands needed to accommodate the demand set forth in the reference forecasts. This includes opportunities that may be available through intensification and redevelopment in existing built up areas, "greenfield" areas with access to full municipal services, and rural areas.
- In the third phase, the results of the reference forecast has been disseminated into various geographic outputs that are included as Appendix A of this report. Note: the forecast of population, occupied households and place of work employment for the traffic zones and dissemination areas are contained in a separate excel file due to the high number of zones.

A Citywide growth forecast has been prepared that incorporates Hemson's well established cohort-survival modelling techniques as well as it's new single-year age and sex model that applies estimates of fertility, mortality and single-year aged migration to and from the City. The three scenarios prepared are based on key demographic assumptions that have been discussed with City staff. All outputs produced through the modelling will be provided to the City as an Excel based package.

This assignment has been completed with access to the full 2021 census results. In addition to special runs ordered by Hemson that inform housing occupancy, employment commuting and employment by the North American Industry Classification System (NAICS) Canada 2017 Version 3.0, the results contained herein in utilized the Statistics Canada Labour Force survey, building permits and annual demographic estimates. Secondary sources have also contributed to the scenario results such as the Ministry of Finance Summer 2022 population outlook and the Canadian Mortgage and Housing Corporation (CMHC) completions data.

The following steps were followed to create the projections:

- The first step involved extracting the population base using recently released figures from the 2021 Census. In addition, the overall migration assumptions, which are the key demographic variable in the population forecast, were obtained through the components of population growth released by Stats Canada in January 2023. The migration assumptions and estimates will account for historical patterns of growth and economic and demographic trends that will influence future growth in the City. Based on the migration assumptions, a City-wide reference forecast of population by single year age group and sex has been prepared.

- Directly related to the population forecast is the number of new households which are determined by applying age-specific household formation rates to the forecast population. This step also includes a forecast of household by structure type, household size by structure type and age of household head (otherwise referred to as the age of household maintainer). Table 1 outlines the age specific headship rates for the CGS in 2021. As seen in Table 1, the largest age groupings of people are between the ages of 55 and 65.

2021 Headship Rates in the City of Greater Sudbury

Age	2021 Census Population	2021 Headship Rate	2021 Occupied Households
15-19	8,830	3.3%	290
20-24	10,475	21.5%	2,250
25-29	10,785	45.3%	4,890
30-34	10,305	53.0%	5,460
35-39	10,235	53.7%	5,500
40-44	10,195	55.9%	5,700
45-49	10,265	56.9%	5,840
50-54	10,530	59.0%	6,210
55-59	12,820	55.5%	7,110
60-64	12,225	59.1%	7,230
65-69	10,350	63.3%	6,550
70-74	8,605	61.4%	5,280
75-79	6,060	65.0%	3,940
80-84	4,360	64.7%	2,820
84-89	2,770	59.6%	1,650
90+	1,250	64.0%	800
Total	**140,060**	**51.1%**	**71,520**

Source: Hemson Consulting based on Statistics Canada data

- A City-wide employment forecast was prepared by applying age-specific labour force participation rates to the forecast population and taking into account unemployment rates and commuting patterns. The employment forecast is based, in part, on the population forecast; the forecast therefore will take into account factors such as the ageing of the population and the changing retirement patterns.

- The employment forecast was then divided into four land-use based categories used for growth management and long-range planning – major office, employment land, population-related employment and rural employment uses – all of which have different growth dynamics and locational and site requirements. These land-use based categories are described in detail in Part D of Section 2 of this report. Below is a general summary:

    - Major Office: jobs within office buildings larger than 20,000 sqm;
    - Employment Land: refers to employment accommodated primarily in low-rise industrial-type buildings;

    - Population Related: is employment that primarily serves local residents;
        - Rural: refers to all jobs located in rural areas

- The three forecast scenarios are based on varying assumptions about future social and economic conditions. As well, the newly released Federal and Provincial policies concerning the number of intended International migrants and what the CGS's share of this will be.

The key metrics produced by the methodology outlined above are described in Section 3 of this report.

APPENDIX B

GEOGRAPHIC OUTPUTS OF REFERENCE FORECAST

Total Population

Former Census Subdivision	2021	2026	2031	2036	2041	2046	2051
Capreol	3,400	3,450	3,500	3,540	3,580	3,620	3,680
Capreol NE Townships	170	190	190	220	220	240	230
New SE Townships	1,260	1,270	1,280	1,290	1,300	1,310	1,330
Nickel Centre	13,310	13,580	13,770	13,980	14,140	14,300	14,560
Onaping Falls	4,860	4,940	5,000	5,060	5,090	5,140	5,230
Rayside-Balfour	16,270	16,760	17,140	17,540	17,840	18,200	18,480
Sudbury	94,860	97,030	98,520	100,180	101,490	103,210	104,770
Valley East	24,840	25,450	25,930	26,360	27,050	27,380	27,800
Walden	11,300	11,540	11,740	11,950	12,080	12,270	12,440
City of Greater Sudbury	**170,270**	**174,210**	**177,070**	**180,120**	**182,790**	**185,670**	**188,520**

Occupied Households

Former Census Subdivision	2021	2026	2031	2036	2041	2046	2051
Capreol	1,420	1,450	1,480	1,500	1,530	1,550	1,570
Capreol NE Townships	70	90	90	100	110	110	110
New SE Townships	510	520	530	530	540	540	550
Nickel Centre	5,370	5,510	5,640	5,790	5,910	6,000	6,070
Onaping Falls	2,000	2,040	2,080	2,120	2,150	2,170	2,200
Rayside-Balfour	6,860	7,110	7,390	7,620	7,860	8,010	8,180
Sudbury	41,530	42,670	43,840	44,900	45,970	46,730	47,420
Valley East	9,390	9,690	10,000	10,230	10,450	10,590	10,720
Walden	4,400	4,530	4,640	4,760	4,870	4,930	5,010
City of Greater Sudbury	**71,550**	**73,610**	**75,690**	**77,550**	**79,390**	**80,630**	**81,830**

Place of Work Employment

Former Census Subdivision	2021	2026	2031	2036	2041	2046	2051
Capreol	110	150	160	170	180	190	200
Capreol NE Townships	460	460	460	460	460	460	460
New SE Townships	110	150	180	210	230	240	260
Nickel Centre	3,920	4,140	4,620	4,940	5,330	5,700	6,040
Onaping Falls	2,300	2,340	2,390	2,430	2,480	2,520	2,560
Rayside-Balfour	3,910	4,200	4,380	4,480	4,590	4,700	4,800
Sudbury	58,880	60,140	61,230	62,250	63,140	63,670	64,060
Valley East	4,260	4,540	4,780	4,940	5,100	5,250	5,380
Walden	5,350	5,490	5,650	5,740	6,120	6,580	7,040
City of Greater Sudbury	**79,300**	**81,610**	**83,850**	**85,620**	**87,630**	**89,310**	**90,800**

Total Population

Settlement Areas	2021	2026	2031	2036	2041	2046	2051
Azilda	4,000	4,150	4,250	4,360	4,440	4,530	4,610
Blezard Valley	330	340	340	350	350	350	360
Capreol	2,870	2,920	2,960	2,990	3,030	3,060	3,110
Chlelmsford	5,720	5,880	6,000	6,130	6,220	6,330	6,420
Coniston	1,310	1,330	1,350	1,380	1,390	1,410	1,440
Dowling	1,350	1,370	1,390	1,400	1,410	1,430	1,460
East End of Long Lake	180	180	190	190	200	200	210
Falconbridge	130	130	130	140	140	140	140
Garson	6,500	6,610	6,700	6,770	6,850	6,920	7,020
Levack	670	680	690	700	700	710	720
Lively	4,450	4,550	4,620	4,700	4,740	4,810	4,870
McCrea Heights	760	770	780	790	800	810	820
McFarlane Lake Flats	550	580	600	610	620	640	660
Old Skead Road	110	110	120	120	130	130	140
Onaping	760	770	780	790	790	800	810
Skead	210	220	230	230	230	240	240
Sudbury	87,950	89,840	91,100	92,540	93,670	95,200	96,540
Valley East	13,490	13,830	14,090	14,320	14,740	14,910	15,140
Vermilion Lake	140	140	140	150	150	150	150
Wahnapitae	330	330	330	330	330	330	330
Wanup	10	10	10	10	10	10	10
Whitefish	80	90	90	90	90	90	90
Outside of a Settlement Area	38,350	39,380	40,190	41,020	41,750	42,470	43,240
City of Greater Sudbury	**170,250**	**174,210**	**177,080**	**180,110**	**182,780**	**185,670**	**188,530**

Occupied Households

Settlement Areas	2021	2026	2031	2036	2041	2046	2051
Azilda	1,760	1,830	1,910	1,980	2,050	2,090	2,140
Blezard Valley	130	130	130	130	140	140	140
Capreol	1,200	1,230	1,250	1,270	1,290	1,310	1,330
Chlelmsford	2,540	2,610	2,700	2,770	2,850	2,890	2,940
Coniston	580	600	620	640	650	670	670
Dowling	520	530	540	550	560	570	580
East End of Long Lake	70	70	70	80	80	80	80
Falconbridge	50	50	50	50	50	50	50
Garson	2,510	2,570	2,630	2,680	2,730	2,760	2,790
Levack	280	290	290	300	310	310	310
Lively	1,780	1,830	1,870	1,920	1,950	1,980	2,010
McCrea Heights	290	300	300	310	320	320	320
McFarlane Lake Flats	210	220	230	240	250	260	270
Old Skead Road	40	50	50	50	60	60	60
Onaping	320	330	330	340	340	350	350
Skead	90	100	100	100	110	110	110
Sudbury	38,810	39,800	40,820	41,750	42,680	43,360	43,950
Valley East	5,090	5,260	5,430	5,550	5,670	5,730	5,800
Vermilion Lake	60	60	60	60	60	60	70
Wahnapitae	130	130	130	140	140	140	140
Wanup	0	0	0	0	0	0	10
Whitefish	30	30	40	40	40	40	40
Outside of a Settlement Area	15,040	15,590	16,110	16,600	17,070	17,350	17,670
City of Greater Sudbury	**71,530**	**73,610**	**75,660**	**77,550**	**79,400**	**80,630**	**81,830**

Place of Work Employment

Settlement Areas	2021	2026	2031	2036	2041	2046	2051
Azilda	680	770	770	780	780	790	790
Blezard Valley	110	120	120	120	120	130	130
Capreol	90	130	140	140	150	160	170
Chlelmsford	1,450	1,560	1,660	1,690	1,730	1,760	1,790
Coniston	300	320	340	360	470	610	750
Dowling	390	390	400	400	400	400	410
East End of Long Lake	10	10	10	10	10	10	10
Falconbridge	80	80	80	80	80	80	80
Garson	1,130	1,200	1,400	1,480	1,550	1,600	1,650
Levack	260	280	290	300	320	330	340
Lively	3,480	3,550	3,620	3,690	3,950	4,260	4,570
McCrea Heights	260	270	270	280	290	290	300
McFarlane Lake Flats	110	150	180	210	210	210	210
Old Skead Road	60	60	80	90	100	110	110
Onaping	280	290	310	320	340	350	360
Skead	120	120	120	120	120	120	120
Sudbury	56,150	57,280	58,290	59,260	60,150	60,680	61,070
Valley East	2,110	2,250	2,360	2,430	2,490	2,550	2,590
Vermilion Lake	70	70	70	70	70	70	70
Wahnapitae	100	100	100	100	100	100	100
Wanup	0	0	0	0	0	0	0
Whitefish	30	30	30	30	30	30	30
Outside of a Settlement Area	12,040	12,600	13,210	13,660	14,180	14,680	15,150
City of Greater Sudbury	**79,310**	**81,630**	**83,850**	**85,620**	**87,640**	**89,320**	**90,800**

Total Population

CGS Wards	2021	2026	2031	2036	2041	2046	2051
1	13,980	14,560	14,780	15,000	15,240	15,530	15,830
2	13,730	14,010	14,230	14,470	14,620	14,830	15,030
3	13,980	14,270	14,540	14,810	15,000	15,250	15,490
4	14,500	14,840	15,140	15,400	15,640	15,930	16,190
5	15,476	15,716	15,916	16,126	16,316	16,511	16,698
6	13,060	13,425	13,710	13,945	14,495	14,660	14,880
7	14,480	14,810	15,040	15,280	15,470	15,690	15,950
8	11,520	11,650	11,640	11,760	11,800	11,860	11,910
9	14,900	15,430	15,860	16,330	16,670	17,040	17,510
10	16,200	16,430	16,680	16,910	17,120	17,340	17,550
11	14,561	14,901	15,191	15,531	15,746	16,221	16,531
12	13,894	14,169	14,354	14,559	14,674	14,809	14,952
City of Greater Sudbury	**170,280**	**174,210**	**177,080**	**180,120**	**182,790**	**185,670**	**188,520**

Occupied Households

CGS Wards	2021	2026	2031	2036	2041	2046	2051
1	6,260	6,440	6,600	6,750	6,950	7,090	7,240
2	5,460	5,610	5,740	5,880	6,000	6,080	6,170
3	5,760	5,920	6,100	6,250	6,390	6,490	6,600
4	6,070	6,260	6,460	6,640	6,820	6,930	7,050
5	5,240	5,350	5,460	5,550	5,650	5,720	5,780
6	5,600	5,800	6,010	6,150	6,270	6,360	6,430
7	5,510	5,690	5,830	5,980	6,120	6,210	6,300
8	4,550	4,610	4,680	4,730	4,790	4,840	4,860
9	5,770	6,040	6,320	6,580	6,830	6,990	7,160
10	7,990	8,210	8,410	8,600	8,790	8,930	9,050
11	6,330	6,500	6,740	6,950	7,120	7,230	7,310
12	7,010	7,180	7,340	7,510	7,640	7,770	7,860
City of Greater Sudbury	**71,550**	**73,610**	**75,690**	**77,570**	**79,370**	**80,640**	**81,810**

Place of Work Employment

CGS Wards	2021	2026	2031	2036	2041	2046	2051
1	6,830	6,980	7,030	7,080	7,180	7,200	7,180
2	8,650	8,810	9,000	9,110	9,500	9,960	10,420
3	4,780	4,960	5,130	5,220	5,340	5,410	5,480
4	4,170	4,400	4,460	4,530	4,580	4,660	4,730
5	5,100	5,260	5,420	5,560	5,720	5,850	5,980
6	1,600	1,750	1,860	1,920	1,970	2,010	2,050
7	3,250	3,460	3,850	4,100	4,290	4,430	4,540
8	7,310	7,380	7,560	7,800	8,070	8,220	8,370
9	6,240	6,720	7,170	7,540	7,900	8,240	8,580
10	16,740	16,930	17,150	17,250	17,310	17,360	17,340
11	6,370	6,620	6,760	6,950	7,150	7,280	7,390
12	8,270	8,360	8,450	8,550	8,620	8,680	8,740
City of Greater Sudbury	**79,310**	**81,630**	**83,840**	**85,610**	**87,630**	**89,300**	**90,800**