

# population projections.

PRODUCED FOR THE CALGARY METROPOLITAN REGION BOARD & ITS MEMBER MUNICIPALITIES

December 2018

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*by:* rennie intelligence

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**rennie**

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## rennie intelligence.

Our rennie intelligence division empowers individuals, organizations and institutions with trusted market insights. We are a diverse team of real estate experts with experience in urban land economics, community planning, demographics and sales.

Data-driven by nature, we research and compile the latest metrics, observe trends as they emerge and create informed forecasts. Our resources support our Advisors, our clients and the public. Through speaking engagements, consulting and regular publications, we help them form sound, strategic plans that help our clients achieve their goals.

## 01. OVERVIEW

### SCOPE OF WORK

The Calgary Metropolitan Region Board (“CMRB”) engaged Rennie to produce a long-term projection of population (to the year 2076) for the CMRB area as a whole, as well as an allocation of future regional population to each of the CMRB’s ten member municipalities. These municipalities include Airdrie, Calgary, Chestermere, Cochrane, High River, Okotoks, Strathmore, Foothills, Rocky View, and part of Wheatland County.

The regional projection was developed within a cohort survival framework, whereby trends in age-specific fertility, age- and sex-specific mortality, and age- and sex-specific migration (to and from other locations in Alberta, other parts of Canada, and other countries) were considered along with the aging of the region’s existing population.

It is worth noting that the starting point for the CMRB-wide projection was a projection of Canada’s population as a whole, followed by a formal outlook for Alberta’s population. This geographically-nested modelling framework was utilized to explicitly acknowledge the role that immigration plays in shaping the national population, as well as the role that both immigration and interprovincial migration play in shaping the provincial population. For Canada as a whole this includes giving consideration to the impacts of the federal government’s revised immigration targets, which, at the time of the model’s development, planned for upwards of 340,000 immigrants annually by 2020. (This target has subsequently been updated to include 350,000 immigrants in 2021, but that information was not timely enough to formally incorporate into these projections.)

The regional outlook was predicated on annual historical estimates from Statistics Canada from 1986 to 2017 for total population and from 1986/87 to 2016/17 for the individual components of demographic change.

The regional projection was presented as both total population and population described by single years of age and sex on an annual basis from 2017 to 2076.

Based on both previous work completed by Urban Futures for the Calgary Regional Partnership and specific input from staff at each of the CMRB’s member municipalities, the regional projection of total population was then allocated to each of its ten municipalities using a shift-share approach.

The output from this step of the process was total population presented on an annual basis for each municipality from 2017 to 2076.

### DATA SOURCES

A range of data sources were utilized in the development of the population projections, including Statistics Canada’s Demographic Estimates Compendium, the federal census (from 1986 through 2016), Alberta Treasury Board population projections, Alberta Vital Statistics, and various municipal/civic censuses. Specific feedback was also provided by municipal planning staff on the initial allocations.

### ADDITIONAL NOTES

1. The regional estimates of population from Statistics Canada’s Demographic Estimates Compendium publication are adjusted for net census undercoverage. Any Census of population—be it federal, regional, or municipal—invariably misses some people (while actually double-counting others). This is most often due to people changing residences around the time of Census enumeration, though other factors come into play as well.

Given this, any population estimate derived from a census of population underestimates, on a net basis, the true number of people living within a particular jurisdiction (it also slightly mis-represents the true underlying age composition of the population).

Statistics Canada attempts to correct for this after releasing the latest census data by producing what

are referred to as *undercoverage-adjusted* population estimates. These estimates tend to be in the range of 2-5% higher than the underlying census counts depending on the Census Division or Province/Territory being considered.

In the case of the CMRB area, population undercoverage in 2016 has been estimated at 4.8%.

2. The backward- and forward-looking under-coverage-adjusted regional population estimates serve as the “control total” to which the historical and future estimates for the region’s member municipalities are forced to aggregate.

In developing historical population estimates that were consistent between the regional and municipal levels, historical federal census estimates from 1986 to 2016, combined with civic census data (where available) for the region’s member municipalities, were used to develop a percentage distribution of population within the CMRB area.

This distribution, which sums to 100% for the 10 member municipalities, was then applied to the historical undercoverage-adjusted regional estimates produced by Statistics Canada. This, in turn, yielded implied undercoverage-adjusted municipal population estimates. Note that while these undercoverage-adjusted estimates will not precisely match historical census counts, they are entirely consistent with them.

For example, the City of Calgary represented 84.5% of the CMRB’s total population in 2016 as per the federal census, and it represents 84.5% of the undercoverage-adjusted regional total as per Statistics Canada’s recent estimate for the same year.

3. The forward-looking municipal-level population estimates are *allocations*. Indeed, they are not comprehensive projections that explicitly reflect each municipality’s existing demography (apart from the overall size of the population) or local economic conditions, and as such they should not be exclusively relied upon to make decisions relating to future

annexations, infrastructure, or other local planning considerations. Instead, they are collectively intended to be used as a high-level, holistic reference tool that reflects the future directions of change envisioned by and for each municipality, recognizing that over a projection horizon that stretches to 2076 there exists much uncertainty.

4. The regional population projection (and hence the municipal allocations) should be considered a baseline scenario, reflecting a long-run outlook that will, in reality, see growth oscillate around the outlook provided herein. In other words, growth in the region and its municipalities will continue to be cyclical, as it has been in the past, with periods of faster growth being preceded and followed by periods of slower growth. The numbers presented herein should be viewed as reflecting an “averaging-out” of those growth cycles.

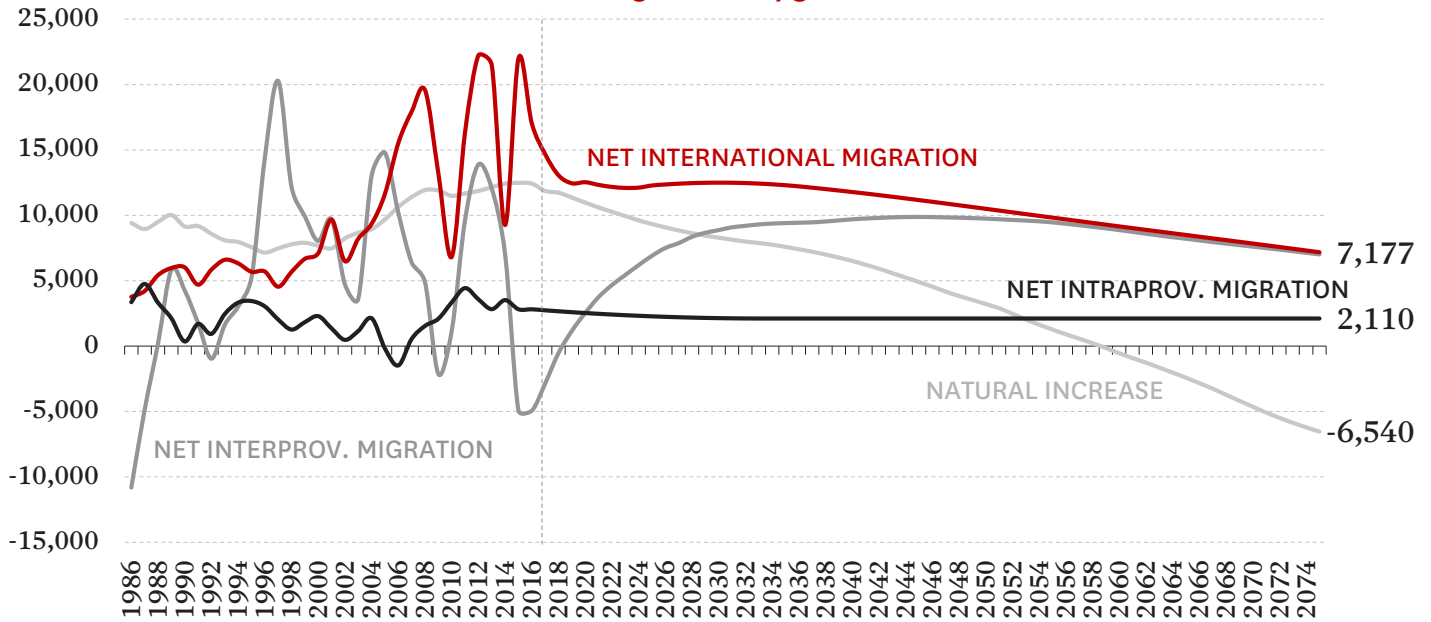
## 02. MODEL OUTPUT

TOTAL POPULATION	1986	1991	1996	2001	2006	2011	2016	2018	2023	2028
Airdrie	11,603	13,747	16,373	20,942	30,121	44,285	64,536	66,889	74,556	84,828
Calgary	649,003	722,113	788,691	903,113	1,029,064	1,141,155	1,298,711	1,342,861	1,456,431	1,574,641
Chestermere	697	1,044	1,961	3,509	9,961	15,424	20,840	21,619	24,615	28,703
Cochrane	4,594	5,937	7,624	12,126	14,329	18,290	27,091	28,152	31,683	36,109
High River	5,524	6,767	7,557	9,603	11,163	13,442	14,237	14,825	16,907	19,464
Okotoks	5,749	7,370	8,738	11,987	17,854	25,500	30,266	31,439	35,266	39,918
Strathmore	3,576	4,265	5,422	7,830	10,648	12,802	14,415	14,982	16,867	19,221
Foothills	10,771	11,675	14,083	17,228	20,556	22,119	23,858	24,683	26,909	29,377
Rocky View	19,819	20,869	23,951	31,537	35,588	37,938	41,302	42,729	46,570	50,814
Wheatland	663	641	704	827	868	880	940	973	1,065	1,172
<b>Total CMRB Area</b>	<b>712,000</b>	<b>794,428</b>	<b>875,104</b>	<b>1,018,702</b>	<b>1,180,152</b>	<b>1,331,836</b>	<b>1,536,197</b>	<b>1,589,152</b>	<b>1,730,870</b>	<b>1,884,247</b>

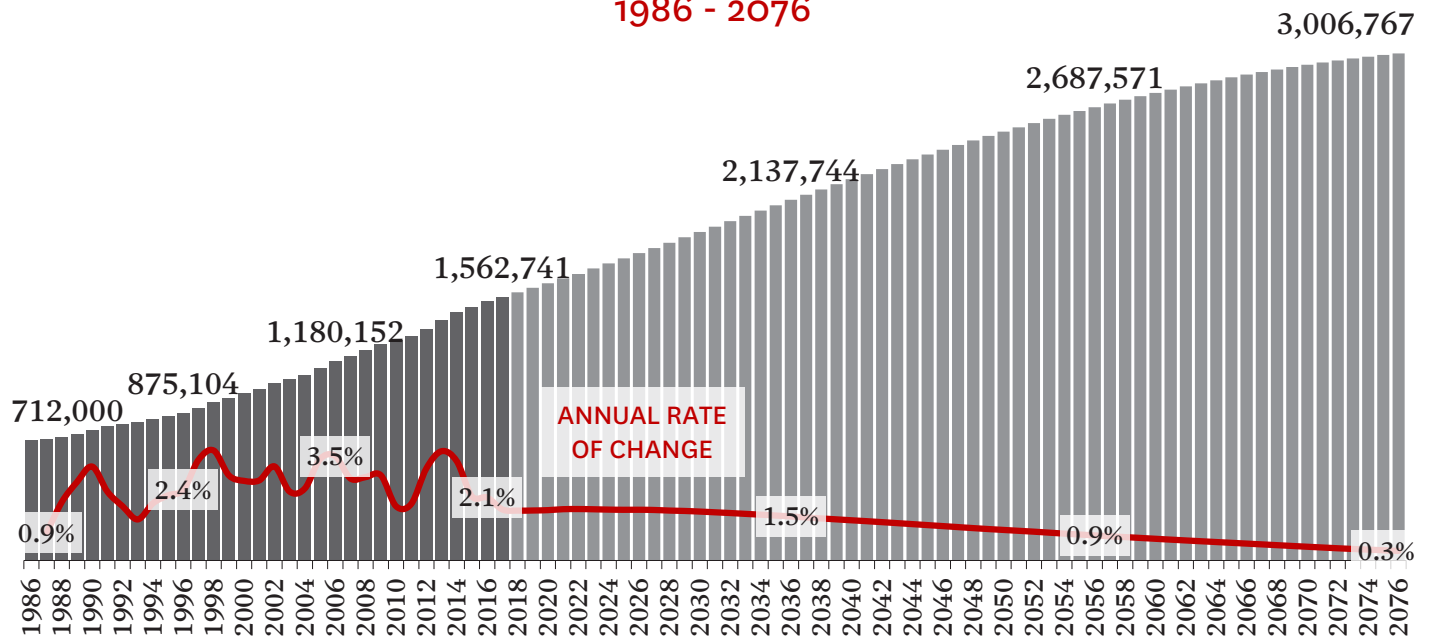
  

TOTAL POPULATION	2033	2038	2043	2048	2053	2058	2063	2068	2073	2076
Airdrie	96,277	108,105	119,670	130,612	140,725	149,807	157,709	164,318	169,481	171,931
Calgary	1,694,822	1,812,147	1,924,545	2,029,430	2,124,804	2,209,260	2,282,202	2,343,086	2,391,190	2,414,306
Chestermere	33,720	39,285	44,660	49,632	54,147	58,133	61,575	64,438	66,691	67,766
Cochrane	40,785	45,409	49,752	53,715	57,277	60,394	63,065	65,271	66,995	67,813
High River	22,156	24,817	27,318	29,596	31,630	33,396	34,898	36,131	37,089	37,542
Okotoks	44,798	49,666	54,312	58,653	62,658	66,229	69,329	71,988	74,138	75,183
Strathmore	22,008	24,900	27,631	30,123	32,374	34,352	36,055	37,467	38,574	39,101
Foothills	31,951	34,498	36,891	39,082	41,103	42,920	44,514	45,859	46,930	47,446
Rocky View	55,223	59,584	63,775	67,706	71,439	74,878	77,960	80,608	82,750	83,794
Wheatland	1,283	1,393	1,496	1,590	1,671	1,738	1,793	1,836	1,869	1,884
<b>Total CMRB Area</b>	<b>2,043,022</b>	<b>2,199,804</b>	<b>2,350,050</b>	<b>2,490,138</b>	<b>2,617,827</b>	<b>2,731,106</b>	<b>2,829,100</b>	<b>2,911,001</b>	<b>2,975,707</b>	<b>3,006,767</b>

## Components of Population Change, Calgary Metro. Region Board Area 1986 - 2075

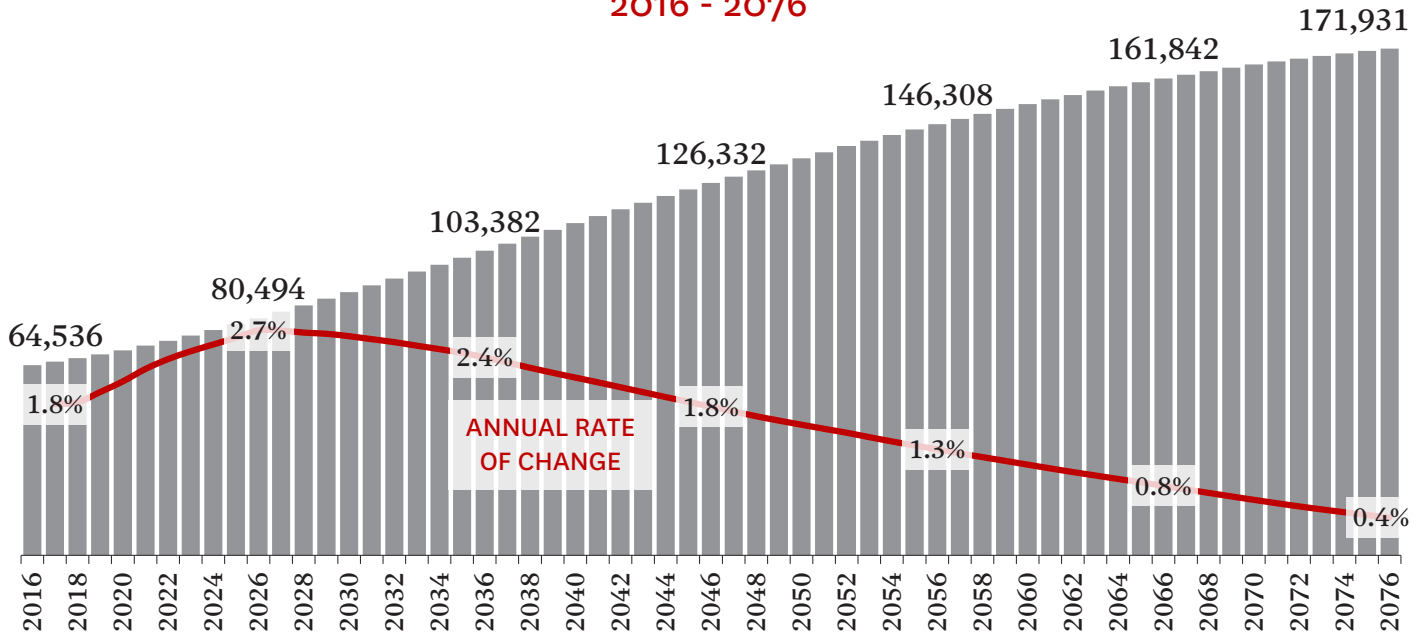


## Total Population, Calgary Metro Region Board Area 1986 - 2076



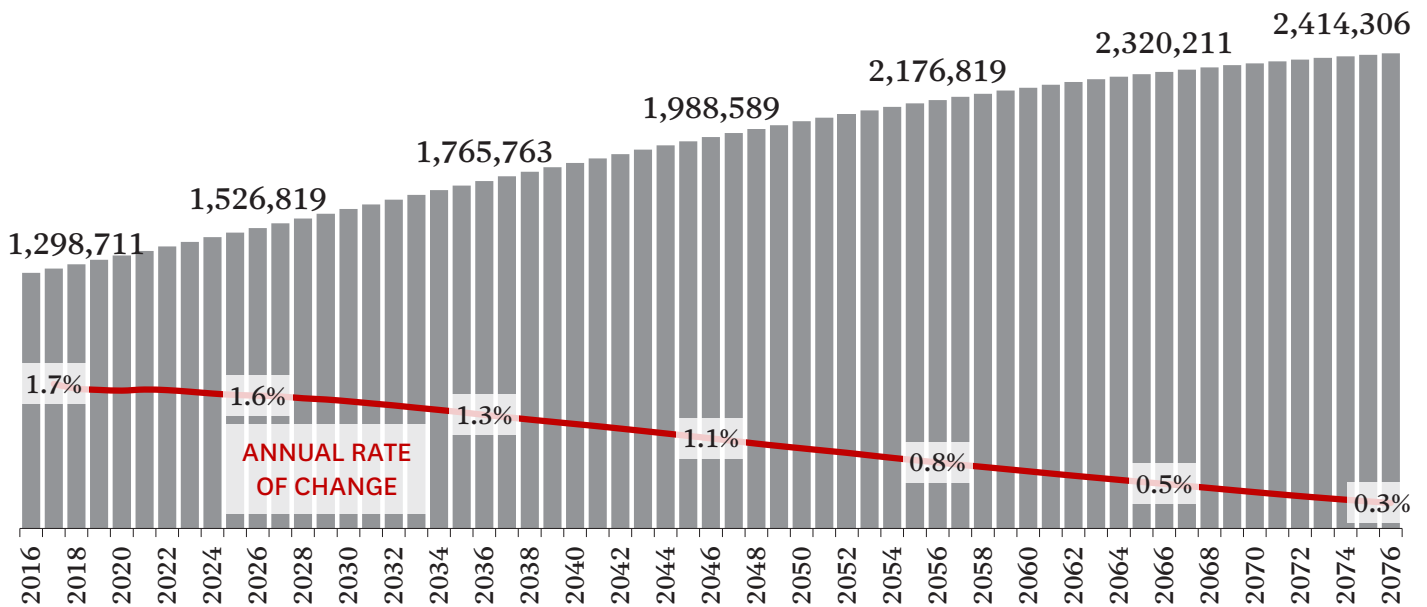
### Total Population, Airdrie

2016 - 2076



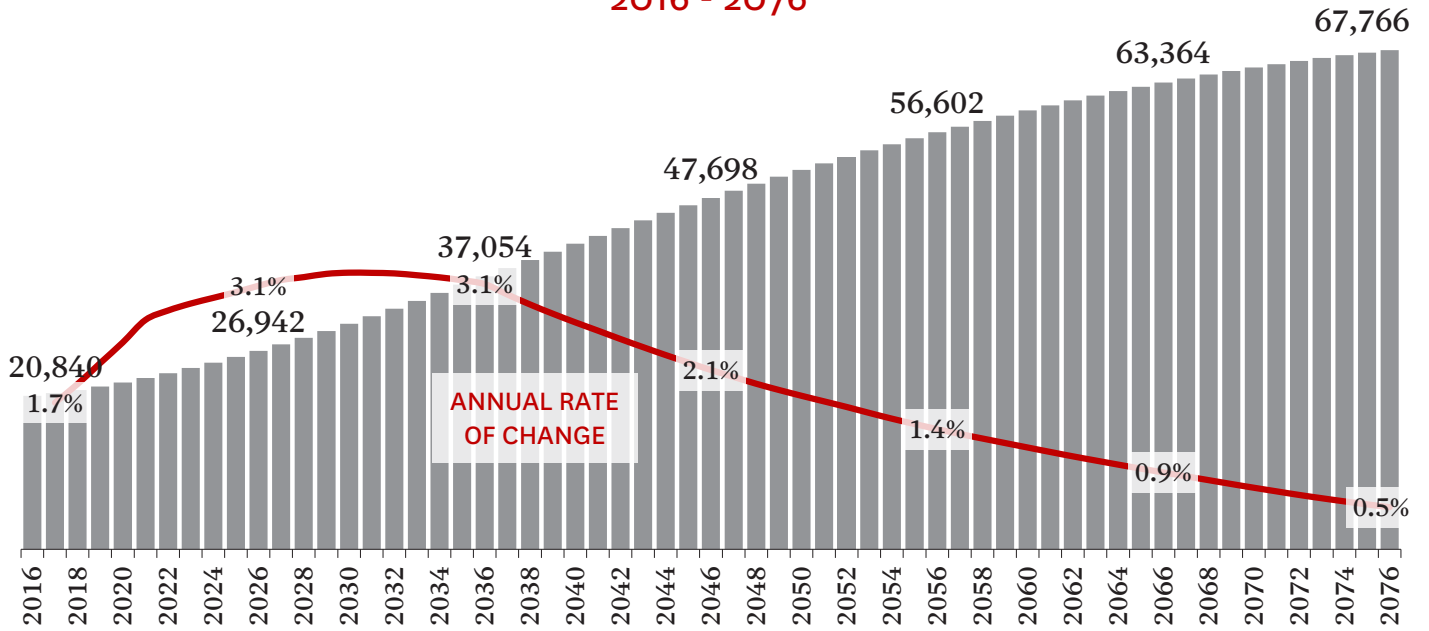
### Total Population, Calgary

2016 - 2076



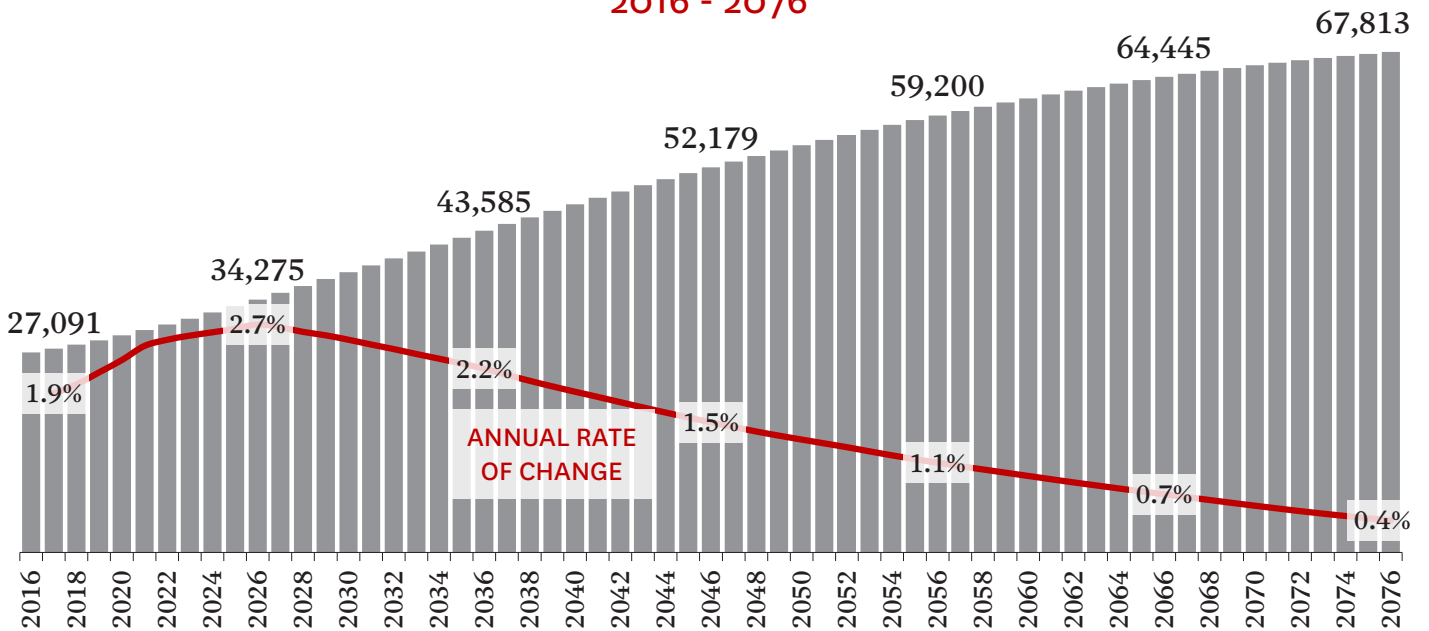
## Total Population, Chestermere

2016 - 2076



## Total Population, Cochrane

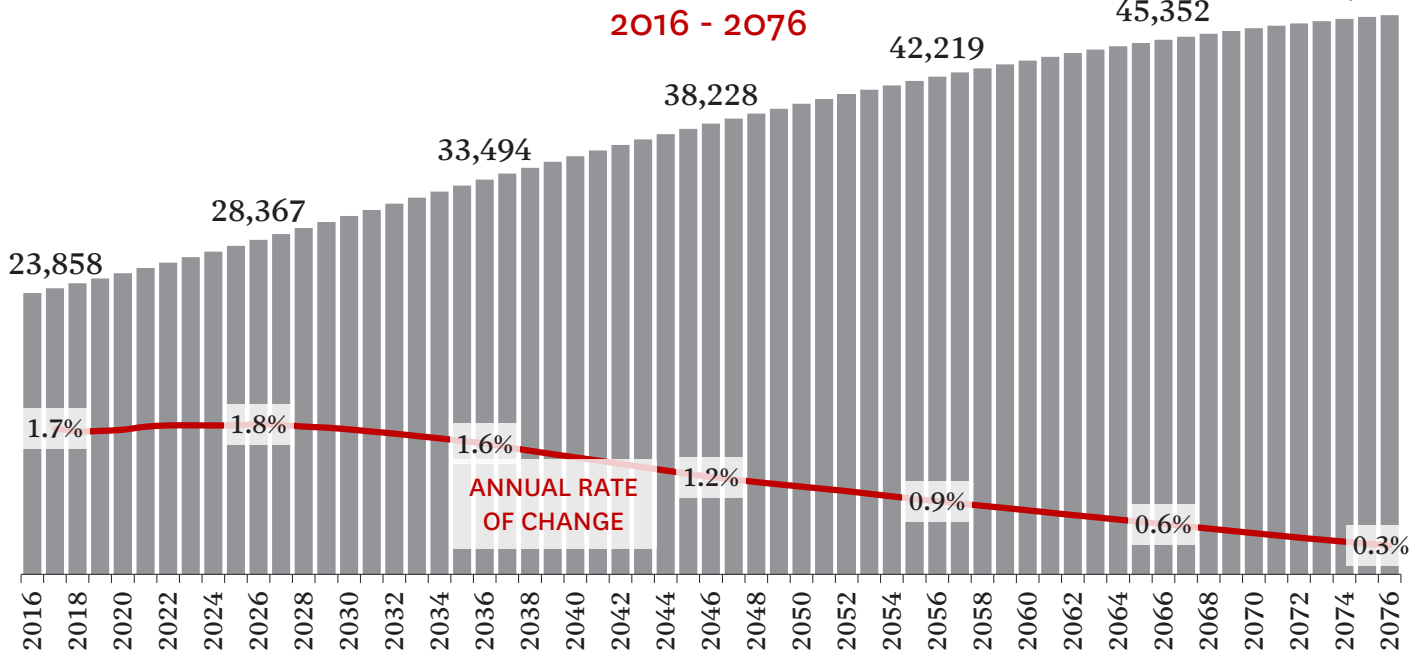
2016 - 2076





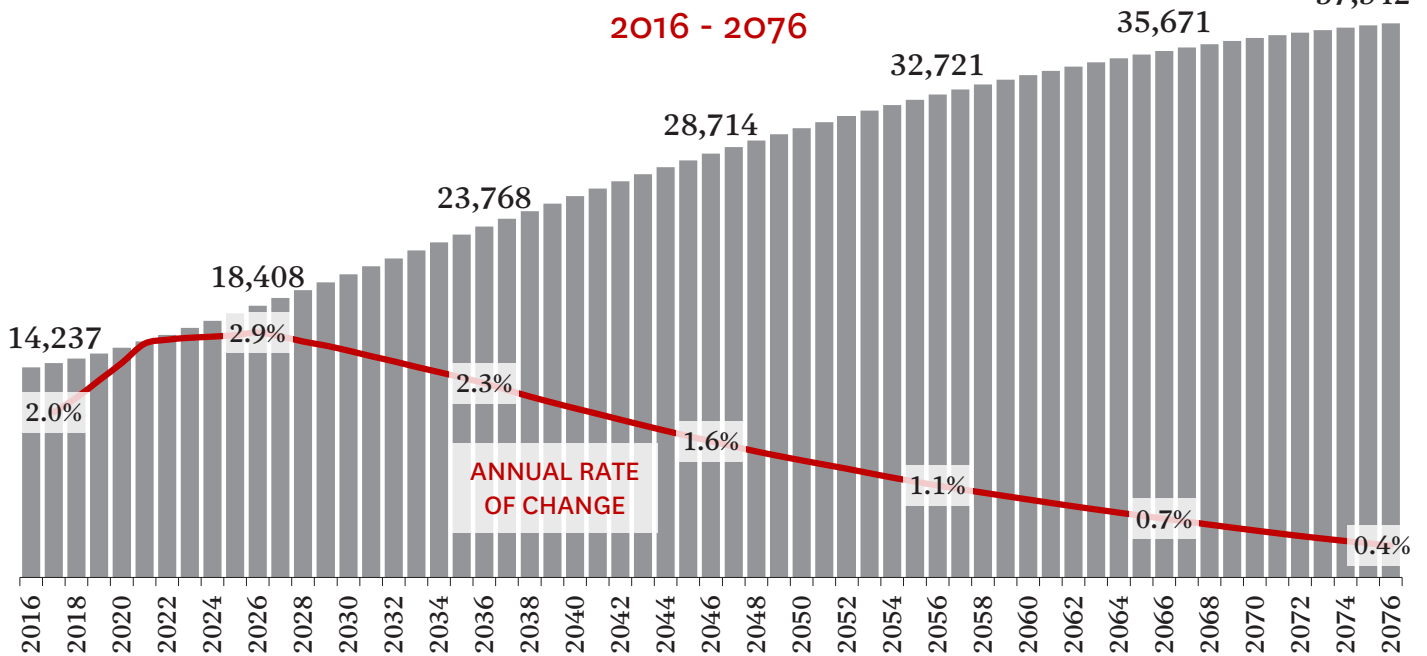
### Total Population, Foothills

2016 - 2076



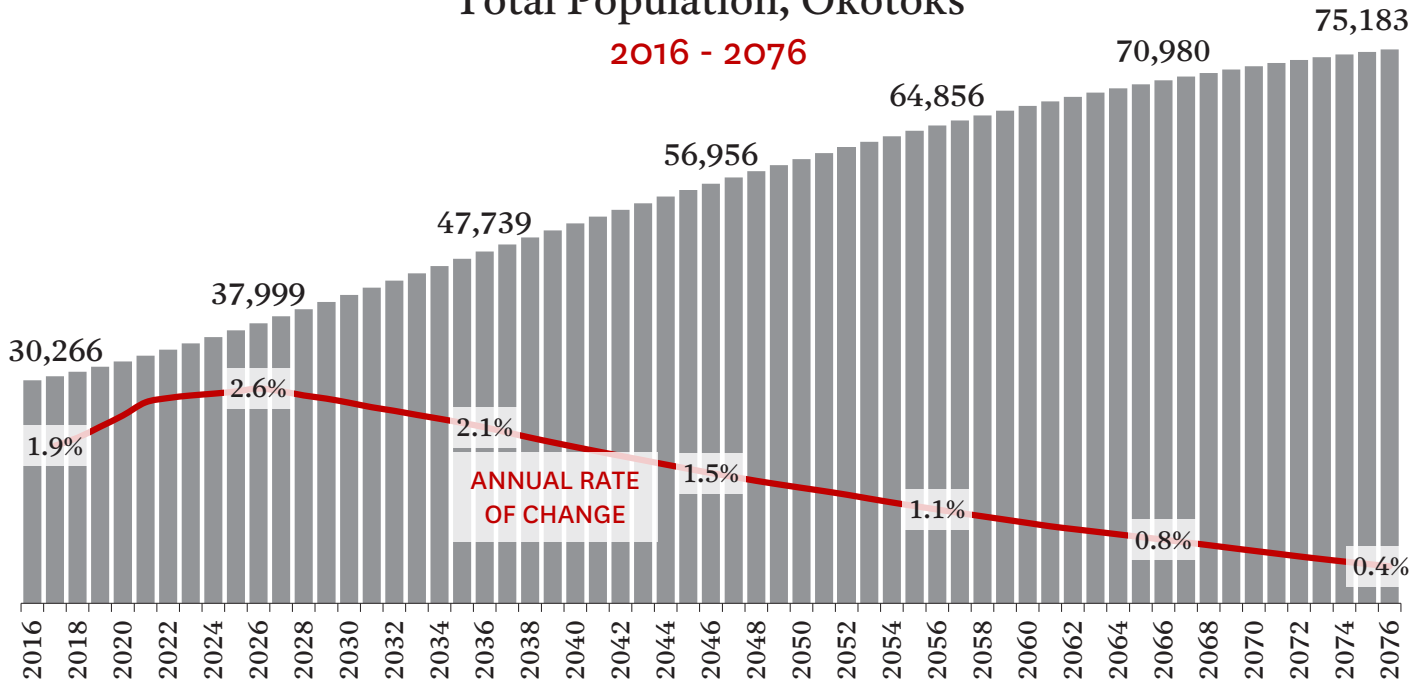
### Total Population, High River

2016 - 2076



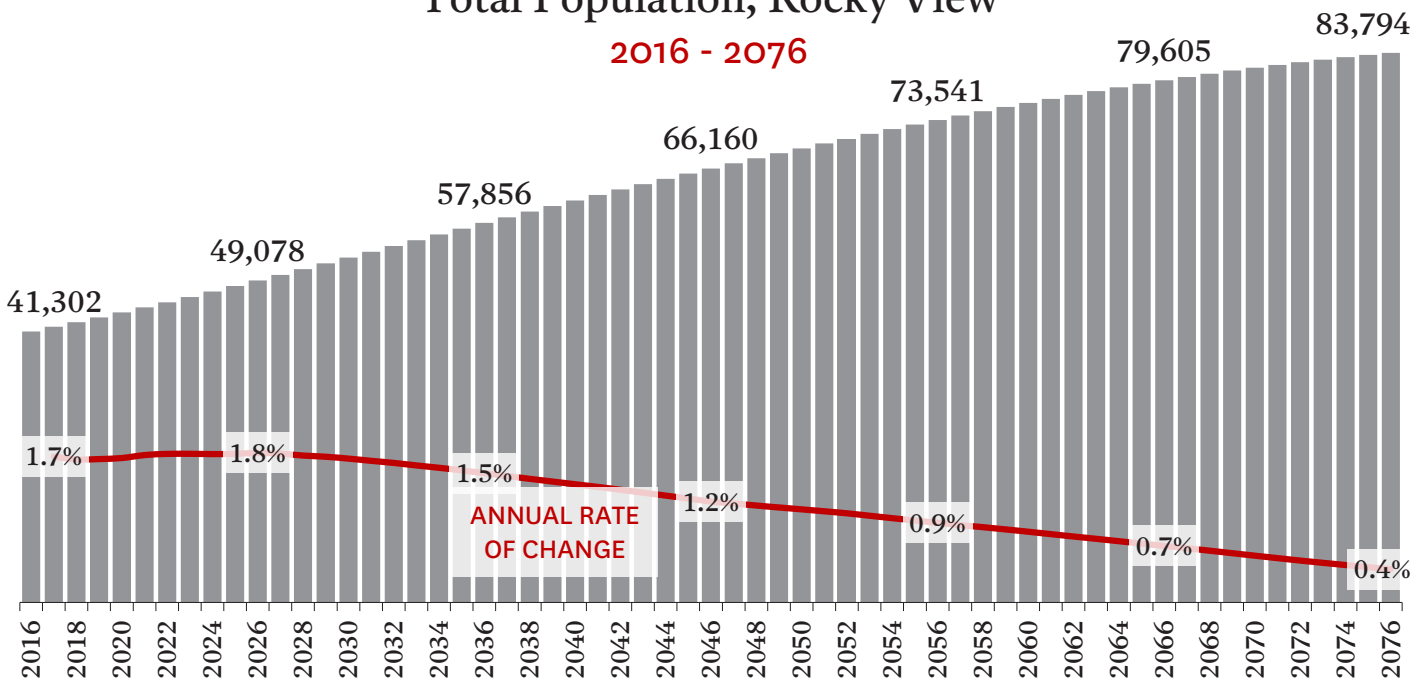
### Total Population, Okotoks

2016 - 2076



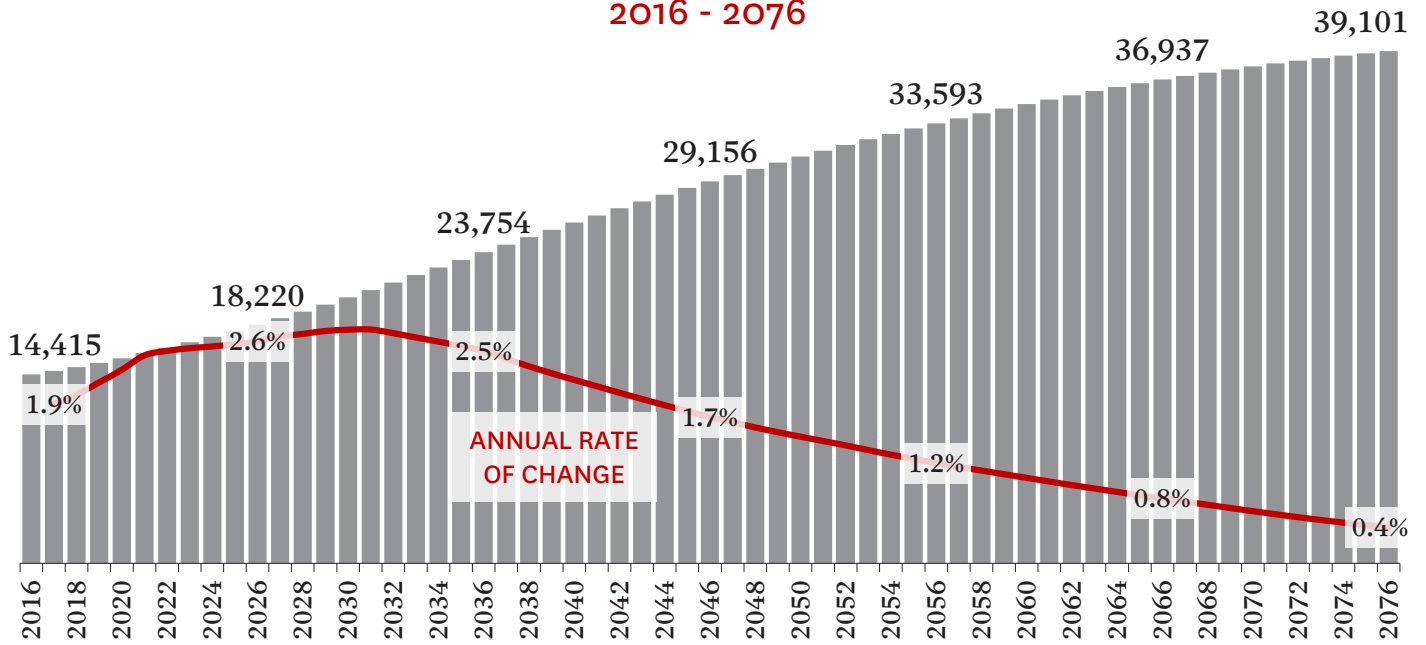
### Total Population, Rocky View

2016 - 2076



### Total Population, Strathmore

2016 - 2076



### Total Population, Wheatland (CMRB part)

2016 - 2076

