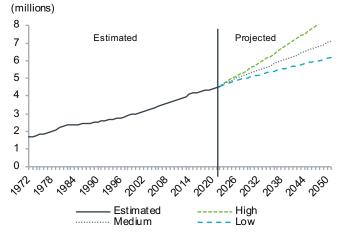
## **Population Projections**

## Methodology and Assumptions

## Introduction

Population projections for Alberta and each of its 19 census divisions are available for the period of 2023 to 2051 by age and sex. Three growth scenarios have been prepared (Figure 1). The medium growth scenario represents the most likely case, and is the reference scenario over the projection period. The high growth scenario anticipates higher levels of fertility and migration, as well as lower mortality rates, leading to higher population growth. The low scenario uses the mortality from the reference scenario, but considers lower fertility and migration, resulting in lower population growth over the projection period. Refer to Appendix 2 for a glossary of demographic terms.

FIGURE 1: POPULATION OF ALBERTA, 1972-2051



Source: Statistics Canada and Alberta Treasury Board and Finance

These projections represent a plausible progression of the population based on the current population base and assumptions regarding future demographic developments. The first decade of the projections are consistent with forecasts of the economic outlook for the province. As long term projections are not strongly influenced by short term trends, the latter part of the projection follows a standard demographic approach,

in which the assumptions reflect historical trends of fertility, mortality and migration. This methodological approach provides planners and researchers with a more relevant set of projections, since Alberta's population growth can display considerable volatility due to economic cycles.

## **Methodology and Assumptions**

## **Component Cohort Survival Method**

The cohort component method is used to project the expected growth, size and age/sex characteristics of the population. This method is essentially a demographic accounting system. It starts with a base-year population distributed by single years of age and sex. Everyone is aged year-by-year, then fertility, mortality and migration assumptions are applied to the base population to project the number of births, deaths, and migrants in subsequent years. Fertility and mortality rates are applied to the population after half of the projected number of migrants for the year have been included in the population. This gives some (but not all, or none) migrants a risk of dying or giving birth. Finally, the three components (births, deaths and migration) are either added to or subtracted from the base population to obtain the projected population. The population is broken down by sex and single years of age up to the open-ended age group of 90 years and over.

The population of Alberta is projected separately from its sub-provincial regions. The component methodology is applied to each of the 19 census divisions (CDs) in Alberta to ensure consistency and comparability. In order to account for regional differences, a unique set of fertility, mortality and migration assumptions is applied to each CD. The sum of the CD projections by age and sex cannot exceed the Alberta total; in this way the Alberta level projections function as a control total for the regional CDs. Two-way raking is used to ensure that the population and components of growth by CDs always add up to the Alberta total by age and sex.



## The Base Population

The base population of the projection model is Statistics Canada's postcensal estimates of the population in Alberta and its 19 CDs as of July 1, 2022 (Figure 2). These estimates are based on the 2016 Census, adjusted for net census undercoverage and incompletely enumerated Indian Reserves.

Note that Statistics Canada's population estimates only include the resident population, as defined by the census. A person must usually be living in a specific area to be considered a resident of that area. The definition of 'usual residents' includes non-permanent residents (NPRs)1, but does not include "mobile" or "shadow" populations, since these people retain a usual residence elsewhere (either outside of Alberta or in a different census division).

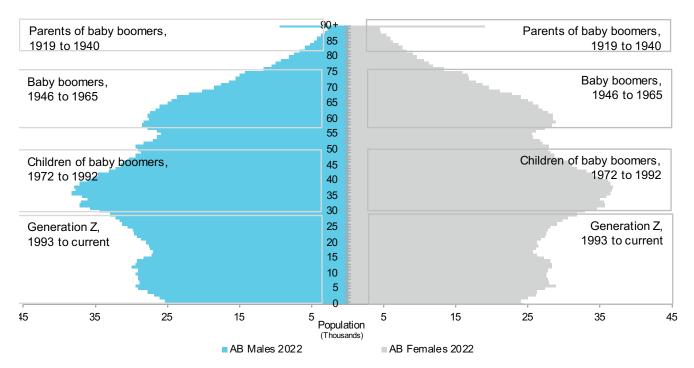
Statistics Canada revises the components of population growth annually to provide the best possible estimates. Since the assumptions for the components of growth tend to be based on historical trends, revisions can alter the trajectory of future growth by introducing changes to the historical patterns of those components. These revisions tend to impact some CDs more than others. Coupled with changes to the projection assumptions, revisions can result in higher or lower projected populations in 2051.

Revised estimates also provide a new starting point for the population by age and sex (i.e., the base year) and this can have a significant impact on the projected growth and age structure. Refer to Appendix 1 for July 1, 2022 population estimates for each CD.

Every five years, revisions tend to be more substantial as the population estimates are rebased, or aligned, to the results of a new Federal census. For instance, rebasing the estimates to the 2016 Census lowered Alberta's total midyear population by just over 40,000 people (i.e., as of July 1st, 2016). The effects on the age structure varied; the population aged 5 to 18 years was revised upwards by over 16,500 persons, while the number of adults aged 19 to 80 years was revised downwards by over 56,000 persons. The largest downward revisions were concentrated in the 20 to 39 year age group.

#### FIGURE 2: AGE/SEX POPULATION (THOUSANDS)

Alberta as of July 1, 2022



Sources: Statistics Canada and Alberta Treasury Board and Finance Note: Information boxes indicate generations in 2022.

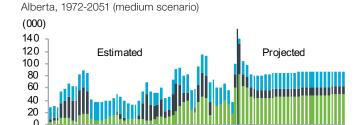


<sup>&</sup>lt;sup>1</sup> NPRs are those temporarily residing in Canada with a study, work or minister's permit, or as a refugee claimant, and family members living with them.

## **Component Assumptions**

In general, fertility and mortality assumptions are derived from detailed analyses of historical trends. Migration assumptions are also based on historical trends, as well as assumptions regarding the economic drivers of migration, such as job creation and industry development. This section presents a more detailed discussion of the historical trends and assumptions for each of the components of growth (Figure 3)<sup>2</sup>.

#### FIGURE 3: COMPONENTS OF GROWTH



■Net International Migration

Net International Migration

Sources: Statistics Canada and Alberta Treasury Board and Finance

## **Fertility Assumptions**

Natural Increase

The projected number of births for a given year are generated by applying age-specific fertility rates to the population of women in the reproductive ages of 15 to 49 years.

#### Alberta

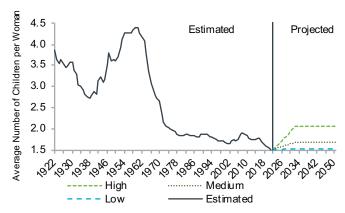
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Alberta's total fertility rate (TFR) dropped below the population replacement level of 2.1 children per woman of childbearing age by the mid-1970s (Figure 4). Fertility ranged from a baby boom high of 4.4 children in 1959 and 1960 to a low of 1.5 children between 2020 and 2022. However, since the late 1970s, it has remained relatively stable when viewed in the larger historical context. Alberta's TFR was 1.5 children in 2022.

Under the medium scenario, the TFR is assumed to stabilize at 1.7 children. In the low scenario, the total fertility rate is projected to drop and stabilize at about 1.5. The low fertility is based on Canada's historical averaged TFR (2001-2021)<sup>3</sup>. Under the high scenario,

#### **FIGURE 4: TOTAL FERTILITY RATE**

Alberta, 1922-2051



Sources: Statistics Canada and Alberta Treasury Board and Finance

the total fertility rate is assumed to rise gradually and stabilize at replacement level (i.e., 2.1 children).

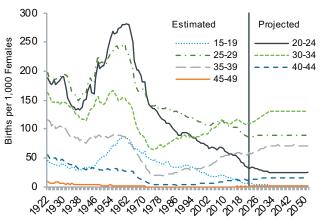
Analysis of age specific fertility trends over time shows a long-term shift in the ages of childbearing among women in Alberta (Figure 5). A higher proportion of women are delaying childbearing and having their first child in their late 20s or early 30s, resulting in a drop in the fertility rates of young women and an increase in fertility among older women. This trend is projected to continue over the next decade, and then stabilize for the remainder of the projection period.

## Regional

There is considerable variation in the fertility rates among census divisions within the province. The TFR in 2022 ranged from highs of 3.3 children in CD 17 (Slave Lake)

#### FIGURE 5: AGE-SPECIFIC FERTILITY RATES

Alberta, 1922-2051 (medium scenario)



Sources: Statistics Canada, Alberta Vital Statistics and Alberta Treasury Board and Finance



<sup>&</sup>lt;sup>2</sup> All references to specific years refer to a census year period (midyear to midyear), unless otherwise noted.

Source: Crude birth rate, age-specific fertility rates and total fertility rate (Table: 13-10-0418-01), https://www150.statcan.gc.ca/t1/tbl1/ en/tv.action?pid=1310041801

and 2.6 in CD 3 (Pincher Creek) to a low of 1.0 in CD 15 (Banff). Fertility was at or above replacement in eight census divisions in 2022. Lower fertility areas where the TFR fell below the provincial rate of 1.5 included CD 11 (Edmonton), CD 6 (Calgary) and CD 15 (Banff) (Table 1).

**TABLE 1: ALBERTA AND CENSUS DIVISIONS** 

TFR and Median Age of Births, 2022

	Major Community in Census Division	Total Fertility Rate	Median Age of Births
CD1	Medicine Hat	1.62	30.1
CD2	Lethbridge	1.82	29.9
CD3	Pincher Creek	2.60	28.7
CD4	Hanna	2.30	29.2
CD5	Drumheller	2.07	30.0
CD6	Calgary	1.37	32.9
CD7	Stettler	2.02	30.0
CD8	Red Deer	1.61	30.8
CD9	Rocky Mountain House	2.18	28.4
CD10	Camrose	1.93	30.2
CD11	Edmonton	1.44	32.0
CD12	Cold Lake	2.10	29.8
CD13	Whitecourt	2.07	30.3
CD14	Edson	1.85	29.4
CD15	Banff	1.03	33.4
CD16	Wood Buffalo	1.90	31.5
CD17	Slave Lake	3.33	27.8
CD18	Grande Cache	2.14	29.2
CD19	Grande Prairie	1.83	30.1
	Alberta	1.53	31.8

Sources: Statistics Canada, Alberta Vital Statistics and Alberta Treasury Board and Finance

Multiple factors likely contribute to the variability in regional fertility, including income levels, educational attainment, employment opportunities, and the proportion of Indigenous people in the population. For instance, since major urban centres such as Calgary and Edmonton tend to have more educational and career opportunities than other areas of Alberta, women living in and moving to these areas tend to reproduce later in life and have fewer children when compared with women in rural areas of the province.

Indigenous people tend to have higher fertility rates and larger family sizes than non-Indigenous people, resulting in higher fertility rates in areas where they account for a greater proportion of the overall population, such as CD 3 (Pincher Creek), CD 12 (Cold Lake), CD 17 (Slave Lake) and CD 18 (Grande Cache).

In addition to the variation in overall fertility, there are also marked regional differences in the age patterns of fertility. The estimated median age of women who had a birth in 2022 ranged from a low of 27.8 years in CD 17 (Slave Lake) to a high of 33.4 years in CD 15 (Banff) (Table 1). As such, assumptions were developed for each region according to their own fertility characteristics, derived from historical trends, in order to maintain those regional differences.

## **Mortality Assumptions**

The projected number of deaths are a result of the application of age and sex specific mortality rates to the population in each year.

#### **Alberta**

Mortality assumptions were not adjusted for 2023 as the acute impacts of COVID-19 were already factored into the base estimates of mortality. Life expectancy is projected to gradually increase in keeping with its long-term trend.

In 2022, male life expectancy at birth was 78.0 years, up from 70.7 in 1976. In contrast, female life expectancy in 2022 was 82.7 years, compared to 77.7 in 1976. Many of the large historical gains in life expectancy resulted from improvements in infant and child mortality. With the low mortality currently observed at these ages, future gains in life expectancy will likely be more concentrated at older ages (Figures 6 and 7). Projected age-specific mortality rates were derived from a method based on the Lee Carter model (1992).4

The model essentially breaks down the age-specific mortality rate (ASMR) into three components: an age-specific constant term, a time-varying mortality index, and an age-specific component that measures how fast mortality at each age varies when the mortality index changes. With the projected mortality index, ASMRs can be calculated for future periods.

Two sets of mortality assumptions (low/medium and high) were developed. Under both scenarios, life expectancy at birth in Alberta is expected to continue its upward trend in the future. 5 Under the low/medium scenario, life expectancy at birth for females is expected to gain 4.7 years from its 2022 level to 87.4 by 2051, while it would increase by 6.2 years to 84.2 for males. The high population growth scenario introduces a lower mortality profile, wherein life expectancy at birth for females

<sup>&</sup>lt;sup>5</sup> Projected mortality assumptions have not taken into account any specific impact of the opioid crisis beyond current trends in mortality.

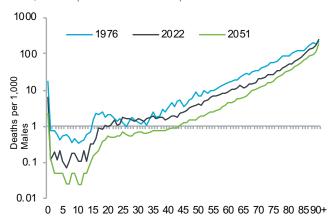


<sup>&</sup>lt;sup>4</sup> Lee, Ronald D. and Lawrence Carter. 1992. "Modeling and forecasting the time series of U.S. mortality." Journal of the American Statistical Association 87 (419) (September): 659-671.

would reach 90.5 years in 2051 for a gain of 7.8 years. Compared to 2022, males would add 9.8 more years to their life expectancy for a total of 87.8 years by the end of the projection period under the high scenario (Figure 8).

#### **FIGURE 6: AGE-SPECIFIC MORTALITY RATES**

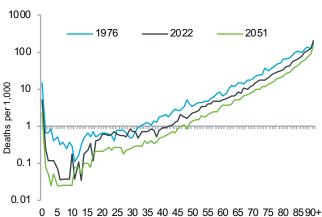
Males, Alberta (medium/low scenario)



Sources: Statistics Canada and Alberta Treasury Board and Finance

#### FIGURE 7: AGE-SPECIFIC MORTALITY RATES

Females, Alberta (medium/low scenario)

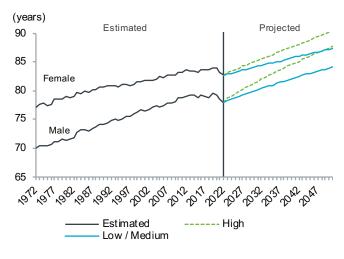


Sources: Statistics Canada and Alberta Treasury Board and Finance

Under both scenarios, male life expectancy at birth is assumed to increase at a faster pace than the life expectancy of females. This is consistent with recent historical trends, where males have experienced larger gains than females. Therefore, it is expected that the sex differential will continue to shrink over the projection period, falling from 4.7 years in 2022 to 3.2 and 2.7 years in 2051, under the medium/ low and high scenarios, respectively (Figure 8).

#### FIGURE 8: LIFE EXPECTANCY AT BIRTH

Alberta 1972-2051



Sources: Statistics Canada and Alberta Treasury Board and Finance

#### Regional

The Lee Carter method requires a large number of events to ensure reliable results, and as such, could only be used at the Alberta level to produce a "mortality change factor". The factor, which takes into account year-to-year changes in Alberta's mortality by age and sex is subsequently applied to historical mortality by age and sex for each CD to produce region-specific projected ASMRs.

For each CD, ASMRs were calculated from the area's historical data by averaging multiple years of data to stabilize the mortality trend. Final projected ASMRs were obtained by multiplying the Alberta level mortality change rates (from the Lee Carter model) by the CD-specific ASMRs for both females and males.

## **Migration Assumptions**

Separate projections of international (movement from outside the country), interprovincial (movement between provinces and territories) and intraprovincial (movement between CDs) migration were created to produce the projected number of net migrants for Alberta and each CD. Assumptions about the age and sex distributions of net migrants were developed for each region based on its own historical data, as well as potential age structures of migrants in the future.

The Alberta economy has remained resilient in the face of multiple challenges. In 2014 there was an oil price shock causing a recession between 2015-16. Following the recession, Alberta experienced transportation bottlenecks amidst slower global growth. In 2020, the dual shocks of the COVID-19 pandemic and collapse



in oil prices affected the province greatly. The economy has since regained its footing and moved past those shocks.

Building on this stability, economic activity is expected to grow at a robust pace in 2023. As the economy moves into an expansion phase, growth is expected to moderate over the short to medium term, underpinned by solid business investment, a strengthening labour market and continued growth in exports.

Economic conditions in the province have a very strong effect on population growth because of the impact on migration patterns. The migration assumptions for this projection include short (2023 to 2025), medium (2026 to 2030), and long-term assumptions (2031 to 2051). Given the potential for economic conditions to change, fluctuations in migration flows may occur.

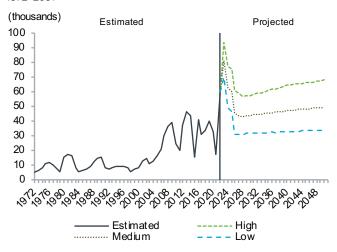
## International Migration

International migration is highly dependent on the Federal Government's immigration policies and targets, and increasingly on the Alberta economy. After hitting a low of 6.0% in 1998, Alberta's share of Canada's immigrants increased, due in large part to the province's strong economy and labour market. In 2016, a record 17.9% of immigrants moving to Canada settled in Alberta. In the following years, this share gradually decreased, falling to a low of 10.6% in 2021. In 2022, of the 431,645 people that landed in Canada, 52,573 made Alberta their home, representing 12%.

The impacts of COVID-19 on international migration were profound. The closing of international borders, along with limited availability of international flights and slower processing of new permanent resident applications slowed international migration substantially starting in April 2020. In response to low immigration throughout the pandemic, Canada has continually increased targets. Currently they are set at 465,000 in 2023, 485,000 in 2024 and 500,000 in 2025. Due to the increase in federal targets, as well as Ukrainian migrants entering the province permanently, immigration to Alberta is forecast to increase significantly, reaching a high in 2025 before turning down (Figure 9). Net emigration is expected to pick up alongside immigration.

Non-permanent residents (NPRs) are heavily dependent on Federal government policies and economic conditions. Recently, COVID-19 impacted NPRs in multiple ways. Due to high unemployment caused by the pandemic, a policy was implemented to limit the types of TFWs allowed to work in Alberta. Furthermore, international travel restrictions limited the ability of international students to come to Canada. As a result of these factors, Alberta witnessed net outflows of NPRs in 2021. NPRs significantly increased in 2022 and are expected to be even higher in 2023, due in large part

FIGURE 9: NET INTERNATIONAL MIGRATION TO ALBERTA 1972-2051



Sources: Statistics Canada and Alberta Treasury Board and Finance

to an increase in TFWs to fill labour shortages, an influx of migrants fleeing conflict in Ukraine and international students. Between 2026 and 2028, we expect the flow of NPRs to turn negative when Ukrainian residents start returning home or move to the permanent residence category.

Based on historical trends, three immigration scenarios have been developed to capture uncertainty and change within the context of immigration policy. Over the projection period, Alberta is expected to receive 1.59 million immigrants under the medium scenario, whereas under the high and low scenarios, the province could welcome about 2.07 million and 1.18 million people, respectively. Net emigration (i.e., emigrants minus returning emigrants plus net temporary emigrants) is assumed to increase gradually, as the number of international in-migrants increases, and the province's population grows. Over the long term, the flow of net NPRs is expected to be slightly positive. In the high scenario, immigration is expected to lift net international migration higher than the historical average, while net international migration in the low scenario will remain below the levels of the last ten years (Figure 9). Between 2023 and 2051, Alberta is expected to receive close to 1.41 million net international migrants under the medium scenario. Under the high and low scenarios, about 1.88 million and 1.01 million net international migrants are projected to move to Alberta, respectively.

## **Interprovincial Migration**

The strength of Alberta's labour market and its economic performance relative to other provinces drives net interprovincial migration. Before the pandemic, Alberta was gaining traction and net interprovincial migration had just turned positive in 2020. However, the



Alberta economy saw an unprecedented contraction in 2020. Since interprovincial migration lags economic conditions by about a year, 2021 saw net outflows as mobility picked up and people left the province for economic opportunities elsewhere in the country. Due to improving economic activity, 2022 presented strong interprovincial net inflows. Between 2023 and 2025, net interprovincial migration is expected to increase tremendously before stabilising to its long-term trend (Figure 10). The long-term average for the medium projection is 13,000 net interprovincial migrants annually. The high and low scenarios project about 20,600 and 6,900 yearly interprovincial migrants, respectively (Figure 10). Over the long term, the regions expected to see the largest net gains are CD 6 (Calgary), CD 8 (Red Deer), CD 11 (Edmonton), CD 16 (Wood Buffalo) and CD 19 (Grande Prairie).

## Intraprovincial Migration

The projected number of people moving between CDs is developed using long-term historical averages. Net intraprovincial migration has no impact on Alberta's overall population growth, so only one scenario was developed for this projection. Historically, CD 6 (Calgary) and CD 11 (Edmonton) have welcomed many intraprovincial migrants, as has CD 8 (Red Deer). Further, CD 5 (Drumheller) and CD 1 (Medicine Hat) are also expected to have positive net intraprovincial migration over the projection period. All other census divisions tend to have more people move out than into their areas (i.e., net loss). CD 16 (Wood Buffalo), CD 2 (Lethbridge) and CD 17 (Slave Lake) tend to have large numbers of people leave for other regions in the province. Over the next 29 years, about 105,500 net intraprovincial migrants within Alberta are expected

to move to the CDs with the two largest urban centres, Calgary, and Edmonton, for employment and educational opportunities.

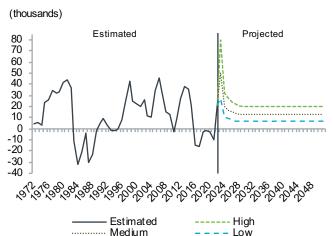
## **Total Net Migration**

Total net migration is expected to accelerate over the next couple of years with the increased Federal immigration targets, Ukrainian refugees and increasing net inflows of interprovincial migrants due to the improving economic outlook in the province. Net migration in 2023 is forecast to be 131,674, higher than the 81,658 migrants seen in 2022 (Figure 11). Favorable economic conditions in the province, relative to the rest of Canada, are expected to accelerate net interprovincial migration inflows in the near term, before stabilizing to the long-term trend.

Regions with more employment and educational opportunities tend to attract more migrants. Based on past trends, of the over 1.84 million net migrants moving to Alberta over the next 29 years, 80% are expected to settle in the regions with the province's two largest urban centres (i.e., CD 6 (Calgary) and CD 11 (Edmonton). During the last recession, areas with substantial oil sands development, such as CD 16 (Wood Buffalo) and CD 12 (Cold Lake), were hit particularly hard, resulting in large net outflows of migrants. CD 16 was impacted once again by the 2020 slump in oil prices and net outflows accelerated in 2021. While oil prices and global demand have improved in the past year, there has been no new major developments and migration related to oil projects has remained muted.

## FIGURE 10: NET INTERPROVINCIAL MIGRATION

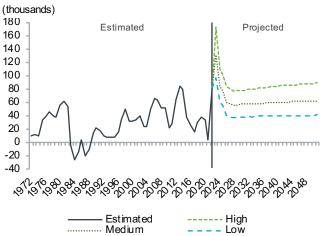
Alberta, 1972-2051



Sources: Statistics Canada and Alberta Treasury Board and Finance

## FIGURE 11: TOTAL NET MIGRATION TO ALBERTA

1972-2051



Sources: Statistics Canada and Alberta Treasury Board and Finance



CD 12 (Cold Lake), a region that historically has a net loss of migrants, will see some gains through net migration inflows over the short term (2023-2025) before returning to moderate losses over the long term. Most of the oil projects in that area are in Situ and require less direct labour. Migration to areas which service the oil and gas sector, such as CD 19 (Grande Prairie) and CD 8 (Red Deer) will see a boost in the short term from increased oil demand. Thereafter, both regions are expected to see a net increase in migrants between 2023 and 2024 as these CDs act as service centres to surrounding areas, before returning to their stable long-term trends.

CD 6 (Calgary) and CD 11 (Edmonton) are expected to follow the provincial pattern, showing a few years of accelerated growth, before returning to their respective long term trends. While CD 6 tends to suffer more during economic downturns relative to CD 11, it also tends to benefit more during upticks. This pattern was exemplified in 2022, where CD 6 saw over 43,000 net migrants compared with about 30,000 in CD 11.

CD 6 is expected to grow at a faster pace than CD 11, bolstered by economic activity in the private sector. Calgary has been building its reputation as an emerging tech hub and increased growth in this burgeoning sector should attract migrants to this region. Several tech firms are choosing to set up base or expand their operations in Calgary. Amazon Web Services, Simmit NanoTech, Symend, Attabotics, Mphasis, Infosys, mCloud and Applexus are among the major drivers of the tech industry in Calgary who will create jobs for the city and its surrounding areas. Some Edmonton tech companies, such as Jobber, have seen significant investment. However, the tech sector in Edmonton is expected to have a lesser impact compared with Calgary.

While recent migration has heavily favored CD 6 over CD 11, rapidly increasing housing and rental costs in Calgary could serve as an obstacle for new migrants. Furthermore, despite the difference in their tech sectors. both CD 11 and CD 6 will continue to grow. The two major urban areas are expected to attract significant investment and lead economic growth for the province. Both regions will also benefit from increased Federal immigration targets. Due to these factors, we expect that migration to CD 11 will pick up relative to CD 6 in the short term and reach a balance over the medium to long term.

## **Ukranian Migrants**

Following the Russian invasion of Ukraine, millions of Ukrainian people were forced to flee the country, many of them women and children. Current United Nations estimates indicate that 6.3 million people have fled Ukraine seeking safety, protection and assistance.

The Canadian government has committed to welcoming unlimited numbers of Ukrainian refugees until it is safe for them to return home. The federal government created the Canada-Ukraine authorization for emergency travel (CUAET) visa to help those displaced come to Canada quickly. The CUAET visa is a special type of visitor visa and permit holders are not automatically considered part of the resident population. However, CUAET visa holders can obtain a work or study permit. Those who do, along with their spouse/common-law partner, and dependent relatives, would be counted as part of the resident population, and are therefore part of this projection this year. As of June 2023, 158,677 Ukrainians arrived in Canada under the CUAET program.

Beginning in 2024, it is expected that some Ukrainians will transition from the NPR category and become permanent residents of Canada. This projection anticipates that in 2026, Ukrainian migrants will begin returning home, leading to net outflows of NPRs between 2026 and 2028.

In the province, CD 11 has the highest share of people who reported Ukrainian heritage in the 2021 Census. However, CD 6 has received the highest share of recent Ukrainian immigrants to Alberta<sup>6</sup>. It is forecast that the largest proportions of Ukrainian people entering the province will move to CD 6, followed by CD 11, with a small proportion across the rest of the province7.

## For more information on the **Population Projections see:**

### **Data for Alberta Population Projections.**

Includes estimated (1996-2022) and projected (2023-2051) population of Alberta and its 19 Census Divisions by single year of age and sex as well as some summary statistics.

Contact Jennifer Hansen at 780.427.8811

<sup>&</sup>lt;sup>7</sup> Mapping Ukrainian Evacuees in Alberta: A Heat Map Analysis of Arrival Trends from March to December 2022 https:// ukrainiansinalberta.ca/finalresidencies/



https://calgaryherald.com/news/local-news/beyond-capacityhousing-ukrainian-evacuees-in-calgary-a-daily-struggle-for-support-

# Appendix 1

# CENSUS DIVISIONS AND THEIR RESPECTIVE POPULATIONS AS OF JULY 1, 2022

Census Division	Major Community	Population	
Alberta		4,543,111	
CD1	Medicine Hat	86,580	
CD2	Lethbridge	187,204	
CD3	Pincher Creek	40,195	
CD4	Hanna	9,385	
CD5	Drumheller	58,278	
CD6	Calgary	1,720,622	
CD7	Stettler	41,008	
CD8	Red Deer	225,441	
CD9	Rocky Mountain House	21,107	
CD10	Camrose	99,760	
CD11	Edmonton	1,558,704	
CD12	Cold Lake	71,366	
CD13	Whitecourt	69,984	
CD14	Edson	29,428	
CD15	Banff	40,994	
CD16	Wood Buffalo	77,091	
CD17	Slave Lake	63,685	
CD18	Grande Cache	14,602	
CD19	Grande Prairie	127,677	

Sources: Statistics Canada

# Appendix 2

Age Specific Fertility Rate	Number of births per 1,000 women of a specific age within the childbearing age range, normally age 15 to 49 years.
Baby Boomer Period	Period following World War II, 1946–1965, marked by an important increase in fertility rates and in the absolute number of births.
Components of Population Growth	Births, deaths and migration are components that alter the size of the total population and its composition by age and sex.
Emigrant	Canadian citizen or immigrant who left Canada to settle permanently in another country.
Immigrant	Person who has been permitted by immigration authorities to live in Canada permanently.
International Migration	Movement of persons between Canada and other countries.
Interprovincial Migration	Movement from one province/territory to another resulting in a permanent change in residence. A person who takes up residence in another province is an out-migrant with reference to the province of origin and an in-migrant with reference to the province of destination.
Intraprovincial Migration	Movement within the province from one Census Division to another resulting in a permanent change in resider
Median Age	Age "x", such that exactly one half of the population is older than "x" and the other half is younger than "x".
Migration	Permanent change of residence from one geographical unit to another.
Mortality Rate	It is usually measured as the number of deaths per 1,000 individuals of that population for a particular time period
Natural Increase	Net contribution of births and deaths to population change.
Net International Migration	Equal to: immigrants - emigrants + returning emigrants - temporary emigrants + net non-permanent residents
Net Interprovincial Migration	Difference between in-migrants and out-migrants for a given province or territory.
Net Migration	Difference between in-migration and out-migration for a given area and period of time.
Net Non-permanent Residents	Variation in the number of non-permanent residents between two dates.
Net Temporary Emigrants	Variation in the number of temporary emigrants between two dates.
Net Undercoverage	Difference between the number of persons who were covered by the census but who were not enumerated (i. undercoverage) and the number of persons who were enumerated whereas they should not have been or who were enumerated more than once (i.e. overcoverage).
Non-Permanent Residents	Persons from another country who had an employment authorization, a student authorization, or a Minister's permit, or who were refugees claimant, and family members living with them.
Permanent Resident	A person who is legally in Canada on a permanent basis as an immigrant or refugee, but not yet a Canadian citizen.
Population Growth	Total change in population of a given geographic unit in a given period, resulting from births, deaths and migration
Population Projection	An estimate of a future population derived from calculations made on certain assumptions that determine the future course of population change.
Population Pyramid	A chart shows the distribution of a population by age and sex.
Replacement Level (Fertility)	Mean number of births per woman necessary to assure the long-term replacement of a population for a given mortality level. Currently, the replacement level in Canada and most other developed countries is about 2.1 children per woman.
Returning Emigrants	Canadian citizens or landed immigrants who have emigrated from the country and subsequently returned to Canada to re-establish a permanent residence
Shadow Population	It refers to those individuals who reside in one region on a temporary basis, while their primary residence is located somewhere else. They are enumerated by the census as residents of the jurisdictions where their primary residence is located.
Temporary emigrant	Canadian citizen or immigrant who left Canada to settle temporarily in a foreign country.
Total Fertility Rate	The sum of age-specific fertility rates during a given year. It indicates the average number of children that a generation of women would have if, over the course of their reproductive life, they had fertility rates identical to those of the year considered.

