
State of Our City 2020



An Urgent Call for a Just Transition



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SUSTAINABLE CALGARY MISSION:

To promote, encourage, and support community-level actions and initiatives that move Calgary toward a sustainable future. In the context of our urban lives, we define sustainable development as the process of working toward the long-term health and vitality of our city and its citizens with regard to ecological, social, cultural, and economic processes.

Live simply so others can simply live.

MAHATMA GANDHI

Table of Contents

ABOUT THIS REPORT	5	RESOURCE USE INDICATORS	45
THE STATE OF OUR CITY SUMMARY	6	☹ Ecological Footprint	46
COMMUNITY INDICATORS	12	☹ Transportation Spending	47
☹ Crime Rate & Rate of Victimization	13	☹ Domestic Waste	48
☹ Leisure Activity	14	☹ Population Density	49
☹ Membership in Community Associations	15	☹ Transit Usage for Work Trips	50
☹ Number of & Attendance at Arts Events	16	☹ Energy Use	51
☹ Sense of Community	17	WELLNESS INDICATORS	52
☹ Volunteerism	18	☹ Access to Preventive & Alternative Health Care	53
ECONOMIC INDICATORS	19	☹ Child & Youth Wellness	54
☹ Housing Affordability	20	☹ Healthy Birth-Weight Babies	55
☹ Oil & Gas Reliance Index	21	☹ Support for the Most Vulnerable	56
☹ Unemployment Rate	22	☹ Self-Rated Health	57
☹ Hours Required to Meet Basic Needs at Minimum Wage	23	☹ Childhood Asthma Hospitalization Rate	58
☹ Food Bank Usage	24	THE PANDEMIC – A CLEAR WARNING AND A WAY FORWARD	59
☹ Income Equity: Gap between Rich & Poor	25		
EDUCATION INDICATORS	26		
☹ Adult Literacy	27		
☹ Average Class Size	28		
☹ Daycare Worker Salaries	29		
☹ Grade 6 Achievement Scores	30		
☹ Library Usage	31		
GOVERNANCE INDICATORS	32		
☹ Representativeness of Electoral System	33		
☹ Municipal Campaign Finance	34		
☹ Effectiveness of Planning	35		
☹ Fiscal Balance	36		
☹ Valuing Cultural Diversity	37		
NATURAL ENVIRONMENT INDICATORS	38		
☹ Air Quality	39		
☹ Food Grown Locally	40		
☹ Pesticide Use	41		
☹ Surface Water Quality	42		
☹ Christmas Bird Count	43		
☹ Water Consumption	44		

About this Report

OUR PROCESS

While producing this report was an important goal, the process of its development was equally valuable. Experiences with sustainability reporting suggest that the way to attain a set of indicators that is truly meaningful, useful, and representative of our city is to involve a broad cross-section of citizens in the indicator-selection process. This helps develop new understandings of issues and new insights into potential solutions. The small businessperson begins to understand the ecological impacts of packaging choices, while the social worker sees new linkages among jobs, poverty, and habitat preservation.

Over 2000 Calgarians participated in the creation of the first two State of Our City reports. Our project team coordinated dozens of presentations and workshops across the city among groups as diverse as Rotary Clubs, City Council, the Developmental Disabilities Resources Centre, and various community associations.

In a tremendous volunteer effort, citizens led the way in choosing indicators, researching the data for each indicator, and writing the State of Our City reports. In the final analysis, the 40 indicators documented in this report were chosen in a democratic process open to all who participated in the project.

TREND LEGEND



Trend is sustainable or moving toward sustainability.



There is no discernible trend.



Trend is far from sustainable or moving further away from sustainability.

WHAT IS A SUSTAINABILITY INDICATOR?

An indicator helps us understand where we are, which way we are going, and how far we are from where we want to be. A good indicator can act as an early warning of an emerging problem and helps us recognize what needs to be done to fix it.

What distinguishes a sustainability indicator is its ability to illuminate the interconnections among systems. Each of the indicator descriptions in this report includes a section called Linkages. A linkage is a direct or indirect relationship between two or more systems, such that changes in one affect the status of another.

ESTABLISHING TRENDS

The sustainability trend for each indicator is located in the upper right-hand corner of the indicator pages (see trend legend below). When designating the trend, several criteria were taken into account. Is the indicator currently at a sustainable level? Is the indicator moving toward or away from sustainability? Is the pace of change of the indicator sufficient for it to reach a sustainable level in a reasonable time? The answers to these questions are necessarily subjective. The indicator project team reviews each indicator thoroughly and debates what the information is telling us before reaching agreement on what we believe the trend to be.

After reading the report, you may or may not agree with our assessments. We hope you will support our urgent call for a just transition to sustainability.

PRINCIPLES OF SUSTAINABILITY

1. Maintain or enhance ecological integrity.

A sustainable community lives in harmony with the natural world. It protects the air, water, soil, flora, fauna, and ecosystems that it depends upon for its survival. These are the life support systems for all human communities.

2. Promote social equity.

In a sustainable community, each and every citizen is afforded access to the benefits and opportunities that the community has to offer without social or economic discrimination.

3. Provide the opportunity for meaningful work and livelihood for all citizens.

A strong, resilient, and dynamic local economy is essential for community sustainability. A sustainable economy provides the opportunity for meaningful work and livelihood for each and every citizen.

4. Encourage democratic participation of all citizens.

We live in a democracy. The bedrock of a democracy is citizen participation in the functioning, planning, and decision-making of society. In a sustainable community, participation is both a right and a responsibility and should be available to every citizen.

5. Maintain ethical relations with our neighbours.

In our bid to achieve sustainability, we need to find ways to work cooperatively with our neighbours in our urban village and in the global village. Sustainability cannot be achieved at the expense of our neighbours – wherever they may be.

State of Our City Summary

No More Time to Lose — A Just Transition Now!

In 1998 Sustainable Calgary's first State of Our City Report identified 2 critical issues that needed attention – overconsumption of resources and socio-economic inequities in our city. Twenty-two years later, the evidence suggests that the state of these critical domains has only worsened. Calgary has seen a lot of progress in those 22 years and we remain a city with a very high quality of life, but an assessment of the 40 social, ecological, and economic indicators clearly demonstrates that the lifestyle we enjoy in Calgary is less sustainable than it was 22 years ago.

The first 20 years of this millennium are Calgary's lost decades with respect to action on sustainability. In large measure, our failure to meet the sustainability challenge can be traced to dysfunctional decision-making processes – elaborated in a set of Governance indicators that we introduce for the first time in this report.

The window of opportunity for a gradual transition to a sustainable future has closed. We must now embark on a rapid transition or face the real prospect of significantly compromised quality of life and livelihoods and a precarious future for our children and their city.

The Story in 7 Domains

Calgarians take pride in our sense of **Community**. While the indicators in this domain remain relatively healthy, our economic troubles are putting pressure on community cohesion and participation. Surveys conducted since the year 2000 indicate that a growing number of Calgarians feel a strong sense of community. For decades, a high number of Calgarians have reported being physically active. But we have seen less arts attendance and increasing crime rates over the past 5 years. These 2 reversals of long-term trends are probably related to our faltering economy. Surveys suggest an upward trend in community association memberships, but renewal of leadership and the maintenance of facilities are looming issues.

All **Economic** domain indicators are in unsustainable territory. Negative trends masked in the boom years are now being exposed. We have the highest income gap of any large city in Canada. A single parent with 2 children would still be required to work over 55 hours a week to make ends meet. Food bank usage is as high as it has ever been. We have seen deteriorating housing affordability over the past 20 years. Having led the country in employment creation for much of the past 20 years, we now have the highest rates of unemployment of any large city in Canada, and there has been very timid movement toward diversification.

The **Education** system has performed well over the past 20 years. Our public library system is world class and heavily used, with the Central Library attracting global attention for its architecture and its programs. In our grade schools, we have some of the best international test results compared to Canadian averages and to other OECD countries. Our public schools typically achieve provincial performance targets. However, we are seeing a rise in class size after several years of decreasing numbers, and we are missing government-mandated targets. One area of concern is the lack of support for daycare, resulting in too few spaces, fees that many families cannot afford, and the chronic issue of poorly paid staff. Another is that levels of adult literacy have been stagnant for 20 years: 40% of Albertans are considered functionally illiterate.

Calgarians are among the healthiest people on the planet. However, many of our **Wellness** indicators are trending in the wrong direction, are stalled, or are moving too slowly toward improvement. While fewer children are showing up in emergency rooms with asthma attacks, mainly due to better management of the disease, youth obesity remains a significant health issue. We have more low-weight births than anywhere else in Canada, and we compare unfavourably with Europe in this regard. Surveys show that more people consider their own health to be worse than others their age. Although income supports for people with disabilities have improved over the past 10 years, they are still well below the poverty line. There has been no discernible shift of health care budgets away from treating disease and toward preventing it.

While there is room for improvement, Calgarians are lucky to live in a high-quality **Natural Environment**, with 4 of 6 indicators sustainable or trending toward sustainability. Air quality shows a slightly improving trend and is relatively good. Water quality, as measured by fecal coliforms downriver of the city, is improving.

Per capita water consumption is at a 20-year low. There has been a 20-fold increase in the number of community gardens since 2000. With respect to pesticide usage, we are on a positive trend in usage per capita and by active ingredient intensity, but application is still quite high.

Resource use indicators are almost universally in unsustainable territory. Calgary is living well beyond its means. Our ecological footprint continues to grow and is the largest of any Canadian city. If everyone on the planet consumed as we do, we would need 4 to 6 planets' worth of resources. Our energy consumption per capita has grown significantly over the past 20 years, and our large and growing per capita GHG emissions constitute a crisis. Our overall population density, while slowly increasing, is far from sustainable and leaves us almost completely dependent on the private automobile and vulnerable to long-term maintenance costs. Steady improvement in numbers taking transit to work through the first decade of the millennium has reversed in recent years. Transport spending in the City budget is tilted in favour of transit, but overall spending by all levels of government still favours road building. The only good news story here is how we deal with waste. Total waste to landfill is down over 50% since 2001, with waste-diversion programs delivering results.

Four of 5 **Governance** indicators are trending unsustainably. Our democracy is under strain. Those we elect to government and to positions of power and influence do not reflect who we are or what we value. Money plays too big a role in politics. Between 2007 and 2015, campaign spending by successful candidates in municipal elections increased 400%. In 20 years, we have seen no improvement in the numbers of women, visible minorities, or Aboriginal people participating in leadership positions in our city. Calgarians' satisfaction with the planning process is lower than it was a year ago but 10% higher than the 15-year average. We don't have enough information available to determine whether our city has a sound long-term fiscal balance.



“Calgarians are lucky to live in a high-quality Natural Environment with 4 of 6 indicators sustainable or trending toward sustainability.”

The Lost Decades: An Inability to Turn Policy into Action

The past 20 years have seen an impressive array of city-building policies adopted by City Council.

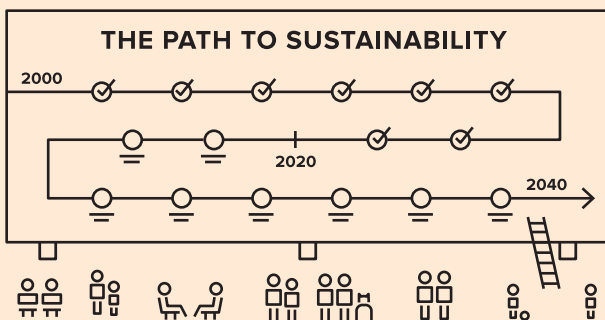
Many of these policies have been formulated with substantial citizen engagement, and most of them aspire to move Calgary toward a sustainable future. The problem is not policy. The problem has been backing up policy intention with budgets and workplans that allocate resources to make it happen. A review of the 40 sustainability indicators leads to the conclusion that the past 20 years have been lost decades – so much promise, with so little to show for it.

Twenty years ago, imagineCALGARY engaged an unprecedented 35,000 Calgarians in a conversation about our future – about what kind of city we wanted Calgary to be in 100 years. In 2004 Mayor Dave Bronconnier announced imagineCALGARY's long-term vision to the world at the Habitat for Humanity conference in Vancouver. Sustainability became the City's core planning objective. This was followed up with the Plan It Calgary process. For the first time, the Calgary Transportation Plan was integrated with the statutory Municipal Development Plan (MDP), guided by the imagineCALGARY 100-year vision. Subsequent City policy was crafted to operationalize Plan It Calgary – the Growth Management Strategy, the Pedestrian Strategy, the Bicycling Strategy, Complete Streets, the Climate Resilience Strategy, Transit Oriented Development, and most recently the 5A Network Principles (Transportation) and the Great Communities Guidebook.

The City's own report card on the MDP was released in 2018. The report states that the City is not on track to meet its MDP targets. Too many people still drive, and too much of our housing stock is still being built and planned on greenfields at the edge of the city, bursting beyond the soon-to-be-completed ring road. In 2019 City Council approved 14 new greenfield communities, even more than the development industry lobbied for. We know this edge-of-city land-use, segregated, car-dependent form of development will never pay for itself, yet we continue to build it.

Our city continues to grow with no realistic plan to reduce our unsustainable levels of resource consumption. We are building a city that makes life more difficult and expensive for socially and economically marginalized citizens and communities.

Our indicators suggest that this state of affairs is fueled by a dysfunctional democratic process, at all levels of government – a process that is growing more and more beholden to the wealthy. Over the past 2 decades, our resource wealth reached its apex. Rather than use that time and wealth to ensure a transition to a new economy in the face of the global climate emergency, we are left with lost decades. We will likely never enjoy the level of wealth we have experienced in the past 20 years. Yet over the next 20 we have to make a rapid transition to a sustainable future or risk a serious erosion of both our quality of life and our prospects for the future of Calgary.



Calgary in the Global Village

In the 1960s, Canadian Marshall McLuhan coined the term *global village*. As Canadians and as Calgarians, we are intimately tied to the global village. Our prosperity is defined by the nature of our relationships with our neighbours in that global village. Over the past 75 years, during a period in history referred to as the Anthropocene, the nature of our economic and social relationships have become untenable socially, ecologically, and economically. Our impact on the planet has grown exponentially, relations within the global village have become more unequal and unfair, and the climate and biodiversity crises threaten us all. Each of these global trends are reflected locally in the 40 sustainability indicators reported herein.

In 2018 the Intergovernmental Panel on Climate Change reported that “the next few years are probably the most important in our history.” It is abundantly clear that without action, the heating of our planet will make human life on earth much more difficult. The climate crisis has been created by the rapidly accelerating burning of fossil fuels to provide cheap energy and the manufacture of consumer products far beyond the needs of most Calgarians. Our place of privilege in the global village is a direct result of the bounty of fossil fuels beneath us. We have become wealthy through the fossil fuel economy, and our city is more affluent and stable than most places on the planet. For these reasons, we have a moral obligation not only to contribute to the solution to global warming but to be leaders in dealing with the climate crisis.

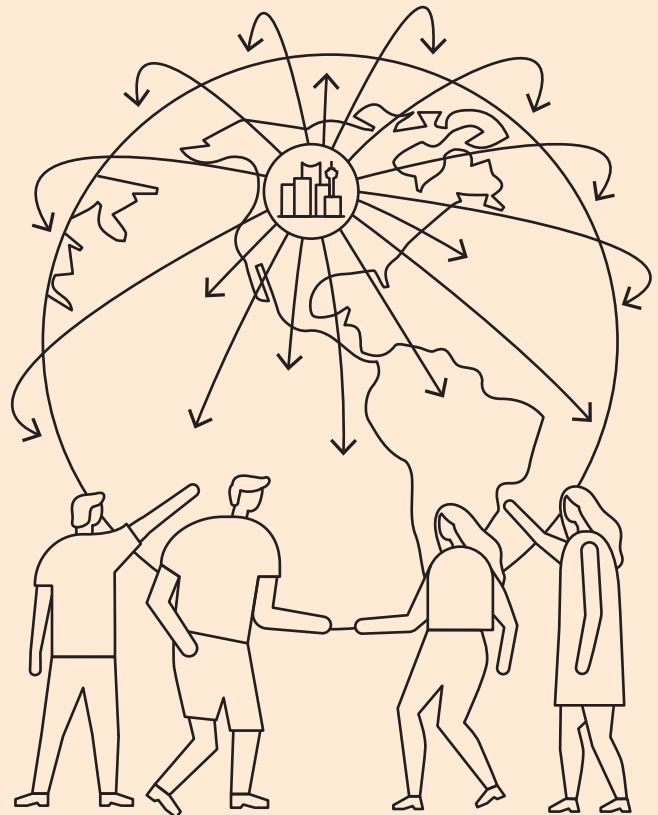
Thomas Homer Dixon (author of *The Ingenuity Gap*), among others, has warned of the diminishing capacity of human societies to successfully deal with multiple emerging crises. The climate emergency is top of mind, but the rate of resource extraction; the volume of material we produce, consume, and throw away; and our food choices all contribute to an equally critical global biodiversity crisis. The inequality that has grown in our city over the past 20 years is mirrored in the global economy. Most Canadians – and even more so, Calgarians – are among the wealthiest 1% in a global economy that has created winners and losers and allowed fewer and fewer people to control more and more wealth, distorting our institutions of governance in the process. In the past 5 years, we have witnessed attacks on our democratic systems that are unprecedented in most of our lifetimes. None of this is sustainable.

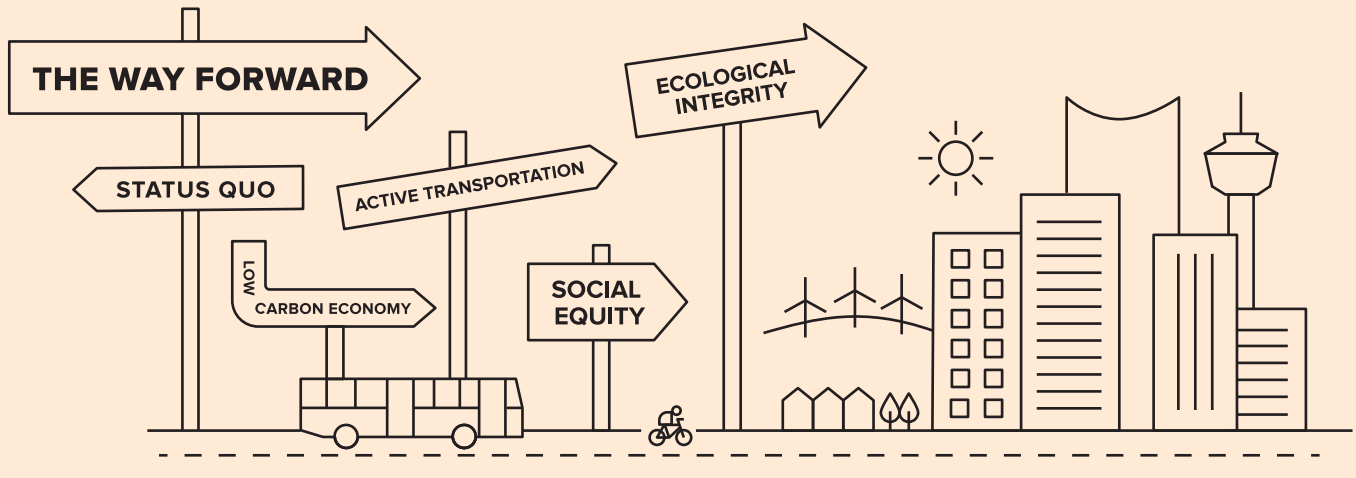


“In 2019 City Council approved 14 new greenfield communities, even more than the development industry lobbied for.”

We may have the ingenuity and resolve to meet these challenges, but despite the pride we take in our “get ‘er done” attitude, our reactions to date give no assurance that we do indeed have what it takes. There is no plan for transition from the deteriorating conditions of the Anthropocene to a sustainable future – no credible global plan, no credible national plan, no credible provincial plan, and no credible city plan. In fact, in our province and our city, resistance to transition remains a dominant political, cultural, and economic force.

Yet Calgary is not an island. We face existential threats to our quality of life and the future of our city. The fossil fuel infrastructures on which we continue to rely are in danger of becoming stranded, unusable assets as global investment wakes up to the threat of climate change. The problems of orphaned wells and post-production cleanup threaten to bankrupt our province or leave it an ecological wasteland. We continue to build a high-maintenance city while the prospect of paying for it all recedes. Having lost 2 precious decades, we must now move toward rapid transition.





The Way Forward: Leaders, Not Laggards

There is a moral imperative for Calgarians not only to step up to the plate as members of the global village and to pull our weight, but to show leadership – to become first responders. For too long, we have been counted as laggards. What do we need to do?

1. We need to acknowledge that while fossil fuels built our city, our future is elsewhere, and we need to direct all of our collective energies to building the new Calgary.

2. We need to take care of the most vulnerable first. How well we do so is a measure of the character of our society. There is no reason we cannot provide affordable shelter for all Calgarians. All citizens who contribute their labour to our economy should expect, at the very least, a livable wage in return. The vulnerable among us who need income support should not be condemned to live in poverty.

3. We need to design a steady state economy that is, above all, fair and just and that allows us to live within our means economically and, more importantly, ecologically. Our indicators suggest that over the past 20 years, we have experienced what ecological economist Herman Daly has referred to as uneconomic growth – growth that makes us worse off.

4. We can follow the lead of places like Iceland and New Zealand and commit to redesigning our economy to focus squarely on well-being and to retool planning for the transition to a healthy, sustainable, circular, and relocalized economy.



“Our indicators suggest that over the past 20 years we have experienced what ecological economist Herman Daly has referred to as uneconomic growth – growth that makes us worse off.”

5. We need to resist the temptation to dismantle the systems that are the foundation of our well-being – health and education. We need to protect and grow our social capital.

6. We need to stop the outward expansion of our city. We need to invest in transit and active transport infrastructure. We need to build a city where walking, biking, and public transit are the norm and the private automobile is a tertiary mode.

7. We have the seeds of opportunity for the transition – young, vibrant, highly educated people and a culture of learning personified in the new Central Library. With respect to energy, we are on the cusp of a final transition once we tap our tremendous renewable energy resources. We have a growing design culture and expertise endowed from years of prosperity. We need our buildings, neighbourhoods, transportation, the city, and the region designed for sustainability – there is no reason to settle for anything less.

8. We need to welcome those from all over the world who are willing to contribute. We are a country, province, and city of immigrants. During the Syrian refugee crisis, Calgarians answered the call and demonstrated what is our better nature. Continuing to welcome new people, new ideas, and new energy from all corners of the world will make life better for all of us.

9. We need to get our political house in order and restore trust in our systems of governance: get money out of politics, and reinvent our democracy with fairness at the core.

Trust: The Fragile, Frayed & Priceless Cornerstone of Sustainable Community

We will not find our way forward if we do not trust one another or the institutions through which we make decisions. Trust is a valuable and fragile currency that bolsters the social and economic health of a community. Trust builds social cohesion and capital and is in turn strengthened by social capital.

Low levels of trust mean greater economic costs – higher legal fees, more complicated contracts, slower pace of transactions, risk aversion for investors, and non-compliance with regulations. Low levels of trust translate into low voter turnouts and resistance to change. Low levels of trust lead to alienation and reluctance to support social welfare programs. Citizens expect institutions to be reliable, responsive, and efficient. They expect them to act with integrity, openness, transparency, and fairness. If institutions fail to honour these values, people will withdraw their support, and that is bad for everyone. Without trust, information flows and communication are slowed, and compromise and policy reform in areas like fair taxation and climate change is made more difficult.

According to the most recent Statistics Canada report on public confidence in Canadian institutions, 43% of Calgarians report some or a great deal of confidence in the federal Parliament, and only 34% confidence in major corporations. The highest levels of trust were reported for the school system (63%) and the police (81%). In fall 2019, when asked whether the City of Calgary practices open and accessible government, is working to improve citizens' input, and uses that input in decision making, and whether citizens have meaningful input, roughly 60% to 70% of Calgarians agreed. But between 2017 and 2019, these areas exhibited negative overall trends, with "open and accessible government" experiencing the steepest decline. Those who expressed trust in City Hall fell from 62% in 2017 to 52% in 2019. During the same period, levels of distrust rose from 15% to 23%.

The Statistics Canada data highlight some serious problems when we examine how many people expressed "a great deal of confidence." In 2013, only 9% of Canadians had a great deal of confidence in the media; only 10%, in Parliament; and only 6%, in major corporations. Of particular concern is the decreasing ability of civil society to hold elected officials accountable for resorting to half-truths and outright fabrications. We have entered a period when some leaders seem to have decided that lying and deception are winning strategies. Therefore, these findings have serious implications for our democracy and our economy. Ownership concentration of social media, combined with technological innovation and polarizations in society, have undermined our trust in institutions and in those who represent them.

The OECD report Trust and Public Policy highlights a noticeable

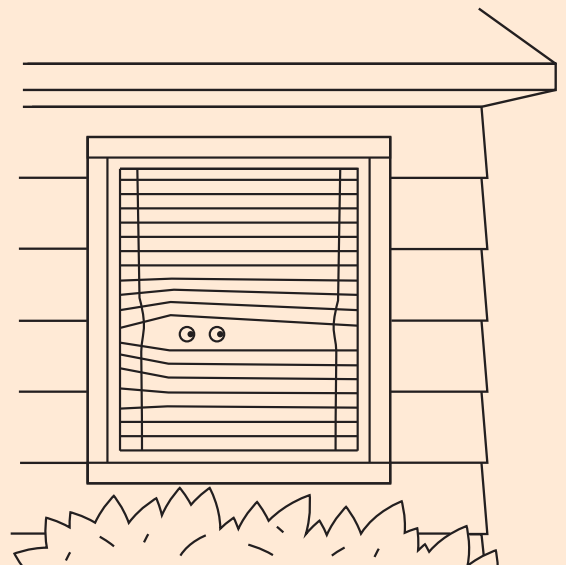


"In 2013, only 9% of Canadians had a great deal of confidence in the media; only 10%, in Parliament; and only 6%, in major corporations."

reduction in trust in government during and after the 2008 global economic crisis (from 2007 to 2015). The report states that "against a background of perceived inequalities in income and opportunities, high unemployment and job insecurity, resistance to globalisation and concern over global pressures such as immigration and climate change, restoring trust is essential."

The one silver lining in all of this is that Canadians express higher levels of trust in government than do citizens of most OECD countries. Notably, trust in institutions was especially high among recent immigrants compared to those born in Canada. Women and older Canadians express higher levels of confidence than men and younger Canadians. Aboriginal people are less confident in institutions than are other Canadians. Canadians with higher incomes and higher levels of education express higher levels of confidence.

If people perceive that the system is rigged against them, they will oppose it. For the past 40 years, many Canadians have experienced increased marginalization and increased inequality, with a very few reaping a greater and greater share of the economic pie. We are at a critical moment when transformational change is required to confront the climate crisis. Without a political system we can trust, there is no good reason for those who have been marginalized to support change. Climate change and loss of biodiversity are existential threats. We cannot deal with them without simultaneously dealing with inequality. We cannot deal with inequality without fixing our democracy. Trust takes a long time to build but can be destroyed in an instant.



The Indicators



Community Indicators



CRIME RATE & RATE OF VICTIMIZATION

Both property crime and person crime rates have been increasing since 2016, after 40 years of decline.

In 2018 the estimated person crime rate per 100,000 people in Calgary was 1,041. The estimated property crime rate was 4,493.



NUMBER OF & ATTENDANCE AT ARTS EVENTS

In 2018 approximately 2.95 million people attended arts events in Calgary – equivalent to 2.33 visits/capita.

This is a drop of 14% from 2017 (2.72 visits/capita). The long-term trend is still positive. In 2011 there were 2.05 million attendees (1.88 visits/capita).



LEISURE ACTIVITY

As of 2019, 64% of Albertans report participating in a sufficient amount of physical activity for health benefits.

This is a positive increase from 2017 (57%) and is the highest level of reported physical activity since 2009. Over the past decade, the percentage of physically active Albertans has remained relatively consistent, fluctuating around an average of about 60%.



SENSE OF COMMUNITY

In 2014 an equivalent percentage of Calgarians, Albertans, and Canadians (67%) reported a very strong or somewhat strong sense of belonging to their local community. The Calgary Foundation's 2018 Vital Signs survey similarly reported that **roughly two-thirds of Calgarians reported a strong sense of belonging.**



MEMBERSHIP IN COMMUNITY ASSOCIATIONS

In 2016, 29% of respondents reported membership in their community associations, comparable to 30% in 2009.

There are 151 community associations with membership in the Federation of Calgary Communities.



VOLUNTEERISM

In 2013, 50% of Albertans volunteered – more than the national average of 44%.

But Alberta was behind Saskatchewan, the province with the highest rate (56%). Albertans volunteered an average of 161 hours in 2013, more than the national average of 154 hours but less than Nova Scotia at 181 hours.



Crime Rate & Rate of Victimization



THE FACTS

In 2018 the estimated person crime rate per 100,000 people in Calgary was 1,041. Both rates have been increasing since 2016, after 40 years of decline.

IMPORTANCE

A sense of safety is a key component of a sustainable community. Crime directly decreases the quality of life of victims through financial loss, physical injury, emotional trauma, and alienation. The repercussions of a crime spread beyond the immediate victim: parents, children, friends, co-workers, witnesses, and the community also suffer. Fear of crime can lead people to stay behind locked doors and resist stepping out into the community, whether to take a walk or to participate in community life.

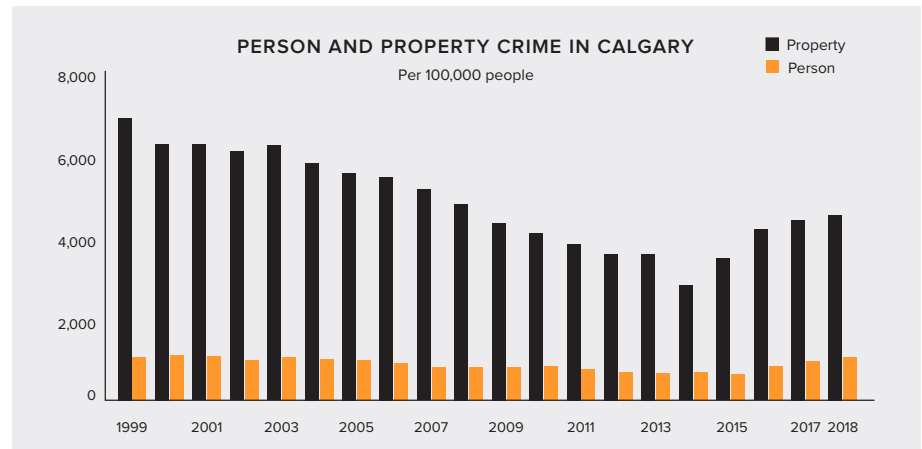
TREND

From the early 1990s to 2015, both person and property crime rates in Calgary steadily decreased. Between 1999 and 2014, property crime declined by 60%. From 2000 to 2015, crime against persons declined by approximately 41%. The number of youth accused of offences declined by almost 50% over that same period. Sex crimes and assaults also decreased significantly.

According to Statistics Canada, police-reported incidence of intimate partner violence in 2017 was 294 per 100,000 people in Calgary, 17% higher than the average for all census metropolitan areas. Of the victims in Calgary, 75% were female.

After a steady decline between 2005 and 2014, Canada's violent crime severity index, developed by Statistics Canada, rose 17% from 2014 to 2018. In Calgary over the same time, the index rose 21%. In 2018 the index was at 82 nationally, 78 in Calgary and Toronto, 72 in Montreal, 68 in Vancouver, and 60 in Victoria. Calgary's index was the highest it had been in 6 years after a historic low of 62 in 2012.

According to the City's 2019 Citizen Satisfaction Survey, 18% of Calgarians do not feel safe walking alone in their neighbourhood after dark. Calgarians are



feeling safer than they did between 2007 and 2010, when 22% to 30% reported feeling unsafe, but the last 3 years have seen an upward trend from a low of 15% in 2013.

Nationally, police-reported hate crimes went up 40% between 2014 and 2018, from 1,295 reported crimes to 1,798. Of these crimes, 43% were race and ethnicity related, 36% were religion related, and 10% were related to sexual orientation.

LINKAGES

A report of the University of Calgary's School of Public Policy (SPP) suggests that the 50% increase in break and enters and vehicle theft from 2015 to 2018 in Calgary is likely related to increased unemployment and increased availability and use of drugs (particularly as related to the fentanyl and opioid crisis).

The way we design our city, communities, and public spaces can deter crime and enhance safety. Neighbourhood gathering spots like community gardens help to build ties between neighbours while establishing a strong sense of community. Building healthy, caring communities where all citizens can enjoy the benefits of a city and contribute to the life of a city is one of the best ways to prevent crime.

The 2017 SPP report showed a correlation between increased domestic violence and Calgary Stampeder football games, the Stampede, the 2013 flood, and lower oil prices. A 2012 SPP report found that

rates of self-reported domestic violence in Alberta had been among the highest in Canada since 2002. The report also estimated that the cost of providing health care and other supports for victims of domestic violence are 6 times the costs of programs to combat domestic violence. Many women endure domestic violence because escaping from the violence often means joining the ranks of the homeless.

DEFINITIONS

The statistics on crime rates in Calgary were drawn from the Calgary Police Service's Annual Statistical Reports: 2005–2018. Person crime includes attempted and committed homicide; street, financial, and commercial robbery; sex offences; assault; kidnapping; extortion; and harassment. Property crime includes break and enter, theft, and fraud.

TAKE ACTION & GET INVOLVED

- Call out unsportsman-like behaviour in youth sports when you witness it.
- Support organizations that work to decrease domestic violence, such as the Women's Centre of Calgary (womenscentrecalgary.org).



Statistics Canada police-reported incidence of intimate partner violence in 2017 was 294 per 100,000 people in Calgary, 17% higher than the average for all census metropolitan areas. Of victims in Calgary, 75% are female.

Leisure Activity



THE FACTS

As of 2019, 64% of Albertans report participating in a sufficient amount of physical activity for health benefits. This is a positive increase from 2017 (57%) and is the highest level of reported physical activity since 2009. Over the past decade, the percentage of physically active Albertans has remained relatively consistent, fluctuating around an average of about 60%.

IMPORTANCE

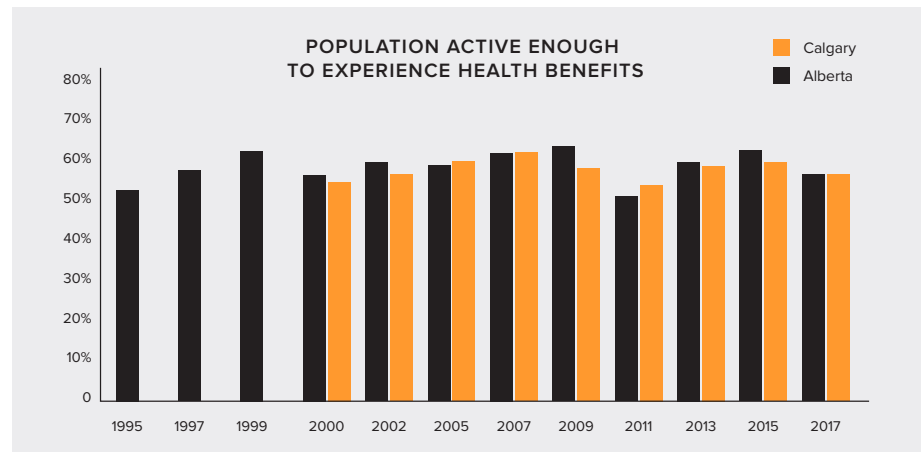
Leisure time helps to create healthy, balanced individuals and communities. Physical activity, the reduction of stress levels, and the pursuit of hobbies contribute to physical, mental, and emotional well-being. People who experience rich, active leisure time often bring positive, productive energy to all other aspects of their lives. At the community level, leisure activity can help to foster social support networks and caring, vibrant communities.

TREND

The 2019 Alberta Survey on Physical Activity suggests that there has been a general increase in physical activity for all Albertans. However, some trends remain persistent. Factors such as age, annual household income, education level, and personal perception produce predictable patterns in an individual's physical activity status. These patterns indicate that accessibility and work-life balance continue to have a strong influence on the health behaviours of Albertans.

As a means for exercise, Calgarians continue to value the city's pathway system. The 2010 Pathway Research Intercept Survey reported that 43% of pathway users used the paths for exercise purposes. Other common reasons included dog walking (17%), commuting (15%), recreation (12%), and enjoying nature (9%). Age is a predictive factor for the type of pathway use. Respondents aged 55 years and older were significantly more likely to use the pathways for exercise compared to those under 35 years.

Men and women use the pathways



differently. Women more frequently use them for walking or nature observation while men are more likely to use them for cycling. However, the 2016 Bicycle and Pedestrian Count indicated an increase in the number of female cyclists, rising from 21% in 2013 to 25% in 2016.

LINKAGES

According to the 2017 Alberta Recreation Survey, Calgarians frequently participate in outdoor recreational activities. Walking was reported to be the most common recreational activity among Albertans. Additionally, 56% of Albertans consider the preservation of nature to be one of the most important benefits of recreation. It seems, then, that the environment and accessibility to outdoor spaces are essential to Calgarians maintaining an active lifestyle. It is estimated that by 2031, 1 in 5 Albertans will be a senior. With seniors reporting the lowest level of physical activity, pedestrian infrastructure must be maintained to reduce season-related barriers to physical activity.

According to the Alberta Recreation Survey, financial and time restrictions are 2 of the most commonly cited reasons why Calgarians are not sufficiently physically active. Since the first Alberta Recreation Survey in 1980, financial restrictions have consistently been cited by Albertans as a top participatory barrier to physical activity. Active lifestyles offer more than physical health benefits; they are also a source of community engagement and interpersonal well-being for many Albertans. It is

therefore crucial that Albertans of all income levels be able to afford an active lifestyle.

DEFINITIONS

Information about physical activity levels in Calgary is from the 2019 Alberta Survey on Physical Activity – a report of the Alberta Centre for Active Living. The percentage of people physically active enough to experience health benefits is from surveys of time spent by individuals in strenuous, moderate, and mild activity in an average week. Statistics on participation in recreation activities is from the 2019 Alberta Survey on Physical Activity and the 2017 Alberta Recreation Survey.

TAKE ACTION & GET INVOLVED

- Take classes at or become a member of fitness centres like the Calgary YMCA (ymcocalgary.org) and YWCA (ywcacalgary.ca).
- Explore the many pathway systems and parks in all areas of Calgary on foot or by bike.
- Join or start a weekly or daily walking group.



According to the Alberta Recreation Survey, financial and time restrictions are 2 of the most commonly cited reasons Calgarians are not sufficiently physically active.

Membership in Community Associations



THE FACTS

In 2016, 29% of respondents reported membership in their community associations, comparable to 30% in 2009. There are 151 community associations with membership in the Federation of Calgary Communities.

IMPORTANCE

Calgary is unique in terms of the status and responsibility afforded to community associations (CAs), in large part because of their proactive history. CAs contribute to the creation of what we call social capital: they create community cohesion; foster independence and creativity; and promote participation, social support, neighbourliness, cooperation, shared visions, and trust.

TREND

Membership in community associations appears to be holding steady. A 2008 Project Intelligence (PI) report found that although half of Calgary households participated in CA activities at least once every 3 months, a relatively small number of volunteers did most of the work. The survey also found that awareness of and membership and participation in CAs was significantly lower among visible minorities, 18- to 34-year-olds, and households making less than \$60,000 annually.

PI found that, although CAs play a vital role in the life of the city, they urgently need resources. Many association buildings are old and in need of repair or replacement. As well, training for employees and volunteers in areas like programming, financial management, community outreach, and governance is needed, while compensation for CA employees is generally below the average for organizations of comparable size and mission.

A 2016 City of Calgary report found that 68% of Calgarians were aware of their community association. The most common reasons given for non-participation were that people have no time, they aren't interested, the programs offered aren't of interest, or they do not know what programs are offered.

In response to the PI and City reports, the Federation of Calgary Communities has focused on programs to increase knowledge and capacity around non-profit governance, financial management, and urban planning, with 58 workshops reaching almost 1,000 people in 2019 alone.

Insufficient and unstable funding for recreational amenities has led to mandatory membership in homeowner and resident associations in newer communities. Governments benefit through reduced demand for servicing communities that are funded in part by homeowner and resident associations. Whether this has freed up more funding for community associations is an open question. There is also a concern that an amenity gap has been created between newer communities with homeowner and resident associations and older communities with CAs.

As CAs evolve, they face challenges such as effective mobilization of residents and perceptions that they promote NIMBYism and are unrepresentative of the community as a whole.

LINKAGES

Surveys indicate that many households join their CA to take advantage of sports and recreational opportunities, thereby promoting healthy lifestyles.

CAs give residents the opportunity to improve local neighbourhoods through volunteer involvement in environment, transportation, and planning – important contributions to city building and healthy communities.

CA activities help the residents build stronger support networks and social contacts. Health Canada notes that people exposed to these social determinants of health experience less heart disease, have lower premature death rates, and are more likely to participate in community life.

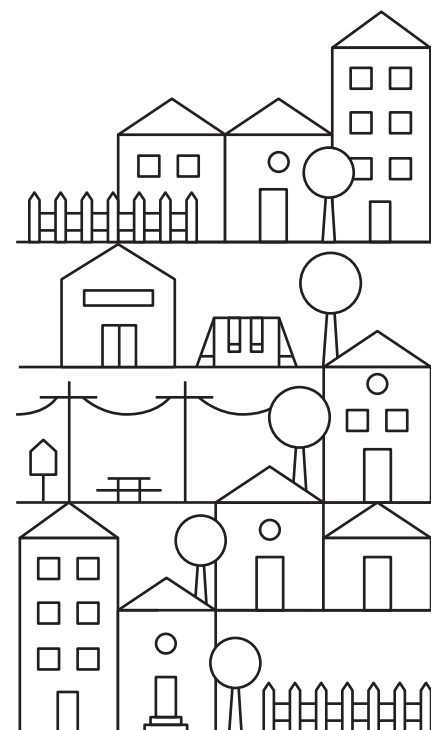
DEFINITIONS

The 2016 data are taken from an Ipsos survey of 2,800 Calgarians (Community Needs and Preferences Research) conducted for the City of Calgary.

The 2009 data are found in the Signposts II report published by the City of Calgary in 2013 and were derived from a random sample of 3,000 Calgarians. The 2008 survey was commissioned by the Federation of Calgary Communities as part of Project Intelligence.

TAKE ACTION & GET INVOLVED

- Become an active member of your community association.
- Learn more about Calgary's community associations from the Federation of Calgary Communities (calgarycommunities.com).



Number of & Attendance at Arts Events



THE FACTS

In 2018 approximately 2.95 million people attended arts events in Calgary – equivalent to 2.33 visits/capita. This is a drop of 14% from 2017 (2.72 visits/capita). The long-term trend is still positive. In 2011 there were 2.05 million attendees (1.88 visits/capita).

IMPORTANCE

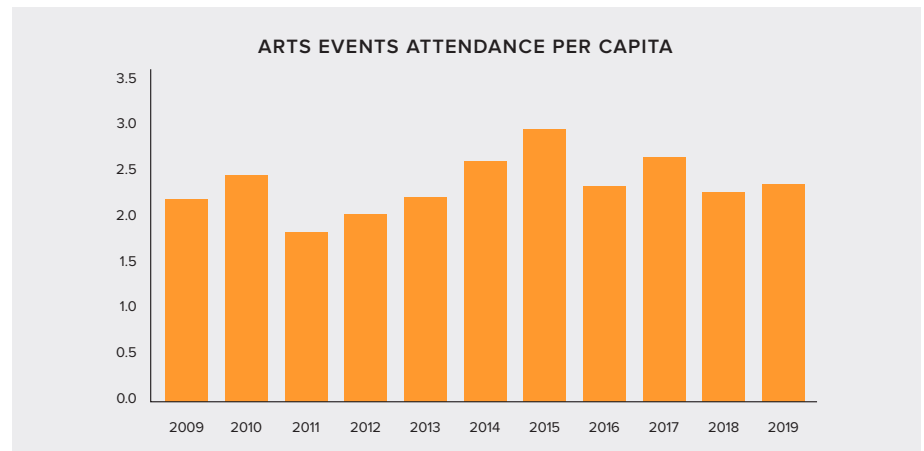
Beyond a certain level of material well-being, quality of life and happiness are less likely to be linked to higher income than to intangibles such as the enjoyment derived from creating and participating in the arts. A sustainable community places great value on the arts for finding and expressing meaning in our daily lives. The arts afford a new outlook to those who take part, whether as participant, spectator, or volunteer.

TREND

In 2010 a Sustainable Calgary survey estimated that 411,000 people attended the top 10 festivals (0.38 visits/capita). By comparison, in 2018 Calgary Arts Development (CAD) registered 565,000 people (0.45 visits/capita) at 14 festivals.

More Calgarians are enjoying a wider variety of festival events than ever before. The Calgary Folk Music Festival, founded in 1980, is the most established major festival in the city. Other major festivals have come on the scene since the first State of Our City Report. Sled Island has grown steadily since its founding in 2007, with approximately 40,000 attendees in 2018. From an initial audience of 8,000 in 2000, the Calgary International Film Festival, with its roots in the Arusha Centre's One World Film Festival, attracted 38,000 in 2018, its second-highest attendance ever. Since its beginnings in 2003, Globalfest has regularly attracted over 100,000 to its annual 4-day event in Elliston Park in Greater Forest Lawn.

In 2018 CAD reported contributions of \$5.14 million through 6 granting programs, up from \$3.75 million in 2009. In 2018, in recognition of the importance of the arts, City Council increased the CAD budget from \$6.4 million to \$12.4 million.



Over the past 20 years, the arts in Calgary have celebrated many milestones, including the creation of CAD in 2005; the establishment of a Poet Laureate in 2011; the naming of Calgary as Canada's Cultural Capital and the establishment of the Cultural Leaders Legacy Artist Awards, both in 2012; the creation of cSpace in 2011 and the opening of their building in 2017; and the opening of Festival Hall in Inglewood in 2013.

LINKAGES

A 2016 CAD survey found that 92% of Calgarians engage in the arts in some way and 86% believe that the arts help bring people together. The arts were supported by 23,500 volunteers in 2018, a contribution valued at more than \$12 million.

The arts contribute to economic diversification. In 2018 Calgarians' arts expenditures reached \$125 million, up 18% since 2009. Calgary's population grew by 18% in the same period. In 2018, 7,125 artists were hired and the arts sector supported 716 full-time equivalent staff.

Still, Calgary lags behind all major Canadian cities with respect to arts grants. CAD data from 2015 show Vancouver receiving \$19.36/capita in arts grants, followed by Edmonton at \$13.54, Montreal at \$9.35, Toronto at \$8.90, Winnipeg at \$7.02, and Calgary at \$6.50.

Equitable access to the arts is an ongoing issue. Lower-income families and individuals often find that festivals and

other arts and cultural events are out of reach economically. Additionally, a CAD Arts Professional Survey carried out in 2017 found that half of Calgary professional artists reported incomes of less than \$35,000 annually and 50% spent more than 30% of their income on housing.

DEFINITIONS

The attendance data are taken from the CAD Accountability Reports. CAD reports on attendance at their 10 cornerstone organizations, professional events, community events, and festivals. Prior to 2014, Sustainable Calgary carried out its own survey of the top 10 festivals in the city.

TAKE ACTION & GET INVOLVED

- Volunteer for your favourite arts organization.
- Attend some of the many festivals in Calgary: Calgary Folk Music Festival (calgaryfolkfest.com), GlobalFest (globalfest.ca), Sled Island (sledisland.com), Cinematheque Calgary (calgarycinema.org).



Lower-income families and individuals often find that festivals and other arts and cultural events are out of reach economically.

Sense of Community



THE FACTS

In 2014 an equivalent percentage of Calgarians, Albertans, and Canadians (67%) reported a very strong or somewhat strong sense of belonging to their local community. The Calgary Foundation's 2018 Vital Signs survey similarly reported that roughly two-thirds of Calgarians reported a strong sense of belonging.

IMPORTANCE

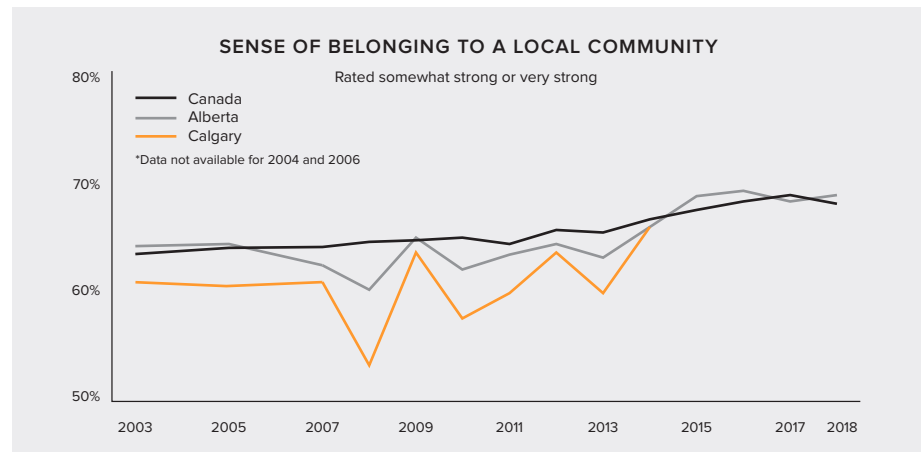
Most people understand sense of community (SOC) intuitively. Yet it is a complex idea, composed of several elements – a feeling of belonging or membership and of having influence in your community, the ability to meet most of your needs through your community, and a feeling of being emotionally connected and committed to your community. We recognize it in neighbourly and friendly actions like waving, chatting, visiting, lending items, and giving assistance. These types of interactions often help us feel at home in our neighbourhood and rooted within the larger city.

TREND

Recent results from the Canadian Community Health Survey indicate that sense of belonging in Calgary and Alberta is slightly higher than it was in the previous 10 years. The 2014 survey reported the highest SOC among Calgarians since 2003. Data for Alberta and for Canada show that people's SOC increased from 2015 to 2018. We expect that Calgary data would show a similar increase.

A comparison of sense-of-belonging ratings with other jurisdictions, however, indicates that Albertans' sense of belonging is not exceptionally high. For example, in 2018, 69% of Albertans reported a strong sense of belonging to their local community, while in the same year, 70% of British Columbians reported a strong sense of belonging to their local community and 78% of residents of Newfoundland and Labrador reported a strong sense of belonging to their local community.

The Calgary Foundation's 2018 Vital Signs survey indicated a strong sense of



belonging among Calgarians; however, their survey also indicated differences in sense of belonging among various demographic and spatial divides. Sense of belonging increased with age: 83% of seniors over the age of 65 reported a strong sense of belonging while only 64% of people under 35 reported a strong sense of belonging. People in the NW and SW of the city reported higher levels of sense of belonging than those in the SE or NE. Also, those more likely to have a weak sense of belonging were unemployed (44% of unemployed individuals reported a weak sense of belonging).

LINKAGES

Studies show that a strong SOC has many benefits for individuals and communities. It is related to greater feelings of safety and security and to increased levels of voting, recycling, helping others, and volunteering. Individuals with a higher SOC tend to be happier and less worried, and to have a greater sense of competence. A strong SOC is also related to lower rates of mental illness and suicide, less child abuse, higher-quality child rearing, physical improvements in neighbourhoods, reduced crime, and greater resiliency among individuals. Studies have also shown that SOC can have a significant influence on the relative success of economic development efforts.

While all these positive benefits arise from a strong SOC, it is also important to recognize possible negative ways in which SOC may operate. Since SOC

is frequently reported among people with shared identities, marginalized groups of people may be excluded from community membership. Inclusive, healthy communities are those in which diverse groups of people feel welcome and connected.

DEFINITIONS

Sense of community (SOC) can be defined as a sense of belonging to one's community and having feelings of reciprocity, fellowship, and support among community members. The Statistics Canada General Social Survey asks people to rate their sense of belonging to community as very strong, somewhat strong, somewhat weak, or very weak.

TAKE ACTION & GET INVOLVED

- Volunteer or offer financial support to the Calgary Immigrant Women's Association (ciwa-online.com).



A strong sense of community is related to lower mental illness and suicide rates, less child abuse, higher quality of child rearing, physical improvements in neighbourhoods, reduced crime, and greater resiliency among individuals.

Volunteerism



THE FACTS

In 2013, 50% of Albertans volunteered – more than the national average of 44% but less than Saskatchewan, which reported the highest rates in Canada (56%). Albertans volunteered an average of 161 hours in 2013, more than the national average of 154 hours but less than Nova Scotia at 181 hours.

IMPORTANCE

The spirit of volunteerism has been a defining characteristic of Calgary. In recent years, it has been particularly apparent during the post-flood cleanup in 2013 and in the response to the Syrian refugee crisis. Volunteering is a good indicator of people's sense of belonging to their community, the responsibility they feel for it, and the care they afford it.

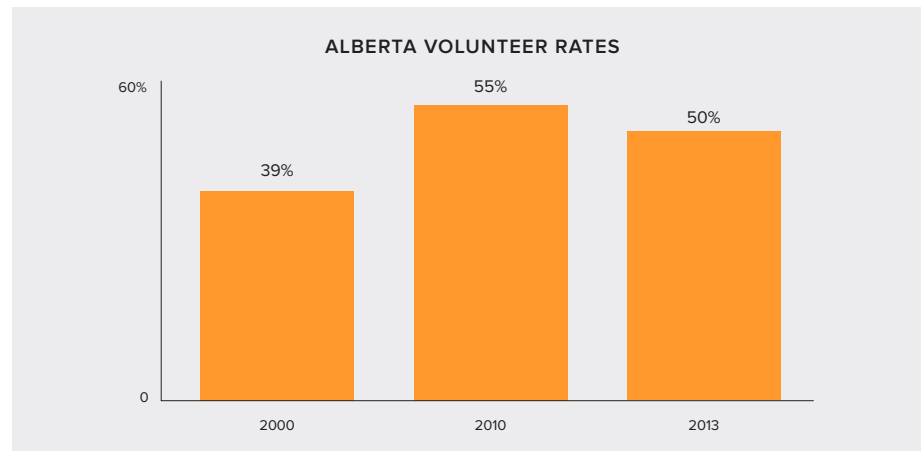
On a personal level, volunteerism offers individuals a sense of satisfaction based on making a contribution to a cause or to their community. It is also an excellent way to make new friends, network, and gain new skills.

TREND

The percentage of Albertans who volunteer showed a steady increase between 2000 and 2010, jumping from 39% in 2000 to 55% in 2010. In 2013 this percentage dropped for the first time in 13 years. Alberta has consistently ranked third or fourth among all provinces and tied for fourth place in 2013. Volunteer statistics at the city level are harder to come by, but the Calgary Foundation's Vital Signs reported that only 50% of Calgarians volunteered in 2010 – less than the provincial average of 55%.

The number of hours that Albertans volunteer has fluctuated significantly, increasing from 2000 (139 hrs) to 2004 (175 hrs), dipping slightly in 2007 (172 hrs), falling back to 2000 levels in 2010 (140 hrs), and rebounding to 161 hours in 2013, when Alberta ranked fifth among provinces in average hours volunteered. However, in 2013, 53% of all volunteer hours were contributed by just 10% of the population.

In 2013 in Alberta, the average donation made to charitable organizations was



\$863, up from \$586 in 2004. The 2013 donation amount was the highest in the country and significantly more than the Canadian average of \$531. Of all Albertans aged 15 years and older, 85% donated in 2013, the highest rate historically. In that year, Alberta tied with Saskatchewan and was behind only Newfoundland and Labrador (87%). Research confirms that those who volunteer more hours also tend to account for most of the money donated to charities.

LINKAGES

Volunteerism is often the catalyst for activities that contribute to the ecological sustainability of our community, such as habitat protection programs and the annual bird counts. Most city festivals rely heavily on volunteers, as do many library programs and food banks. Our school system is also enriched by the contribution of parents who volunteer.

In 2013 volunteers contributed the equivalent of \$5.6 billion and 140,000 full-time jobs to the Alberta economy (1 million jobs in Canada). A Conference Board of Canada study estimated the dollar value of volunteering at nearly \$56 billion in 2017 and cites research that volunteering improves health outcomes, including mortality, mental health, and life satisfaction.

On a cautionary note, as governments withdraw funding for education, health, and social services, volunteer levels may rise to fill the gaps. Elder care is a perfect

example. A 2015 study by the Institute for Research on Public Policy estimated that 20% of women and 15% of men provide 11 to 20 hours per week of caregiving for family members.

DEFINITIONS

Provincial and national data come from the 1997, 2000, 2004, 2007, 2010, and 2013 National Survey of Giving, Volunteering and Participation (Statistics Canada General Social Survey). This indicator measures the rate of formal volunteerism among Canadians 15 years and older. Formal volunteerism is defined as intentional, organized participation in a volunteer or charitable activity. Informal volunteerism occurs more spontaneously, when people casually assist friends, neighbours, and family members outside of their household. Canada will release 2018 data in 2020.

TAKE ACTION & GET INVOLVED

- Support the Institute for Research on Public Policy's recommendations for caregiver support (<https://irpp.org/wp-content/uploads/2015/12/study-no58.pdf>).
- Check out the Volunteer Centre of Calgary, or Propellus (propellus.org) for opportunities to volunteer in your community.



In 2013 volunteers contributed the equivalent of \$5.6 billion and 140,000 full-time jobs to the Alberta economy (1 million in Canada).

Economic Indicators



HOUSING AFFORDABILITY

According to the 2016 census, **approximately 22.2% (103,290) of all Calgary households spent 30% or more of their gross income on housing.** The City of Calgary reported that 19% (88,000 households) of households earning less than \$60,000 annually are currently in need of affordable housing. The 2018 Point-in-Time (PiT) Homeless Count found **2,911 people experiencing homelessness in Calgary.**



HOURS REQUIRED TO MEET BASIC NEEDS AT MINIMUM WAGE

To meet basic needs at minimum wage in Calgary in 2018, **a single parent with 2 children had to work 55.35 hours/week at the minimum wage of \$15.00/hour.** This has improved considerably since 2004 (111 hours/week at a minimum wage of \$5.90/hour). A living wage in 2018 was \$20.76.



OIL & GAS RELIANCE INDEX

In 2018 Calgary's oil and gas reliance (OGR) index stood at 34.9.

Approximately 5.4% of Calgary's workforce, about 47,000 people, were directly employed in the primary sector industries of forestry, fishing, mining, quarrying, and oil and gas. Primary sector industries and utilities contributed about \$36 billion (28.4%) of Calgary's GDP in 2018. In Alberta, **the value of oil and gas exports in 2018 was \$84 billion** – 71% of all merchandise exports.



FOOD BANK USAGE

In 2018 the Calgary Food Bank Society (CFB) distributed 9.4 million lbs. of food through 83,401 hampers, providing food for 192,391 Calgarians.



UNEMPLOYMENT RATE

In 2019 Calgary had the highest unemployment rate of Canada's 6 largest cities.

In 2019 **Calgary's unemployment rate was 7.2% compared with a national rate of 5.6%.** This is almost a complete reversal from 2011, when nationwide unemployment sat at 7.5% and Calgary's unemployment rate was 5.8%.



INCOME EQUITY: GAP BETWEEN RICH & POOR

In 2017 the ratio of Alberta's top 20% of earners to the bottom 20% was 26 to 1.

That was down from 32 to 1 in 2016 but up from 25 to 1 in 2015. **To be considered in the top 1% of earners in Canada, you require an income greater than \$235,000.**



Housing Affordability



THE FACTS

According to the 2016 census, approximately 22.2% (103,290) of all Calgary households spent 30% or more of their gross income on housing. The City of Calgary reported that 19% (88,000 households) of households earning less than \$60,000 annually are currently in need of affordable housing. The 2018 Point-in-Time (PiT) Homeless Count found 2,911 people experiencing homelessness in Calgary.

IMPORTANCE

The United Nations considers housing a human right. Housing is the highest and most unavoidable expense of any household. Suitable and affordable housing is woven into all parts of our lives. It contributes to better mental and physical health, financial flexibility, independence, stability, and security.

TREND

Although housing affordability in Calgary improved from 2010 to 2016, it is still considerably worse than it was in 2006 and it has declined significantly since 1997. According to 2016 census data, 66% of Calgary households own homes with a mortgage. Of these homeowners, 16.5% of households were overspending on housing. Comparatively, in 1997 only 7.5% of all Calgary homeowners overspent on housing.

Of those households in Calgary that are renting, 10.2% are in subsidized housing and 36% are unable to afford their rental properties. This is an increase of 6% since 1991 and 4% since 2006. The average monthly rent for a 2-bedroom dwelling in 2016 was \$1,308. For this unit to be affordable, a household must be earning at least \$53,000 per year. Calgary's low-end market rental rates are among the highest in Canada, and the supply among the most limited.

In Canada's other major cities, the average supply of non-market housing units is 6%. In Calgary, it is 3.6%. To meet the national average, Calgary will need 26,000 additional affordable housing units by 2024. In May 2019, City Council adopted a new policy that will contribute

to building more non-market housing in Calgary. The policy allows the sale of up to 10 City parcels to developers of non-profit affordable housing every 2 years.

Calgary's first ever homeless count in 1992 found that 447 individuals were experiencing homelessness. The 2008 count showed that homelessness in Calgary had risen by 650% over 10 years. Since the implementation in 2008 of Calgary's 10 Year Plan to End Homelessness, homelessness has dropped by 19%. The 2018 PiT Homeless Count showed that while only 3% of the general population identifies as Indigenous, they represented 20% of the homeless population. In Alberta, 15% of those who became homeless did so because they were unable to pay their rent or mortgage. Another 16% became homeless due to job loss and 25% due to addiction or substance use.

LINKAGES

Building out into greenfields is the de facto affordability strategy in Calgary. But the "drive 'til you qualify" approach often results in higher costs of living, mostly attributable to higher transportation costs.

The 2016 Sustainable Calgary report Affordable Living: Housing + Transportation found that if a household could avoid the purchase of a car, or a second or third car, and put the savings into housing, between 26% and 1800% more homes for sale would have been available to a home-buyer, based on June 2011 MLS data. The greatest increase in choice occurred at the \$60,000 income bracket (1800% or 1,677 homes), followed by the \$50,000 (1570% or 848 homes) and \$80,000 (125% or 2,228 homes).

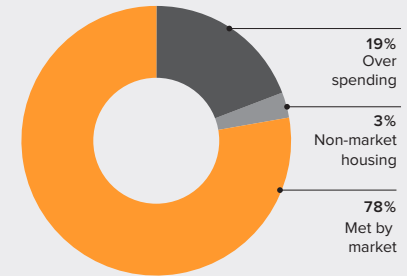
City sprawl contributes to more traffic congestion, less leisure time with families, and higher greenhouse gas emissions. When families are overspending on housing, they tend to cut back on essentials like nutritious food, post-secondary education, and dental visits.

DEFINITIONS

According to the Canada Mortgage and

SPENDING ON HOUSING IN CALGARY

453,626 Households



Housing Corporation, housing is affordable when a household spends less than 30% of their before-tax income on adequate shelter. According to the City's definition, a household needs affordable housing when it earns less than 65% of the Calgary Area Median Income and spends more than 30% of its gross income on shelter. The PiT counts provide a snapshot of the number of people experiencing homelessness on one night. The 2018 PiT count took place on April 11 in Calgary. Information for this indicator came from Statistics Canada census data, Calgary Corporate Affordable Housing Strategy 2016–2025, and the 2018 Alberta Point-in-Time Homeless Count Technical Report (7 Cities on Housing and Homelessness).

TAKE ACTION & GET INVOLVED

- Advocate for a National Housing Strategy to fund non-market alternatives like housing co-ops and land trusts.
- Learn more about homelessness in Calgary from the Calgary Homeless Foundation (calgaryhomeless.com).
- Explore the possibility of co-op housing in Alberta at the Southern Alberta Co-operative Housing Association (sacha-coop.ca).



Oil & Gas Reliance Index



THE FACTS

In 2018 Calgary's oil and gas reliance (OGR) index stood at 34.9. Approximately 5.4% of Calgary's workforce, about 47,000 people, were directly employed in the primary sector industries of forestry, fishing, mining, quarrying, and oil and gas. Primary sector industries and utilities contributed about \$36 billion (28.4%) of Calgary's GDP in 2018. In Alberta, the value of oil and gas exports in 2018 was \$84 billion – 71% of all merchandise exports.

IMPORTANCE

A diverse economy that does not rely on a single resource, employer, or sector is better able to withstand economic downturns and fluctuating market prices. Reliance on a single industry is also not healthy for democracy, since decision-making becomes heavily influenced by the dominant economic player.

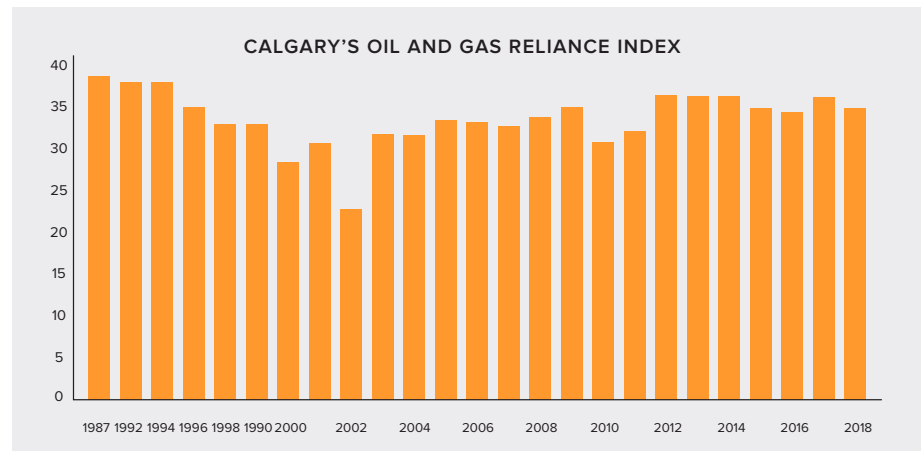
TREND

Calgary's economy remains tethered to the fortunes of the oil and gas industry. Unsurprisingly, the OGR index is positively correlated with oil prices, and the sharp rise in oil prices through 2007 and 2008 increased the index. However, these 2 factors are not negatively correlated. The sharp decrease in oil prices in 2014 did not decrease the OGR index. In fact, the recent boom times have furthered locked in Calgary's dependency on oil and gas.

In 2018 only 1.9% of Calgary's businesses were engaged in mining, quarrying, and oil and gas extraction, and the average hourly wage in those combined sectors was \$47.52, the second-highest average among all industries.

The 2018 OGR index is above the long-term average of 34.1. The index is down from a historic high of 38.8 in 1987. From 2000 to 2009, the index averaged just 32.4, but it has averaged 34.8 since 2010. The average of the past 10 years is just below the 1990s average of 35.4. Calgary is Canada's administrative centre for oil and gas and has the second-largest number of corporate headquarters in Canada.

The downtown office vacancy rate in



2012 was 5%. Since 2016, the rate has remained above 25%. In late 2019, it was 27.2%. Moreover, in January 2020, among Canada's 7 major cities, Calgary was second from the bottom in terms of number of new housing starts and fourth in total value of building permits, and outperformed only Edmonton in MLS benchmark composite housing price growth.

There were only 57 business bankruptcies in Calgary in 2018, three fewer than in 2017 but the second-highest number since 2014. The Conference Board of Canada has an economic diversification index for Canadian cities, scaled, in terms of increasing economic diversity, from 0 to 1. In 2009 Calgary's index was 0.77; this reached a nadir in 2012 of 0.74. From a high of 0.83 in 2017, it dropped slightly in 2018 to 0.81. The same index rated Vancouver, Saskatoon, and Toronto at 0.83, 0.93 and 0.86, respectively.

LINKAGES

Economic diversification is linked to our sense of community. Many Calgarians have experienced the impact of the boom-and-bust cycles in oil and gas. Although Calgary has the largest number of millionaires per capita of any Canadian city and Canada's most productive workforce, in recent years, the city has experienced increased unemployment, declining job growth, falling home prices, higher emigration, and slower population growth.

Clearly, not enough reforms were undertaken during the boom time to

provide resilience during the bust, including changes to unemployment insurance and movement toward a progressive taxation system. Moreover, a more sustainable economic development strategy should focus on activating the community economic development drivers and on the cluster of key sustainability challenges facing Calgary.

Sustainable Calgary's 2005 Citizens' Agenda Report recommended refocusing on economic development opportunities in affordable housing, energy conservation and renewable energy sources, waste management, human-powered transportation, immigrant workforce expansion, green building design, and transit- and community-oriented development.

DEFINITIONS

The OGR index is derived by determining the oil and gas industry's contribution to three areas of Calgary's economy: employment (the Conference Board of Canada Metropolitan Outlook Report), GDP (the Conference Board of Canada), and net exports (Government of Alberta, Alberta Finance and Enterprise). These three values are reflected as percentages, which are then added together and divided by 3. An index of 100 would be total reliance.

TAKE ACTION & GET INVOLVED

- Support local business at Be Local (belocal.org).

Unemployment Rate



THE FACTS

In 2019 Calgary had the highest unemployment rate of Canada's 6 largest cities. In 2019 Calgary's unemployment rate was 7.2% compared with a national rate of 5.6%. This is almost a complete reversal from 2011, when nationwide unemployment sat at 7.5% and Calgary's unemployment rate was 5.8%.

IMPORTANCE

In a sustainable community, all people should have the opportunity to contribute to their community with work that is meaningful and that provides for the necessities of life and the resources to participate in the life of their community. The continued diversification of the Calgary economy, along with the integration of bold environmental and climate policy, is critically important to addressing systemic employment challenges.

TREND

The 2019 unemployment rate is an improvement from 2018, when the rate stood at 8.2%. From 2011 to 2019, Calgary's unemployment averaged 6.4%, reaching a peak of 9.4% in 2016 at the height of the 2015/16 Alberta recession. It is estimated that Alberta shed nearly 20,000 jobs in the energy sector alone in 2015. This, along with the changing nature of work, resulted in a rapidly increasing downtown office vacancy rate, which peaked at 27.8% in 2018.

The oil and gas sector continues to dominate the economy, but with automation and the gathering threat of the climate emergency, jobs in that sector will likely never return to historical levels. On the other hand, the expansion of the city's emerging technology sector has created approximately 2,000 jobs for data scientists, coders, and programmers that remain unfilled. Momentum toward transition to a post-fossil fuel economy is sluggish at best.

Continued economic diversification provides a direct pathway to a more sustainable economic future for Calgary. For example, Calgary Economic Development and the Information and



Communications Technology Council recently launched an online tool to help unemployed oil and gas sector workers gain the skills they need to participate in the new economy.

LINKAGES

High levels of unemployment can drain a city of its prosperity. With fewer people earning wages, fewer tax dollars are available to support programs for unemployed citizens, while demand for these programs increases. Services such as affordable housing and food banks can become overloaded in times of high unemployment, and the basic health of unemployed citizens and their families can suffer.

Levels of education and literacy are strongly linked to unemployment rates. Workers with little education or poor literacy skills are vulnerable to layoff and displacement, and once unemployed, they can find it very difficult to secure new jobs.

Sometimes, structural barriers such as lack of transportation can prevent people from gaining employment. Public transit that is convenient, affordable, and efficient can help people who do not drive or do not own – and often cannot afford to own – a car to have access to a wider range of jobs. Dollar for dollar, one of the most cost-effective creators of jobs is building mass transit. Stage 1 of the Green Line will create 20,000 jobs.

Calgary is the most unequal large city

in Canada in terms of income gap, and in 2019 had the highest unemployment rate. At the same time, our economy still generates more wealth than any city in the country. From a sustainability point of view, we can create more jobs and distribute the wealth more fairly without having to continue to rely on a growing economy and the outsized ecological footprint that comes with it.

DEFINITIONS

The unemployment rate measures the proportion of the population in the labour force who are without work. The labour force includes individuals aged 15 and over who are employed (part-time and full-time) or actively looking for work. The figures cited in this indicator are for the Calgary Census Metropolitan Area and are from Statistics Canada.

TAKE ACTION & GET INVOLVED

- Support organizations that advocate for a basic income for all, such as Basic Income Calgary (basicincomecalgary.ca).



The continued diversification of the Calgary economy, along with the integration of bold environmental and climate policy, is critically important to address systemic employment challenges.

Hours Required to Meet Basic Needs at Minimum Wage



THE FACTS

To meet basic needs at minimum wage in Calgary in 2018, a single parent with 2 children had to work 55.35 hours/week at the minimum wage of \$15.00/hour. This has improved considerably since 2004 (111 hours/week at a minimum wage of \$5.90/hour). A living wage in 2018 was \$20.76.

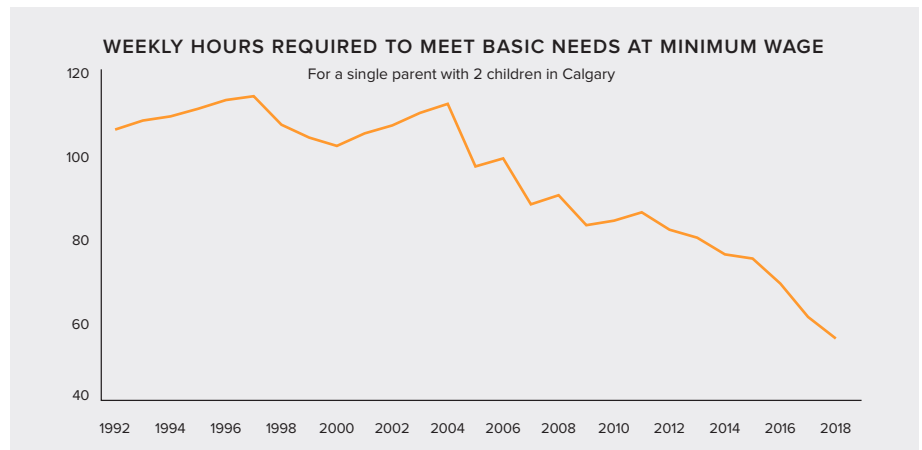
IMPORTANCE

Equity is an important element of a sustainable community. Every member of the community should have the opportunity to do meaningful work for a reasonable wage. Adequately remunerated employment can increase self-sufficiency, decrease reliance on social programs, and, in the long term, reduce costs to society. The single most impactful way to reduce poverty without significant government subsidies is to ensure that the minimum wage reflects the living wage and is indexed for overall cost increases.

TREND

Between 2011 and 2018, Alberta saw a year-over-year increase in the minimum wage, from \$8.80/hour to \$15.00/hour. During the same time period, hours required to meet basic needs fell from 85 in 2011 to 55.35 in 2018. In July 2019, the minimum wage rate for students under 18 working less than 28 hours/week was rolled back to \$13.00/hour.

In 2018, at \$15.00/hour, single parents with 2 children were still working 55.35 hours/week to reach the low-income cutoff (LICO). The current number of hours of work required to reach the LICO is lower than it has been at any time since 1992. In the 1990s, the hours of work required averaged 108/week. In the 2000s, the average was 101 hours, and from 2010 to 2018, the average was 73.4 hours. Not since the 1970s have low-income households been able to work anything close to a regular work week at minimum wage and reach the LICO. In 1978 a single parent with 2 children would have had to work 42 hours/week. While the trend has been positive for 15 years, we are still a long way from the minimum wage (real) rates of the 1970s.



LINKAGES

The additional time required to make ends meet results in less time spent on other aspects of life that impact personal and societal well-being. Furthermore, these numbers only represent a portion of the costs of managing a household; in particular, they do not include transportation costs, the second-largest household expenditure after housing; leisure activities like an occasional trip to Banff or a night out; or dental care.

Long working hours can leave individuals and households precariously close to homelessness and leave little time for family, community, physical fitness, lifelong learning, volunteer activities, or participation in local governance. Moreover, in families where parents are working long hours for low wages, the cycle of poverty is reinforced over generations, since parents who work long hours are less able to support the learning and development of their children.

Efforts are ongoing for a national Guaranteed Annual Income. Locally, Enough for All, a community-driven poverty-reduction strategy, aims to cut poverty in half by 2023.

DEFINITIONS

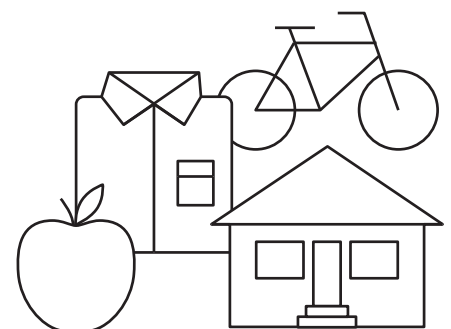
This indicator is derived by dividing Alberta's minimum hourly wage into the before-tax LICO incomes established by Statistics Canada for various household sizes in cities of over 500,000 people. LICO is defined as the income threshold at

which families are expected to spend 20 percentage points more than the average family on food, shelter, and clothing.

These calculations assume an average work week of 40 hours and 2 weeks of vacation annually, with all 13 statutory holidays taken. The LICO is used for this assessment as it has been calculated since 1959, so long-term trends can be established. It is also the measure used by the City of Calgary to determine if people qualify for subsidies.

TAKE ACTION & GET INVOLVED

- Write or call your MP and premier, asking them to support universal pharmacare and universal dental care.
- Advocate for poverty reduction in Calgary through organizations like Vibrant Communities Calgary (vibrantcalgary.com) and through the use of local currency (calgarydollars.ca).



Food Bank Usage



THE FACTS

In 2018 the Calgary Food Bank Society (CFB) distributed 9.4 million lbs. of food through 83,401 hampers, providing food for 192,391 Calgarians.

IMPORTANCE

Food bank usage indicates to what extent we are fulfilling our societal responsibility to more vulnerable citizens. Historically, food banks were considered a temporary phenomenon, dedicated to resolving a food distribution crisis. Over time, they have become a fixture in our towns and cities.

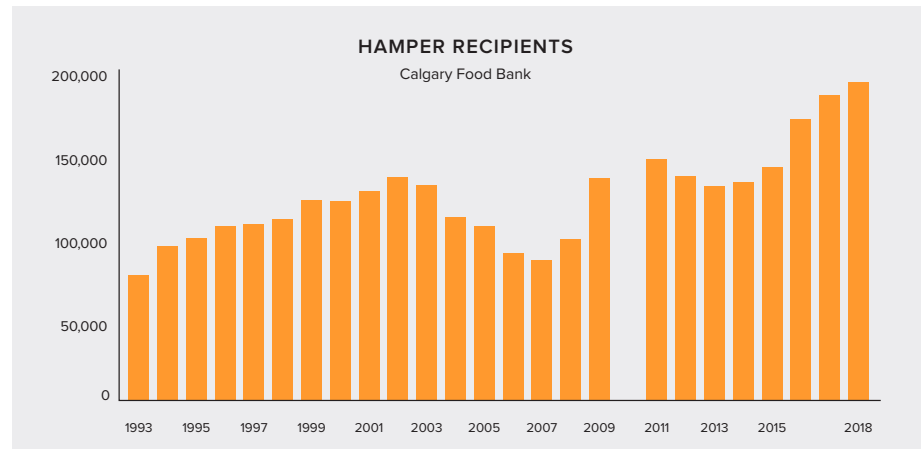
TREND

By 2018 the CFB had not seen a reduction in demand for over 5 years. In 2018 there was a 4% increase in hampers distributed compared to 2017. The number of clients using the CFB increased by 52% between 2008 and 2012, largely as a result of the 2008 recession. The number of clients whose households have at least one wage earner rose from 33% in 2011 to 38% in 2014 and decreased to about 30% in 2018. Families represented 57% of food bank users in Calgary in 2018, while 43% were individuals. Thirty-nine percent were children, and 16% were single parents. Approximately 30% of users were on social assistance, and 16% were on disability-related income support.

Nationally, HungerCount reported that usage stabilized in 2019, with visits at the same level as 2018. Usage levels in 2019 were virtually the same as in 2010. In Canada, the percentage of children using food banks is well above the percentage of children in our population. In March 2019, children represented 19.4% of the Canadian population but 34.1% of those using food banks. In 2019, 48% of users were single persons and 18.3% were single-parent households. Over 17% of users reported provincial disability support as their main source of income. Nine percent of users were pensioners and over 12% were employed.

LINKAGES

The CFB benefited from over 140,000 volunteer hours in 2018 – a value of over \$4.4 million.



According to Dr. Lynn McIntyre of the University of Calgary, among those who are employed, food insecurity is experienced disproportionately among people working in retail, health care, construction, and administration.

Lack of accessible, affordable, and safe public transit can severely limit the ability of many low-income citizens to find work and to travel to and from work reliably. Similarly, lack of affordable housing can force people on low incomes to make difficult choices between paying for food, utilities, or rent. A report by the Calgary School of Public Policy suggests that a Guaranteed Annual Income can alleviate hunger and food insecurity.

Canada's Food Price Report, produced jointly by the University of Guelph and Dalhousie University in 2019, shows that since 1986, food price inflation has far outpaced after-tax median income (20%) in all food categories – meat (130%), seafood, dairy, cereal (115%), fruit (55%), and vegetables (50%).

The 2019 HungerCount reported that across the country, almost half of recipients report that they come to food banks because social assistance is not sufficient. There has been a huge increase in single-parent and single-person households coming to food banks: singles receive very little in the way of social assistance. Food bank users are over 5 times more likely to report mental health issues compared to the general population. Between 2016 and

2019, there was a 30% increase in seniors accessing food banks. Since 2010, there has been a 10% increase in the percentage of users who live in market rental housing, and this is putting pressure on their ability to buy food.

DEFINITIONS

The CFB is a crisis facility that provides food from 9 depots to Calgarians in times of financial trouble. The CFB started providing this emergency service in 1982 and has been tracking its distribution of food since 1993. The number of recipients measured in this indicator includes people who make multiple visits. Data in this report are from CFB Annual Reports and HungerCount Annual Reports.

TAKE ACTION & GET INVOLVED

- Help the Canadian Association of Food Banks (foodbanksCanada.ca) advocate for universal childcare, increased support for singles, an improved Canada housing benefit, and basic income for all.
- Support organizations like the Calgary Food Bank (calgaryfoodbank.com) and Leftovers Foundation (rescuefood.ca) through donations or volunteering.



Income Equity: Gap between Rich & Poor



THE FACTS

In 2017 the ratio of Alberta's top 20% of earners to the bottom 20% was 26 to 1. That was down from 32 to 1 in 2016 but up from 25 to 1 in 2015. To be considered in the top 1% of earners in Canada, you require an income greater than \$235,000.

IMPORTANCE

Inequality eventually weakens democracy as those with wealth influence the political process in their favour. As people watch inequality grow, they begin to withdraw their consent or support for change, and a crisis of legitimacy of government and institutions of all kinds builds.

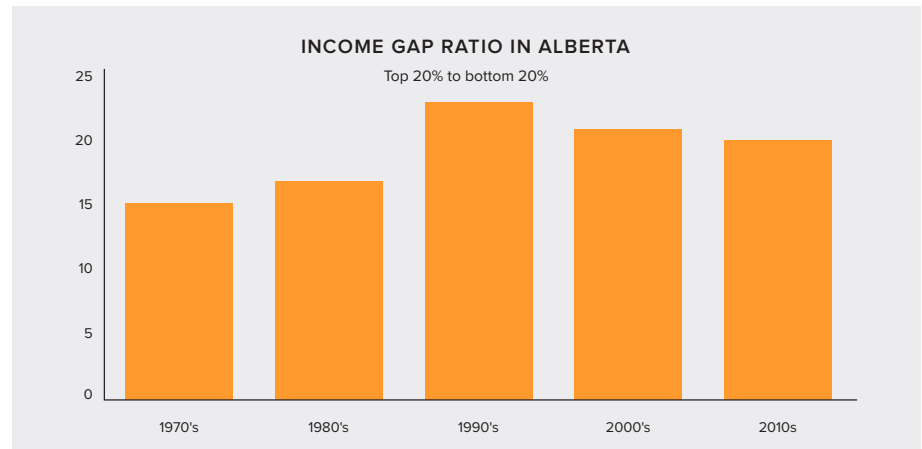
TREND

From the Great Depression until the mid-1970s, there was a steady improvement in wealth distribution in Canada. The inequality of income worsened through the 1980s, averaging 28 to 1. In the 1990s, inequality grew again, with the average ratio for the decade being 36 to 1. The 2000s saw decreasing inequality, with an average ratio of 30 to 1. Since 2009, the ratio of top to bottom income earners has improved to 26 to 1 but is still 25% greater than it was in the late 1970s.

Statistics Canada reported that from 2016 to 2017, average income in Canada grew by 2.5%, while income for the top 1%, 0.1%, and .01% grew by 8.5%, 17.2%, and 27.2%, respectively.

According to the report *Income Inequality in Canada*, by CPA Canada, Calgary's after-tax inequality in 2017 was 4 times higher than the national average for the period 1982 to 2017, while Vancouver and Toronto follow closely behind. For after-tax income, Calgary is the most unequal city in the country. When it comes to the 1%, Calgary is the most unequal city in both market income (employment income, interest income, etc.) and after-tax income. Moreover, the 1% in Calgary take home more than double the share of income than those in Toronto, Vancouver, and Montreal and 3 times that of Edmonton.

According to *Born to Win*, by the Canadian Centre for Policy Alternatives (CCPA),



between 2012 and 2016, the net worth of the wealthiest 87 families in Canada rose 37%. As a result, those 87 families have the same wealth as the lowest-earning 12 million Canadians.

According to the CCPA's report *Climbing Up and Kicking Down*, from 2008 to 2016, the income of Canada's top 100 CEOs increased from \$7.3 million to \$10.4 million. In 2016 the average CEO income was more than 200 times that of the average Canadian.

LINKAGES

The book *The Spirit Level: Why More Equal Societies Almost Always Do Better* reports on groundbreaking research on 23 of the wealthiest countries in the world. The research shows that physical and mental health, drug abuse, education outcomes, imprisonment, obesity, social mobility, trust, teenage pregnancy, and violence are all worse in more unequal societies.

Even advisors to the International Monetary Fund called inequality "the most serious challenge we face" globally. A January 2011 article in *The Economist* highlights 3 top reasons why inequality matters – its negative impact on personal well-being, the limits it imposes on equality of opportunity, and the effects of higher concentrations of political power.

A 2001 report from York University, *Inequality Is Bad for Our Hearts*, reports that if all Canadians were as heart healthy as the wealthiest Canadians, there would

be 6,366 fewer deaths from heart disease annually. The cost of income-related differences in heart disease among Canadians is estimated at \$4 billion annually.

DEFINITIONS

Data for the ratio of top 20% to bottom 20% of earners come from Statistics Canada and are based on average market income by economic family type (Table 11-10-0192-01, formerly CANSIM 206-0031). This indicator is based on information from Statistics Canada, the Canadian Labour Market and Skills Research Network, and the Conference Board of Canada. Income includes the following sources: employment, employment insurance, social assistance, and other government transfers.

TAKE ACTION & GET INVOLVED

- Advocate for fair and progressive tax policies through organizations like Canadians for Tax Fairness (taxfairness.ca).



The cost of income-related differences in heart disease among Canadians is estimated at \$4 billion annually.

Education Indicators



ADULT LITERACY

In 2012, **55% of Albertans 16 to 65 years of age scored at literacy level 3 or higher** (minimally functional), a drop of 6 percentage points since 2003. Only 15.8% of Albertans functioned at a high level of literacy. Though this is the highest rate among all provinces, it is significantly lower than Japan (22.6%). Nationally, 52% of Canadians aged 16 to 65 function at literacy level 3 or higher, **placing Canada tenth among OECD countries.**



GRADE 6 ACHIEVEMENT SCORES

On the 2018/19 Provincial Achievement Tests for grade 6 language arts, **87.8% of students enrolled in Calgary Board of Education (CBE) schools achieved an acceptable standard** as identified by Alberta Learning. This was an increase from the previous year's 86.1%, which had been the **highest rate in 10 years.**



AVERAGE CLASS SIZE

In 2018/19, the average class sizes for the Calgary Board of Education (CBE) and Calgary Catholic School District (CCSD) were 24.4 and 23.5 students, respectively, larger than the Alberta average of 22.6. These averages are generally in line with Alberta Commission on Learning's guideline of 23. **Neither board met the target class size requirements for the important K-3 grade level.**



LIBRARY USAGE

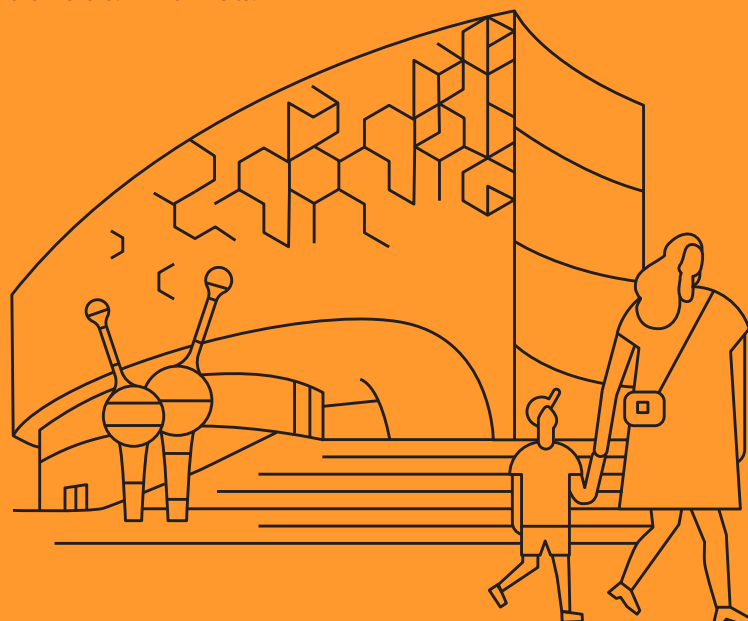
In 2017 Calgarians visited the 21 branches of the Calgary Public Library (CPL) approximately 6.8 million times.

This represents a 34% increase over 3 years: in 2014 there were 5.1 million visits.



DAYCARE WORKER SALARIES

In 2018, with the minimum wage at \$15.00/hour, daycare staff in Alberta worked for an average starting wage of \$15.86/hour, an overall average wage of \$16.87/hour, and a top wage of \$18.42/hour.



Adult Literacy



THE FACTS

In 2012, 55% of Albertans 16 to 65 years of age scored at literacy level 3 or higher (minimally functional), a drop of 6 percentage points since 2003. Only 15.8% of Albertans functioned at a high level of literacy. Though this is the highest rate among all provinces, it is significantly lower than Japan (22.6%). Nationally, 52% of Canadians aged 16 to 65 function at literacy level 3 or higher, placing Canada tenth among OECD countries.

IMPORTANCE

Literacy supports lifelong and independent learning by helping people to acquire new competencies and skills. A society's ability to tackle the complex sustainability challenges we face today is directly related to the literacy of its citizens.

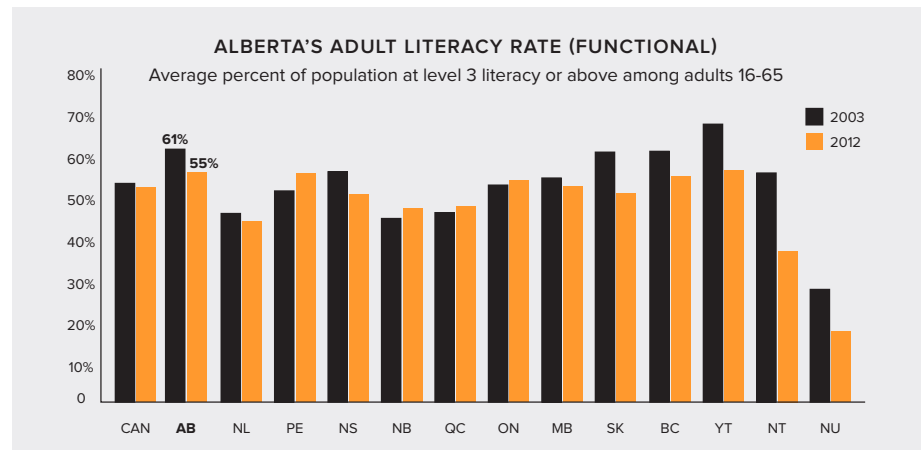
TREND

Since 1989, there have been only 4 major adult literacy surveys across Canada. The 2003 ALLS survey suggests some deterioration in adult literacy in Alberta since 1996. The 2013 results suggest a further deterioration between 2003 and 2012. The percentage of Albertans at level 1 literacy or lower increased from 13.6% to 15.2% and those at level 2 or below increased from 39.5% to 44.8%. In 2012 the Conference Board of Canada gave Alberta a B grade for high-level literacy skills and a C grade for inadequate literacy scores.

Though the 2003 and 2013 results are not strictly comparable, according to Statistics Canada, the adjusted inadequate literacy (levels 1/2) rate rose from 42% in 2003 to 48% in 2012. In each survey, literacy tends to decrease with age.

According to the Conference Board of Canada, Aboriginal Canadians have a 60% rate of inadequate literacy compared to the Canadian average of 48%. Similarly, 60% of recent immigrants to Canada have inadequate literacy skills, compared to 44% of people born in Canada.

In 2012 Canada had more people in the higher levels of literacy than the OECD average, but we also had more people in the lower levels of literacy. Alberta was the



only Canadian province with more people than the OECD average in the highest levels of proficiency in prose, numerical, and computer literacy.

LINKAGES

In all countries, individuals with lower proficiency in literacy are more likely than those with better literacy skills to report poor health, to believe that they have little impact on political processes, and to not participate in organizations or volunteer activities. In most countries, they are also less likely to trust others.

A 2018 Canada West Foundation report suggests that raising the average literacy and numeracy skill level of the workforce could increase GDP by \$54 billion per year and productivity by 5%, and that the biggest impact is gained by investing in the lowest literacy levels.

In Canada, an individual at literacy levels 1 or 2 is almost 3 times more likely to be unemployed than an individual at level 3 or higher. Between 22% and 50% of people with low-level literacy skills live in poor households compared to 8% with high literacy levels.

Less than 10% of Canadians who could benefit from literacy upgrading programs actually enroll. According to the ABC Canada Literacy Foundation, financial instability, lack of childcare, and lack of accessible transportation are some of the barriers that prevent people from enrolling in literacy programs.

Those in the criminal justice system experience literacy problems at 3 times the rate of the general population. People with low literacy levels experience more hospitalizations and are more likely to misinterpret medical instructions.

DEFINITIONS

This indicator is based on the 2013 Program for the International Assessment of Adult Competencies (PIAAC), the 1996 International Adult Literacy Survey, and the 2003 Adult Literacy and Life Skills Survey.

At level 1 literacy, individuals function at a grade 5 to 7 level and may have difficulty understanding medicine dose information. Those at level 2, equivalent to grade 7 to 9, may have difficulty mastering new job skills. At level 3, an individual can do simple research and integrate information, and at level 4, an individual integrates and contrasts information well. An individual at level 5 can integrate complex information and perform multiple numerical operations.

TAKE ACTION & GET INVOLVED

- Attend Calgary WordFest events (wordfest.com) or offer your services as a volunteer.
- Support organizations that promote literacy and learning, such as the Further Education Society of Alberta (furthered.ca).

Average Class Size



THE FACTS

In 2018/19, the average class sizes for the Calgary Board of Education (CBE) and Calgary Catholic School District (CCSD) were 24.4 and 23.5 students, respectively, larger than the Alberta average of 22.6. These averages are generally in line with Alberta Commission on Learning's guideline of 23. Neither board met the target class size requirements for the important K-3 grade level.

IMPORTANCE

Education is the foundation upon which a community can build ecological, social, and economic sustainability. A strong education equips youth to become contributing, committed, compassionate, and skilled citizens of tomorrow. Positive environments for teachers and students, including smaller class sizes, can also raise morale and lower stress levels, thereby improving the overall quality of education.

TREND

Beginning in the 2004/5 school year, Alberta Education provided jurisdictions with Class Size Initiative funding, with the intent that jurisdictions meet the Alberta Commission on Learning (ACOL) class size guideline by 2006/7. From 2004 to 2018, a total of \$3.44 billion went directly to hiring and maintaining teachers. The funding successfully reduced the average class size from 27.2 in 2003/4 to 21.5 in 2009/10. Since that time, teacher layoffs have resulted in class sizes rising once again, and they now exceed the targets for some grade ranges.

The CBE has generally allocated resources

to keep its class sizes in K-6 lower than the CCSD, but CCSD's enrolments are lower than those of CBE in grades 7 to 12. Nevertheless, K-3, considered the most critical age for small class sizes, is significantly higher than the target in 2018/19. Indeed, neither board has ever attained its targets for K-12 since the inception of the class-size reduction program.

LINKAGES

Research suggests that class size matters most once you get below 15 students. Smaller class sizes and increased individual attention can play a critical role in socialization that contributes to a healthy lifestyle as youths become adults. Small class size seems to be particularly effective for education outcomes for minority and low-income students. The gains made through small class sizes in K-3 seem to be retained even if students experience larger classes in later grades.

This indicator is also linked to the phenomenon of school sprawl. More students are bused in Calgary than in any other jurisdiction in Canada, draining away money that could otherwise go to children's education. Sprawl also contributes to the need for more schools in new communities, while schools in established communities operate at less than capacity.

Volunteers have always been a part of our school system. With budget cutbacks, volunteers become even more critical as they assist with fundraising and extracurricular activities. Obligating

parents to provide more time and money, however, works to the disadvantage of lower-income communities, where parents may already be working long hours to make ends meet.

But there is another variable in class size – the teacher. There is ample evidence that the profession is high stress and that class size and workload make teaching more difficult. In Finland, a country with high educational attainment, teachers are highly respected and have 20% less classroom time than the OECD average.

DEFINITIONS

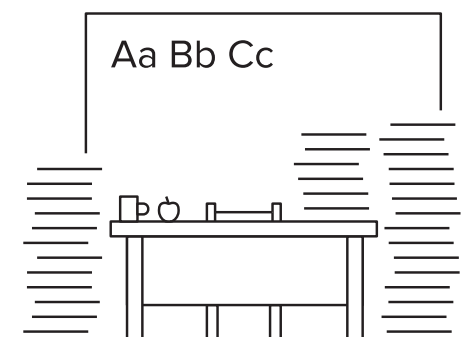
Class size is defined as the ratio of students to full-time equivalent teachers in a classroom. Alberta Learning publishes class sizes based on data collected from the CBE and the CCSD for K-12. Given that students may spend time in several classes, the Alberta Learning report limits the data to the 4 core subject classes: language arts, math, science, and social studies. Special needs class sizes are not included in these calculations, nor are educational professionals who do not teach in classrooms – principals, counselors and librarians.

TAKE ACTION & GET INVOLVED

- Volunteer your time and skills to your local school and get active with parent councils, whether with the Calgary Board of Education (cbe.ab.ca) or the Calgary Catholic School District (cssd.ab.ca).
- Support non-profit educational programs for youth, such as those of the Calgary Bridge Foundation for Youth (cbfy.ca) and the Women's Centre of Calgary (womenscentrecalgary.org).

Class Sizes in Calgary and Alberta

2018/19 School Year	CBE	CCSD	Alberta	ACOL Guide
K- Grade 3	20.4	21.5	20.4	17
Grade 4-6	23.5	23.8	22.8	23
Grade 7-9	25.7	22.6	23.5	25
Grade 10-12	27.9	26.9	23.5	27



Daycare Worker Salaries



THE FACTS

In 2018, with the minimum wage at \$15.00/hour, daycare staff in Alberta worked for an average starting wage of \$15.86/hour, an overall average wage of \$16.87/hour, and a top wage of \$18.42/hour.

IMPORTANCE

Education during early childhood has a tremendous effect on child development and on the overall path that is laid down for future learning. In their 1999 book, *The Learning Revolution: To Change the Way the World Learns*, Gordon Dryden and Jeannette Vos state that 50% of a child's ability to learn is developed during the first 4 years of life, while another 30% is developed by age 8. However, early childhood programs receive proportionally lower government funding than other educational programs. Daycare workers' low wages and strenuous working conditions lead to high turnover rates, which in turn can create instability in daycare programs.

TREND

In 1996 a starting daycare worker made 35% above the minimum wage and a senior worker made about 85% above minimum wage. In 2011 a starting worker made about 42% above minimum wage, while a senior worker earned just over 2 times the minimum wage. In 2018 senior daycare workers in Alberta made only 25% above the minimum wage, falling about 10% short of a living wage. Wages of daycare workers peaked relative to minimum wage around 2005, and the percentage above minimum wage has fallen steadily since then, largely due to regular increases in minimum wage rates.

The importance that researchers attach

to early childhood education is not reflected in either education standards for early childhood educators or in their compensation. As of 2008, only Manitoba required a 4-year degree for early childhood educators.

Childcare wages do not compare very favourably to wages for other jobs in Calgary. For example, the average 2009 wage was \$28.29 for construction, \$17.35 for retail, and \$22.58 for transportation and warehousing. Since 1992, registered childcare spaces in Alberta have increased from 51,000 to 110,000. Of those, 69,603 are for children aged 5 years or under.

In 2015/16, Alberta allocated \$2,422 for each regulated child space. The Canadian average was \$3,405. Only 3 provinces allocated less – BC, Nova Scotia, and PEI. Manitoba and Saskatchewan both allocated over \$4,000.

LINKAGES

Inadequate and expensive childcare has economic consequences. In 2019, according to Statistics Canada, about 54% of Alberta children aged 5 years or under were in some kind of early learning or childcare arrangement. In terms of the proportion of families with difficulty finding affordable care, Alberta was superceded only by BC, at 13.5% and 16%, respectively. In Quebec, only 6.5% reported difficulty. Fifteen percent of Albertans (the highest in the country) reported not using childcare because the cost was too high. The national average was 10%. In Quebec, it was under 2%.

A 2014 study by the Canadian Centre for Policy Alternatives found that preschooler fees in Calgary ranged from \$769 to

\$1,046; on average, this was 26% of a woman's income. In contrast, women in Montreal used approximately 5% of their incomes for preschool care. It is important to note that Alberta has a 15-week maternity leave policy compared to 17 weeks for all other provinces and territories.

Studies consistently demonstrate that the early childhood education stage is the most important child development stage educationally and that investment in early childhood education ultimately produces the highest rates of economic return. Yet a 2009 OECD study found that Canada spent less than 0.4% of GDP on early childhood education and care (ranking 36th of 39 countries) compared to 1.7% in Iceland, 1.42% in Sweden, and 1.2% in the UK.

DEFINITIONS

Daycare staff wage information was obtained through the Government of Alberta's Wage and Salary Survey. Hourly wage figures assume full-time employment and apply to all early childhood educators, including daycare staff, preschool teachers, and supervisors. The reference to women's income is based on the median income of women 25 to 34 years of age in the referenced city.

TAKE ACTION & GET INVOLVED

- Write your MLA, MP, premier, and prime minister asking them to take action on a comprehensive national childcare strategy that addresses the needs of working and stay-at-home parents.
- Support organizations, like Time for Child Care (timeforchildcare.ca), that advocate for the availability of quality, affordable childcare for every family who wants it.

Daycare Worker Salary (Alberta)	1996	1999	2001	2005	2009	2011	2015	2017	2018
Starting Wage	\$6.75	\$7.35	\$8.39	\$12.49	\$12.49	\$13.39	\$16.82	\$14.62	\$15.86
Average Wage	\$8.01	\$8.50	\$10.58	\$14.48	\$14.48	\$15.32	\$19.20	\$16.81	\$16.87
Top Wage	\$9.25	\$9.85	\$12.10	\$17.51	\$17.51	\$18.69	\$22.54	\$19.33	\$18.42
Minimum Wage	\$5.00	\$5.65	\$5.90	\$8.80	\$8.80	\$9.4	\$10.20	\$13.60	\$15.00

Grade 6 Achievement Scores



THE FACTS

On the 2018/19 Provincial Achievement Tests for grade 6 language arts, 87.8% of students enrolled in Calgary Board of Education (CBE) schools achieved an acceptable standard as identified by Alberta Learning. This was an increase from the previous year's 86.1%, which had been the highest rate in 10 years.

IMPORTANCE

Lower-performing students tend to have a lower sense of self-esteem, higher dropout rates, and higher rates of incarceration. As people develop numeracy and literacy skills, they are generally better able to function in society, have greater independence, can contribute effectively to public debate, and can learn additional skills.

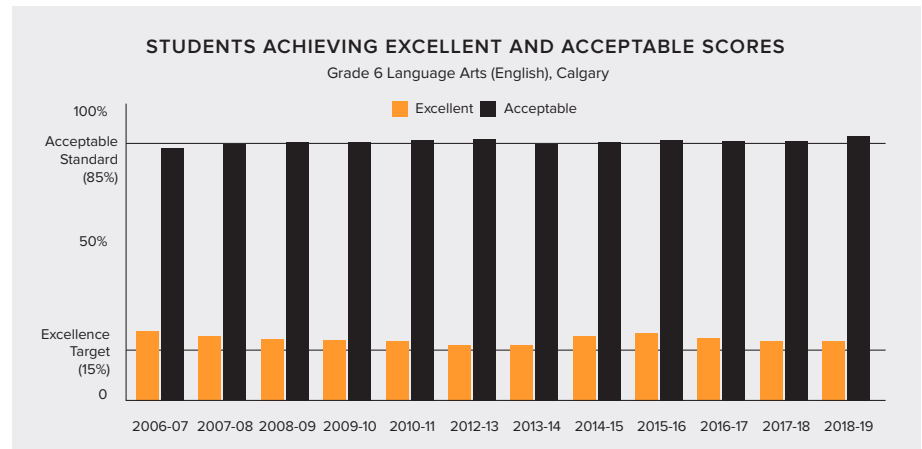
TREND

Since 2007, Calgary's grade 6 achievement scores have generally been above provincial targets. The standard of excellence (SOE) target (15% of students) has been exceeded every year. The past 3 years have yielded the best 3-year average on record. The acceptable standard (AS) target has been reached in each of the last 10 years.

In each of the past 2 years, the CBE reached its grade 6 SOE and AS targets fairly comfortably in all subject areas except mathematics.

Grade 9 results have not been as positive as those for grade 6. In 2018/19, only in language arts did the CBE reach the AS target, though the SOE targets were reached in all but French language arts in each of the past 2 years. In grade 12 diploma exams, AS targets were reached in all but mathematics, while SOE targets were reached in all but English language arts and French language arts.

Another relevant educational achievement marker is the OECD-sponsored Program for International Student Assessment (PISA). PISA tests have been administered every 3 years since 2000. The 2012 PISA focused on mathematics and included 65 countries (34 from the OECD). A total of 21,000 Canadian 15-year-olds from



900 schools across 10 provinces were tested. Canada scored above the OECD average and ranked tenth, on par with the Netherlands and Finland. Alberta scores were equivalent to the Canadian average and on par with BC. Quebec students scored higher than any European or North American country, outperformed only by several Asian countries.

In reading and science, Alberta performed at the top in Canada, on par with the top European country (Finland) but worse than a host of Asian countries.

Equity in scores among students was above average in Canada. BC scored highest on equity, but the largest equity gaps in Canada were found in Alberta and Quebec. One in 6 Albertans were high achievers (level 5 or more), but Alberta also had higher than the national average of low achievers (below level 2) at 15%. In Quebec, only 11% of students were low achievers.

LINKAGES

Volunteerism that supports community building and participation tends to be higher among more educated and more literate members of the population.

Children who struggle to read and write may have parents who also have literacy challenges. Since parents have a strong influence on the enthusiasm and interest with which children approach reading and writing, children from families with low levels of literacy may not receive the

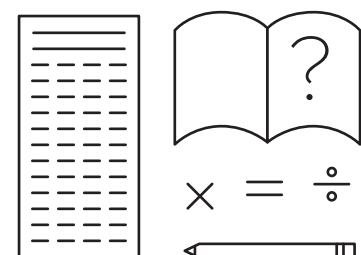
encouragement and support they require to develop strong literacy skills. Parents with literacy challenges may also lack the information, confidence, or skills to ensure that their children are receiving sufficient support at school. After struggling through lower grade levels, children in this situation often drop out of high school or graduate with low levels of literacy.

DEFINITIONS

This indicator is based on the results of Alberta Learning's Provincial Achievement Tests in Language Arts for grade 6 students in Calgary's public and separate schools. The provincial targets are 85% of students achieving acceptable performance and 15% achieving excellent performance.

TAKE ACTION & GET INVOLVED

- Read to your children from a very early age. Encourage them to read and write.
- Provide a good example to children by reading widely yourself.
- Support your local public library and help build a culture of reading in your community.



Library Usage



THE FACTS

In 2017 Calgarians visited the 21 branches of the Calgary Public Library (CPL) approximately 6.8 million times compared to 5.1 million visits in 2014, a 34% increase over 3 years.

IMPORTANCE

Libraries advance democracy and community development. A key role for the public library is to enhance opportunities for participation of underserved populations in civic life. Public libraries have become even more relevant in this era of misinformation. Without universal access to information, citizens may become ill-informed about the actions of their representatives and are unable to engage meaningfully in the democratic process.

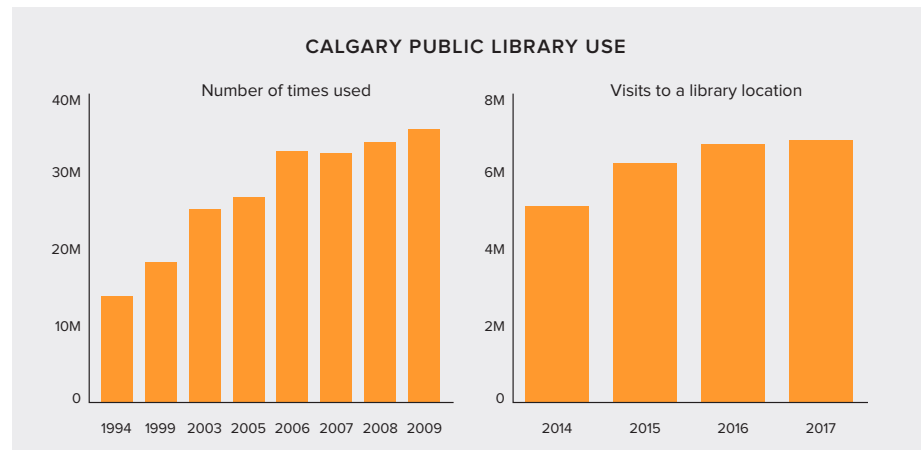
From a community-building perspective, libraries serve as focal points for individuals in their quest for a sense of belonging. Library programs and resources can serve as the foundation of economic self-sufficiency and can facilitate the acquisition of skills needed in the current technological global economy. Many people use libraries for career development or for exploring employment opportunities.

TREND

The new 240,000 ft² Central Library opened in 2018. Over 50,000 people visited during the first weekend alone. Named one of the most stunning contemporary libraries in the world by the BBC, it holds a collection of more than 450,000 books.

The CPL continues to have a higher number of visitors than all city festivals and sporting events combined. Between 2014 and 2017, although Calgary's population grew by only 5%, the per capita use of the CPL increased by 22%. From 1994 to 2009, total uses of the library grew from 13.8 to 35.5 million. No total use data are available for the years since 2009.

Since 2013, the CPL has maintained an annual circulation of more than 15 million items and has hosted more than 170,000



participants in its programs. Community organizations have used meeting rooms for more than 1,600 hours, and patrons have accessed 325,000 wifi sessions for research, job searches, and personal purposes.

LINKAGES

The new Central Library is both a library and public plaza. The library was designed to meet the requirements for LEED gold certification: for example, all wood used is certified as being sourced from sustainable, responsibly managed forests.

The CPL's services and offerings respond to its diverse population and their needs. Calgary is a young city with a median age of 36.4 years and a growing number of families with young children. For these families, the CPL provides educational programming to promote age-relevant literacy skills and digital resources to enhance a child's learning experience. One of the most popular services is the Early Learning Centres, of which there are currently 12 in the city, each individually designed to provide a space for children to learn through activities that support early literacy. For example, Canada's success in the new economy depends in part on individuals acquiring digital skills such as coding, and two of the CPL's programs, Coding Buddies and Code Club, offer children the opportunity to learn the basics of coding in a fun environment.

Since 2015, Calgary has been ranked among the top 5 most livable cities in

the world, making the city a magnet to newcomers settling in Canada. Despite the economic woes of the last decade, Calgary has maintained one of the highest levels of migration to Canadian cities. The CPL has developed a comprehensive suite of options for newcomers, expanding beyond ESL conversation classes and writing clubs to partnering with immigrant-serving agencies to offer settlement services in community libraries.

In an effort to help protect, preserve, and promote Indigenous culture, the new Central Library has incorporated Indigenous artwork and installations throughout the building, including in the Welcome Wall, the Civic Concourse, the Elders' Guidance Circle, and the Indigenous Languages Resource Centre.

DEFINITIONS

The data for this indicator come from CPL records. Total uses include visits (in person and online), borrowing, and courses/programs. The CPL has not reported data for recent years.

TAKE ACTION & GET INVOLVED

- Volunteer at your local public library branch (calgarylibrary.ca/your-library/volunteer/).
- Build a Little Free Library for your neighbourhood (littlefreelibrary.org) or find a Little Free Library near you (tiny.cc/yyclittlefreelibraries).

Governance Indicators



REPRESENTATIVENESS OF ELECTORAL SYSTEM

In the 2019 federal election, **27% of the seats won by the Conservative Party of Canada (CPC) in Alberta were “unearned”** in comparison to the proportion of votes received. The CPC received 69.2% of the vote and won 97.1% (33 of 34) of the seats. The NDP managed to win 1 seat; in a proportional system, they would have won 4. The Liberals, with 13.7% of votes, would have won 5 seats rather than being shut out.



FISCAL BALANCE

From 2015 to 2019, the balance between the City of Calgary’s budget and sustainability results differed across a variety of indicators. **For physical activity, waste management, and library usage, positive results are being achieved** and stable funding appears to have contributed to improved sustainability. **For transportation, water management, planning effectiveness, and poverty, progress toward sustainability is not evident;** these sectors are characterized by budgets that have either seen a decrease as a percentage of the overall budget or not been effective.



MUNICIPAL CAMPAIGN FINANCE

Of 14 councillors elected in Calgary in November 2017, 13 were the highest campaign spenders in their respective ward.

The average amount spent by winners was \$184,000, much more than the amounts spent on campaigns by provincial MLAs or federal MPs. While it is generally acknowledged that the vast majority of campaign funding came from the building and development industry, **actual data on municipal campaign finance were incomplete and difficult to gather and validate, and often relied on the whim of each candidate.**



EFFECTIVENESS OF PLANNING

In 2019, 79% of Calgarians reported being satisfied or very satisfied with the City’s land-use planning.



VALUING CULTURAL DIVERSITY

In 2018, of the 218 positions surveyed within a selection of Calgary’s most influential boards, councils, elected bodies, and media, **34% were held by women, 12.4% by visible minorities, and 1.4% by Aboriginal people.** These groups make up 50%, 36%, and 2.9%, respectively, of Calgary’s population.



Representativeness of Electoral System



FACTS

In the 2019 federal election, 27% of the seats won by the Conservative Party of Canada (CPC) in Alberta were “unearned” in comparison to the proportion of votes received. The CPC received 69.2% of the vote and won 97.1% (33 of 34) of the seats. The NDP managed to win 1 seat; in a proportional system, they would have won 4. The Liberals, with 13.7% of votes, would have won 5 seats rather than being shut out.

IMPORTANCE

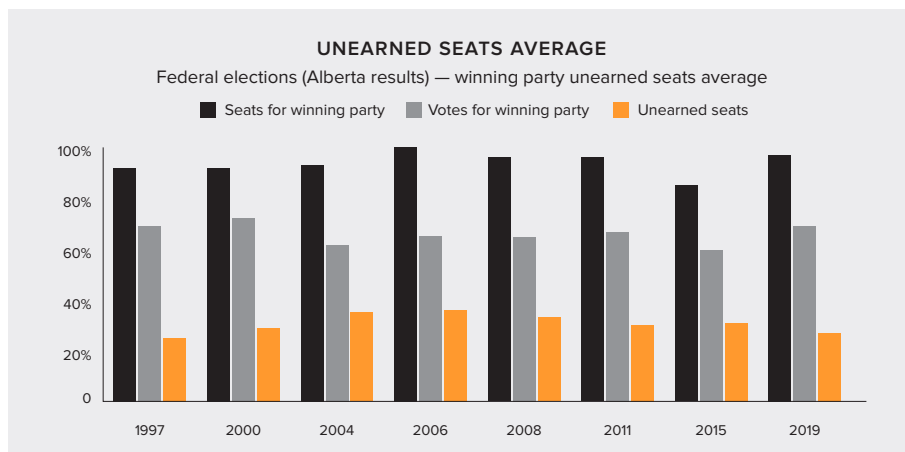
One of the hallmarks of a sustainable community is well-functioning, fair, and transparent institutions of governance. One of the pillars of our system of governance is the electoral process. In a representative democracy, we expect that the people who represent us will in fact mirror the popular will expressed at the voting booth.

TREND

In Alberta, the CPC routinely wins 90% to 100% of the seats in federal elections, with support from only 65% to 70% of voters. Examining this discrepancy with an eye to voter turnout is also instructive. Only 52% to 62% of Albertans voted in the previous 6 elections. So in fact the CPC has been awarded 90% to 100% of the seats on the basis of between 35% and 45% of eligible voters casting a vote for them.

In the past 8 elections, at least 25% of the CPC seats were unearned. In 2006 it was a record 36%, and in all elections between 2004 and 2015, the percentage of unearned seats was at least 30%.

In Alberta’s provincial elections, since the Social Credit victory in 1967, the average spread between percentage of seats won and percentage of popular vote has been about 30% and as high as 40%. This translates into unearned seat averages of between 24% and 45% in that time. Every election since 1967 has resulted in a majority government, but only 8 of 15 elections saw 1 party gain a majority of votes cast. As a result, we have seen a dismal average voter turnout rate of 52.8% over all elections since 1993.



Nationwide, in the 2019 Federal election, in a proportional system, there would have been 45 less seats for the Liberals, 5 less for the Conservatives, 30 more for the NDP (more than double their current total), and 22 for the Greens (instead of just 3). In the 2019 provincial election, 24% of the United Conservative Party’s total of 63 seats were unearned. The NDP would have won 3 more seats in a proportional system, the Alberta Party would have won 9 seats, and the Liberals would have held on to their 1 seat.

LINKAGES

For our societies to move toward sustainability, significant change will be required. In a democratic system, an agenda for change has to gain support of the majority. It is difficult to establish a mandate for change in a system that people consider unfair and unrepresentative.

Sense of community can be strengthened when all citizens have confidence that all points of view, concerns, and values are represented in debates and in the decision-making process.

The first-past-the-post system provides more opportunity for those with political or economic power to game the system. It provides them with a larger say in governance, leading to increasing inequality of influence, income, and opportunity. This system encourages boutique policy-making: a party can cater to small segments of the population as a strategy for gaining an electoral majority.

DEFINITIONS

For this indicator, we have coined a new measure – unearned seat average. This is a measure of how many seats a party was awarded through our first-past-the-post electoral system compared to the seats it would have held if seats were proportional to popular vote – that is, if our system were based on proportional representation.

TAKE ACTION & GET INVOLVED

- Learn more about how proportional representation works (www.fairvote.org/how_proportional_representation_elections_work).



It is difficult to establish a mandate for change in a system that people consider unfair and unrepresentative.

Municipal Campaign Finance



THE FACTS

Funding for municipal elections matters. Of 14 councillors elected in Calgary in November 2017, 13 were the highest campaign spenders in their respective ward. The average amount spent by winners was \$184,000, much more than the amounts spent on campaigns by provincial MLAs or federal MPs. While it is generally acknowledged that the vast majority of campaign funding came from the building and development industry, actual data on municipal campaign finance were incomplete and difficult to gather and validate, and often relied on the whim of each candidate.

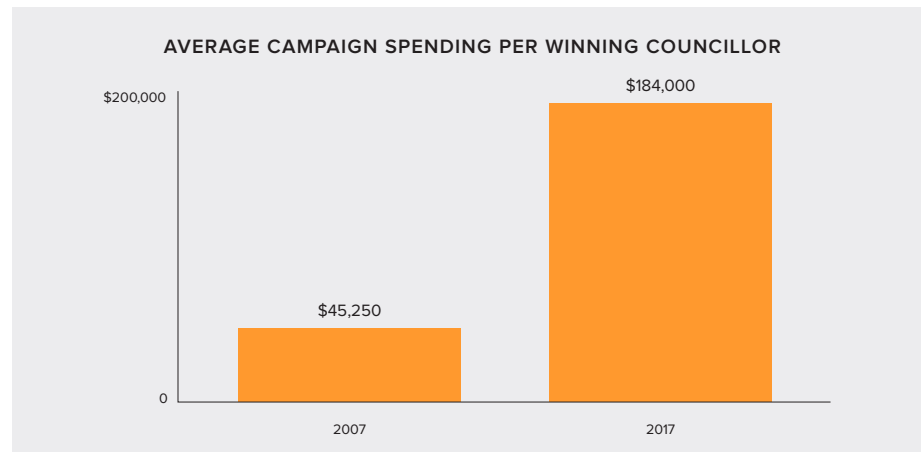
IMPORTANCE

Unlike provincial or federal elections, Alberta's municipal elections are not contested by political parties. Each candidate runs independently, which requires the development of a campaign platform, advertising, organization, and the funding to support all of this. The absence of a party system makes the candidate even more reliant upon donations to campaign effectively.

For a representative democracy like Calgary's to work, residents must believe that City Council considers and acts in the interest of citizens. A perception that Council works specifically for groups that fund its electoral success weakens the faith that Calgarians have in their councillor or mayor to act without undue influence.

TREND

The average spending for winning candidates in 2007 was \$45,250, just one-quarter of the 2017 spending. In December 2018, the provincial government passed significant changes to Alberta's Local Authorities Election Act (LAEA). Notable changes include forbidding donations from corporations and unions, reducing personal donation limits to \$4,000 across all candidates, restricting the donation period to the year of the election, and eliminating a loophole that allowed anonymous donations from fundraising events. The updated LAEA also sets out rules governing third-party advertising. Many of these changes mirrored



legislation governing provincial elections passed in 2015.

While many of these changes are welcome, there were areas that the updated legislation did not cover. Significantly, the deadline for reporting actual donations continues to be well after the election date. There is no requirement that candidates disclose the names of their donors and amounts before citizens vote.

There are still no limits on campaign spending, which encourages candidates to continue to fundraise and spend in order to improve their chances to win. Over the past 4 civic election cycles, mayoral-candidate spending has approached \$1 million. In 2017 Mayor Nenshi raised \$650,000 and his main rival raised \$916,000.

The updated LAEA does not mandate a database of all donors and their donations for local elections, which means there is no easy way to track donors and their contributions. This also puts some of the burden of compliance in terms of donor limits on each candidate. In contrast, for provincial elections, the province maintains a public, searchable, comprehensive database of all donors and their donations.

The enforcement of compliance with the LAEA is not described. The updated rules are deeper and broader, requiring more effort to follow, but compliance is left largely to municipalities. This could become especially challenging in the monitoring of third-party advertising.

LINKAGES

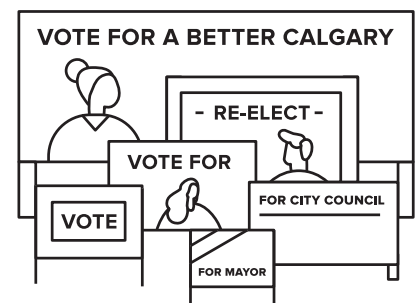
Trusted, open, fair elections are critical to our functioning democracy and are the highest order of governance for our city. Campaign finance rules are a critical component of building trust between elected representatives and an engaged citizenry. A public understanding of who has funded candidates and by how much informs decisions on who to support and shapes our trust in our elected officials.

DEFINITIONS

Campaign finance rules are set by the province through the LAEA. Local governments, like the City of Calgary, run elections based on the guidelines it contains. The policies and requirements – down to the actual disclosure forms for candidates – are driven by the LAEA.

TAKE ACTION & GET INVOLVED

- Contact your MLA and the premier, asking them to amend the LAEA to ensure public disclosure of donors and their donations to candidates in municipal elections and to set campaign spending limits.



Effectiveness of Planning



THE FACTS

In 2019, 79% of Calgarians reported being satisfied or very satisfied with the City's land-use planning.

IMPORTANCE

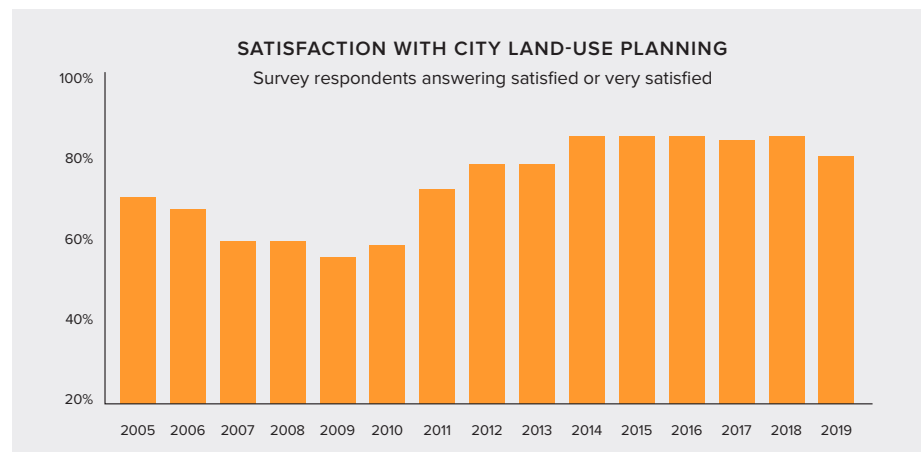
Land-use planning is a vital component of people's experience of their city and neighbourhood. Good land-use planning can improve the diversity of opportunities available to people, as well as their ability to get to where they need to be – work, recreation, grocery store, doctor, or City Hall. It can provide safe and accessible green space and interaction with nature, which is known to improve well-being. It can help us improve the quality of life through the promotion of sustainable mobility and more active daily lives, while at the same time decreasing the burden that our lifestyles have on the planet. Objective assessments of land-use planning are complex and rare. Citizen perceptions of land-use planning, while sometimes problematic, do offer important insights. Land-use planning must be both effective and seen as effective.

TREND

The City's 2019 Quality of Life and Citizen Satisfaction Survey showed a 5% decrease in level of satisfaction with land-use planning compared to 2014 to 2018, when the satisfaction level was steady at about 84%. The level of satisfaction was significantly lower from 2006 to 2011, when it ranged from a low of 54% in 2009 to a high of 71% in 2011.

Services with which Calgarians were most satisfied in 2019 included the fire department (98%), drinking water quality (97%), parks (93%), and residential garbage collection (90%). Satisfaction was significantly lower in 2019 than the year before for property tax assessment (down 13%), downtown revitalization (down 9%), and on-street bikeways (down 7%, at only 60% satisfaction).

The 2019 survey reports on citizens' ranking of the importance of a service as well as their satisfaction with that service. It identifies "primary weakness" areas as those services deemed important by



at least 90% of respondents but having a satisfaction ranking of less than 85%. Land-use planning fell within the primary weakness zone in 2019, along with transportation planning, tax assessment, affordable housing, and growth management.

Of note, the 2019 report also found decreases in level of trust, level of satisfaction with administration and council, and perception of transparency and opportunities for citizen input.

LINKAGES

Effective planning is key to keeping up with the demands of a growing and evolving city and is a critical part of any economic development plan, since it helps attract talent to Calgary's labour pool by maintaining a high standard of quality of life. It can produce a more smoothly operating city and the efficiencies that go with thoughtful coordination. A government that is effective in planning is also more likely to inspire the trust of citizens, which can improve government effectiveness in the long run by encouraging dialogue, collaboration, and consensus around key projects.

This indicator is also linked to representative governance. If people do not feel represented by elected governments, they are more likely to oppose or be weary of change. It relates to equity, since people living in inequitable societies are less likely to trust that change will be fair and will change their lives for

the better. At a time when levels of stress are high and many people are feeling marginalized or vulnerable, effective planning can contribute to sense of community. It says to citizens "We've got your back."

DEFINITIONS

Data for this indicator were taken from the City's annual Citizen Satisfaction Survey, administered via telephone since 2005. Respondents in the 2019 survey were equally divided between male and female. Only 20% of respondents were from the NE quadrant of the city. Forty-nine percent held university degrees, and 23% lived in households making more than \$150,000. Twenty-five percent had lived 40 or more years in Calgary. The survey asked respondents to specify whether they were somewhat satisfied or very satisfied with how the City was doing with respect to 35 different City services and programs.

TAKE ACTION & GET INVOLVED

- Check out the events offered by the Federation of Calgary Communities (calgarycommunities.com/our-events).



A government that plans effectively is also more likely to inspire the trust of citizens, which can improve government effectiveness in the long run by encouraging dialogue, collaboration, and consensus around key projects.

Fiscal Balance



THE FACTS

From 2015 to 2019, the balance between the City of Calgary's budget and sustainability results differed across a variety of indicators. For physical activity, waste management, and library usage, positive results are being achieved and stable funding appears to have contributed to improved sustainability. For transportation, water management, planning effectiveness, and poverty, progress toward sustainability is not evident; these sectors are characterized by budgets that have either seen a decrease as a percentage of the overall budget or not been effective.

IMPORTANCE

To achieve sustainability and social and ecological well-being into the future, it is essential that government finances be equal to the challenges facing society. In *Alberta's Long-Term Fiscal Future*, economist Trevor Tombe writes, "We must abandon short-term political thinking and do things differently. We must plan for a sustainable fiscal future." Plans and promises are insufficient unless the necessary financial resources are available.

TREND

The amount of waste to landfills dropped by 4% since 2015. This reflects a major effort by the City to divert waste to recycling, an effort reflected in the 10% average annual increase in City funding.

Two-thirds of Albertans report being physically active, while the City's Parks and Recreation budget has, on average, increased 4% per year, slightly below the 5% average annual increase in the City budget.

Library usage is high and increasing, and City spending on the library system averaged 3% per year, slightly below the average annual increase in the City budget.

Both property crimes and crimes against persons have been increasing since 2016. Calgary's violent crime severity index is the highest it has been since 2012. The police budget has increased an average of 4% per year, slightly below the average annual increase in the City budget.

Twenty-two percent of Calgary households spend more than 30% of their income on housing, and 19% with income below \$60,000 are in need of affordable housing. Despite an 8% average annual increase in the City's social housing budget, only 3.6% of Calgary's housing stock is non-market housing, well below the 6% average for other large Canadian cities.

Water quality continues to be negatively impacted by human use, particularly land use and stormwater runoff. Despite reduced per capita water use, Calgary's water consumption is not sustainable, with legal constraints, climate change, and land development being the primary concerns. City funding for water services has not kept pace with the average annual increase in the City budget.

A single parent with 2 children in Calgary must work 55 hours per week at minimum wage to stay above the poverty line. Canada-wide, the income gap remains 25% wider than it was in the 1970s. For after-tax income, Calgary is the most unequal major city in the country. Calgary's unemployment rate is the highest among the largest cities. Food bank use continues to grow. City funding for community and social development has increased, on average, 1% per year, well below the average annual increase in the City budget.

Planning decisions have hurt the City's bottom line: in 2019, the City approved new residential communities that are contrary to the Municipal Development Plan and that will cost the City an extra \$73 million over the period 2019 to 2022.

The City's transportation spending continues to be split approximately 50/50 between transit and roads, with a slight edge to transit. However, the cost of partial completion of the Stoney Trail ring road dwarfs the City's transit budget and means the City is no longer on track to reach its Municipal Development Plan target for road infrastructure.

LINKAGES

Sustainability is vitally linked to how

governments raise and deploy their revenues. It is dependent on an integrated assessment of the fiscal balance across all levels of government – local, provincial, and federal – and how they share revenues through initiatives such as the federal equalization program and the various grants and subsidies provided to municipalities.

Our city and province are almost completely dependent on revenues from a commodity whose continued exploitation and use will result in a climate catastrophe. In a 2019 Fiscal Policy Trends report from the School of Public Policy, economist Trevor Tombe argues that our province and, as a consequence, the City of Calgary are fiscally unsustainable.

We are the lowest-taxed province and city according to almost every metric. To keep even basic services, we must contribute more to the common good (i.e., taxes must be raised) while at the same time determining what services we can do without or deliver more efficiently.

Fiscal balance must also consider private versus public spending. With an ecological footprint greater than almost anywhere on the planet, Calgarians have to seriously consider how we lower personal consumption, reduce the burden of resource extraction and pollution on the planet, and maintain vital services like health and education.

DEFINITIONS

Fiscal balance is a qualitative comparison between progress toward sustainability and the money spent on an issue. It incorporates data from a host of other indicators in this report and City of Calgary expenditures from 2005 to 2018 compared to inflation based on the Municipal Price Index.

TAKE ACTION & GET INVOLVED

- Support organizations that advocate movement toward a just and compassionate city, such as Calgary Climate Hub (calgaryclimatehub.ca) and Calgary Alliance for the Common Good (calgarycommongood.org).

Valuing Cultural Diversity



THE FACTS

In 2018, of the 218 positions surveyed within a selection of Calgary's most influential boards, councils, elected bodies, and media, 34% were held by women, 12.4% by visible minorities, and 1.4% by Aboriginal people. These groups make up 50%, 36%, and 2.9%, respectively, of Calgary's population.

IMPORTANCE

The richness of community life is closely related to the diversity of its constituents. As diversity increases, so does the breadth of our collective experience and creativity, as well as the quality of political debate. Beyond ethnic diversity, respect and acceptance of other differences (e.g., sexual orientation or physical or mental ability) is an important mark of a mature society and is inherent to a sustainable society.

TREND

With respect to the entire sample surveyed in 2018, in none of the categories (women, visible minorities, and Aboriginal people) do we find proportional representation. Furthermore, there is no sector in which any of these categories has proportional representation.

Since 2001, representation for women in the non-profit sector has dropped significantly; in the government sector, it has increased modestly; in media, it has returned to 2001 levels after a 25% drop in 2010; and on corporate boards, it has increased from 10% but still stands at a dismal 23%.

Representation for visible minorities in the non-profit sector has shown a very marginal improvement, but at 10%, it is barely a quarter of a proportional percentage. Representation in the

government sector, at 21%, is much better than the other sectors but is still 15 percentage points below proportional. Representation in media is 10% of proportional, and, compared to 2001 and 2010, when there were no visible minorities on corporate boards, representation has increased to a mere 10%.

Compared to 2010, when there were no Aboriginals in the entire sample, there has been a small improvement, with 2.6% on non-profit boards, none in government positions, 1% in media, and 2.1% on corporate boards.

LINKAGES

Women fare no better at the Toronto Stock Exchange. Of those companies who self reported in 2018, women held only 16.4% of board seats, 24% of boards were all male, only 4.4% of companies had a female board chair, and only 52% of those reporting had a policy to increase female recruitment. Across industry sectors, the best performers were utility companies, where women made up 27% of directors. The worst performers were in oil and gas, where women made up only 9% of directors.

Women make up 29% of Canadian parliamentarians. According to the Inter-Parliamentary Union's Parline database, as of March 2020, we rank 57th among nations of the world in terms of gender diversity. In contrast, women make up over 45% of parliamentarians in 12 countries listed by the IPU, including Rwanda (61%), Cuba (53%), Sweden (47%), and Costa Rica (46%). The bias in certain health research conducted only on male subjects has long been recognized. The criminal justice system is only beginning to recognize

traditional Aboriginal forms of justice. Research in Sweden has demonstrated that even snow clearance in cities carries a gender bias. For all of these reasons, women find themselves overrepresented in the ranks of the poor, Aboriginals are far more likely to be incarcerated, and visible minorities are more likely to face intentional or unintentional bias in a job search.

DEFINITIONS

The survey data reported herein were gathered by Sustainable Calgary. Canada's Employment Equity Act defines visible minorities as "people other than Aboriginals who are non-Caucasian in race or non-white," and Aboriginals as "persons who are Indians, Inuit, or Métis." The survey included the corporate boards of directors of 5 of the top private sector employers with head offices in Calgary and the boards of directors of 5 of the largest non-profit sector agencies. Elected officials in the survey included the 2010 Calgary Public and Separate School Board members, city councillors and mayor, provincial MLAs, and federal MPs. The media survey included the supper-hour news anchors for each local television station, radio morning show anchors for the top 5 rated radio stations, and membership on the editorial boards of Calgary's 2 leading dailies. Demographic information was derived from the 2016 Canadian Census.

TAKE ACTION & GET INVOLVED

- Support local non-profits that work to enhance the voices and inclusion of all Calgarians, such as Action Dignity (formerly Calgary Ethno-Cultural Council: actiondignity.ca) and the Women's Centre of Calgary (womenscentrecalgary.ca).

REPRESENTATION IN LEADERSHIP POSITIONS IN CALGARY, 2001-18

YEAR	NUMBER OF POSITIONS			% WOMEN			% VISIBLE MINORITY			% ABORIGINAL		
	2001	2010	2018	2001	2010	2018	2001	2010	2018	2001	2010	2018
Non-profit	82	91	78	46	36	36	7	12	10	2	0	3
Government	49	61	64	33	34	39	14	16	21	0	0	0
Media	30	37	28	40	28	39	3	8	4	0	0	1
Corporate	59	54	48	10	19	23	0	0	10	0	0	2
Totals	220	245	218	34	31	34	6	9	12	1	0	1

Natural Environment Indicators



AIR QUALITY

Alberta's goal has been to maintain good air quality at least **97%** of the time in urban areas and avoid poor air quality events.

Based on air quality measurements from 1997 to 2017 at various locations in Calgary, the 97% goal has not been achieved in 45% of those 20 years. Those 2 decades saw over 300 instances of poor air quality. These poor air quality events came in clusters, primarily during the years 2003, 2010, 2015, and 2017.



SURFACE WATER QUALITY

Between 2013 and 2015, **average fecal coliform counts below Calgary at Carseland Weir decreased significantly from 167 to 33**. In that same period, *E. coli* counts decreased from 164 to 23. Between 1996 and 2010 in the Bow River downstream of Calgary at Highway 22X, the fecal coliform standard was exceeded in 61 of 129 samples and the *E. coli* standard was exceeded 6 times out of 123 samples. Historical comparison is difficult as monitoring site locations have changed over time.



FOOD GROWN LOCALLY

In 2017 there were **100** public and **100** private community gardens in Calgary.

In 2018 there were 11 provincially approved farmers' markets in addition to 10 markets in other small towns in the Calgary region.



CHRISTMAS BIRD COUNT

In 2018, 73 different species, a total of 61,717 birds, were counted by 138 volunteers on December 16 between 8:00 a.m. and 6:00 p.m. **Volunteers contributed a total of 238 hours to the count.**



PESTICIDE USE

Just over **8,000** kilograms of pesticides were sold in Calgary in 2015.

Herbicides accounted for 62% of the total and insecticides for 35%. In 2016, the City of Calgary applied pesticides in city parks at an average intensity of 0.23 kg of active ingredient per hectare.



WATER CONSUMPTION

In 2018 **Calgary's average water consumption was 362 litres per capita per day (lpcd), showing an 11% decline from 2012** and continuing a downward trend since the 1970s. Per capita residential use was 228 lpcd.





THE FACTS

Alberta's goal has been to maintain good air quality at least 97% of the time in urban areas and avoid poor air quality events. Based on air quality measurements from 1997 to 2017 at various locations in Calgary, the 97% goal has not been achieved in 45% of those 20 years. Those 2 decades saw over 300 instances of poor air quality. These poor air quality events came in clusters, primarily during the years 2003, 2010, 2015, and 2017.

More detailed, exploratory analysis has compared air quality with school locations and transportation options. It identified higher levels of pollution in the inner city (where walking, cycling, and transit options are good), along with poorer winter air quality in the south and poorer summer air quality in the NE – both areas that are car-dependent.

IMPORTANCE

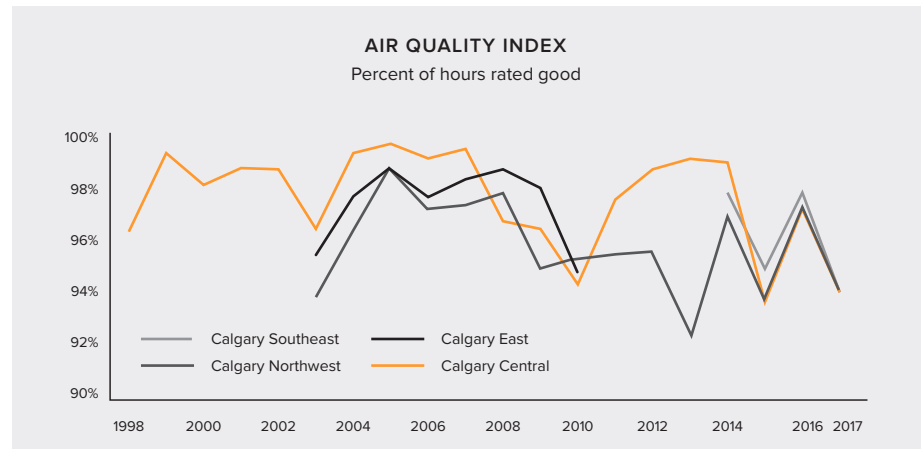
The air we breathe is a common good. Air quality can affect our health, economy, aesthetics, and the environment. Almost all parts of the body can be affected, both in the short term (e.g., respiratory problems) and in the long term (e.g., increased asthma and cancer). The Canadian government estimates that each year, 14,600 Canadians die prematurely due to fine particulate matter, nitrogen dioxide, and ozone in the air.

The mid-range estimate of the annual health cost of particulate matter and ozone is \$36 billion (in 2015 dollars). Poor air quality also results in economic losses due to damage to materials such as paint, metal, and rubber, and through reduced property values in areas that become known for poor air quality.

TREND

With the exception of long periods of poor quality associated with years of heavy forest fire activity, Calgary's air quality remains good, in comparison to most big cities, but the long-term trend is toward worsening air quality

Particulate matter in the 2.5-micron range is perhaps the most troubling air quality



parameter. From 1997 through 2017, there were 189 days in which the safe level for particulate matter was exceeded. These exceedances were concentrated in 4 years and are increasing in frequency.

City-wide, nitrogen dioxide is declining, although not at the monitoring stations located in southeast Calgary and in the inner city (Inglewood).

LINKAGES

The City of Calgary's 2010 State of the Environment report notes that the personal vehicle is the largest source of air pollution in the city. Environment Canada estimates that per passenger kilometre, carbon dioxide and nitrogen oxide emissions for passenger vehicles are 3 times those of buses and 5 to 10 times those of the LRT. While the per kilometre emissions of various pollutants have improved from 25% to 50% over the past 20 years, the average kilometres driven has increased significantly – 51% for SUVs, light trucks, and minivans.

Leaving our cars at home and using alternative modes of transport reduces air pollution and contributes to improved health, an enhanced sense of community, and crime deterrence. In turn, as air quality improves, more people may be persuaded of the benefits of walking and cycling to work and other destinations.

Calgarians sometimes blame poor air quality on atmospheric inversions. These inversions, however, do not create the

pollutants but merely trap them near the ground, limiting their dilution in the atmosphere. In these conditions, we breathe (and often see) the condensed effects of everything we put into the air!

DEFINITIONS

The provincial government uses the Air Quality Index (AQI) to measure general air quality in the province. The AQI currently combines measures of fine particulate matter, nitrogen dioxide, and ground-level ozone. Previously, the index included carbon monoxide and sulphur dioxide, but those were removed because they were not considered useful in predicting impacts on health. Particulate matter and ozone are known to impede lung and immune system function. Nitrogen dioxide is formed primarily as a result of combustion from vehicles, residential and commercial heating, and industry and is known to aggravate respiratory problems.

TAKE ACTION & GET INVOLVED

- Walk, cycle, scooter, rollerblade, or take public transit to work and other destinations.
- Support organizations that advocate for better air quality, such as Calgary Climate Hub (calgaryclimatehub.ca).

Food Grown Locally



THE FACTS

In 2017 there were 100 public and 100 private community gardens in Calgary. In 2018 there were 11 provincially approved farmers' markets in addition to 10 markets in other small towns in the Calgary region.

IMPORTANCE

Growing food locally is a common synonym for producing food sustainably. This is critically important today because in 2019, our industrial food systems contributed approximately 21% to 37% of greenhouse gas emissions globally.

The capacity of a community to produce its own food also has the potential to help address food security issues. Approximately 11% of total households in Alberta report being food insecure. There is an opportunity to create local food production programs centred around education and access to space for growing food.

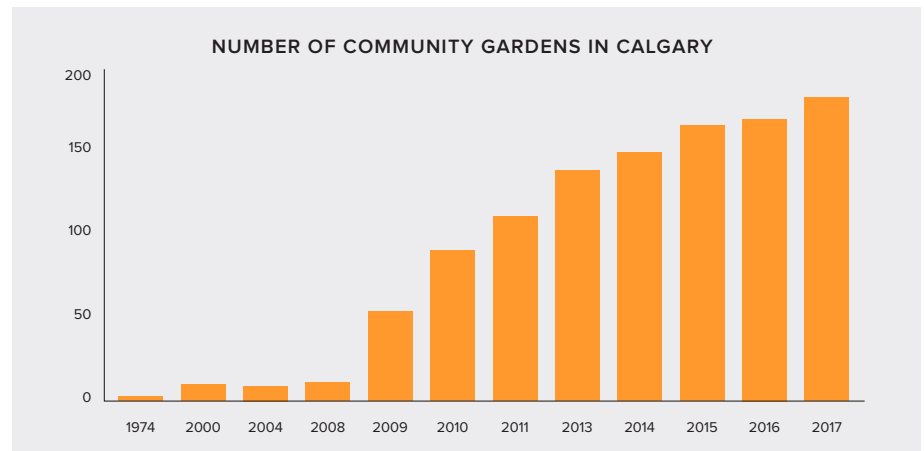
Local food is often healthier than foods produced in the industrial food supply. It is fresher, tends to be free of preservatives, and is generally less processed.

TREND

Despite Calgary's long winters, the city has a good climate for producing food. The popularity of growing local food is on the rise. In 1974 there was only one community garden in Calgary. By 2000 there were 10, and 20 years later the Calgary Horticultural Society reports that there are more than 200.

The Calgary area has seen a rise in urban farming. We now have 7 Community Supported Agriculture (CSA) operations and at least 1 larger-scale distribution network for local food (YYC Growers and Distributors).

Calgary continues to see a rise in permaculture projects stewarded by homeowners producing food on their properties. The City is now collecting residential food scraps and turning them into compost, which is available to Calgarians at no cost for use in their gardens.



More elementary schools in Calgary have added edible landscapes as part of schoolyard naturalization efforts, providing children with exposure to how food is grown locally.

In 2012 the City of Calgary took a major step toward achieving a more sustainable food system by launching the Calgary Eats! Food System Assessment and Action Plan.

LINKAGES

The fact that our food system relies on cheap energy is a pressing reason for growing food locally and sustainably. An economic barrier exists against more widespread acceptance of local food because it is typically more expensive than the industrialized food supply. Certain design approaches, such as permaculture, can offer considerable help in creating unconventional and efficient food production systems.

Food is the third-highest household expenditure after housing and transportation. Community gardens can help lower the cost of food for people working for minimum wage or dependent on AISH. Gardening has been shown to reduce stress and ameliorate mental illness. Many people participate in community gardens as a way of increasing their attachment to community and being more socially engaged. Gardening is a regular, low-impact activity that can contribute to positive physical and mental health outcomes. Urban agriculture is also contributing to economic diversification in Calgary.

DEFINITIONS

The City of Calgary defines a community garden as "a piece of land gardened by a group of people for the purpose of providing a garden experience to Calgarians." Public community gardens are gardens located on public lands such as those in city parks. Private community gardens are privately owned gardens shared by the owners with a specific group of gardeners.

There is no single definition of local food. For some it is food grown in the city; for others, it is the region; and still others talk about the 100 mile diet. The City of Calgary uses the term *local* to describe foods that are grown, produced, processed, and sold in Alberta. Permaculture is a design approach that is concerned with the creation of regenerative human habitat, including for the production of food.

TAKE ACTION & GET INVOLVED

- Produce your own food in your backyard or patio, or in a community garden.
- Visit your local farmers' markets.
- Ask your grocer to carry local and organic produce.
- Sign up as a fruit picker with Calgary Harvest (calgaryharvest.org).
- Consider becoming a member of the Calgary Horticultural Society (calhort.org) or the Calgary Permaculture Guild (permaculturecalgary.org).

Pesticide Use



THE FACTS

Just over 8,000 kilograms of pesticides were sold in Calgary in 2015. Herbicides accounted for 62% of the total and insecticides for 35%. In 2016, the City of Calgary applied pesticides in city parks at an average intensity of 0.23 kg of active ingredient per hectare.

IMPORTANCE

A sustainable community strives to eliminate the use of toxic substances. Evidence indicates that pesticide use can have serious consequences for human health, including increased risk of cancer, birth defects, neurological effects, and respiratory problems.

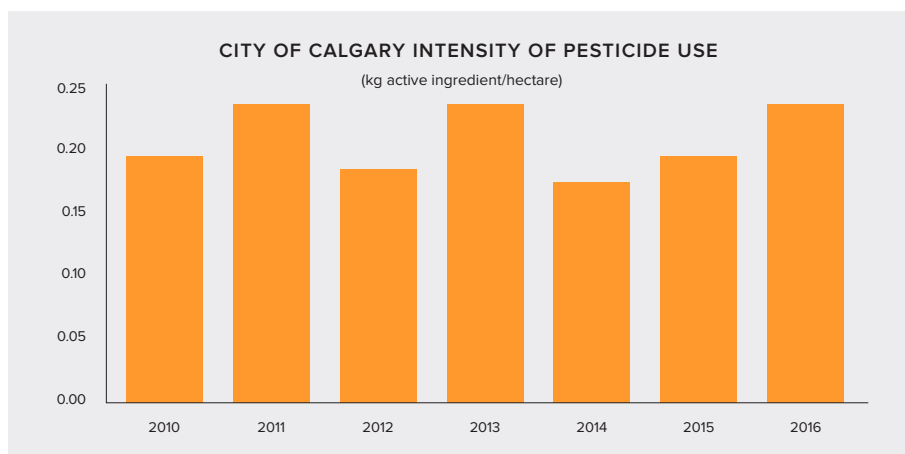
TREND

Pesticide sales in Calgary have declined since 2003, primarily because products that combine fertilizer and herbicide (weed and feed) were banned by the Alberta government beginning in 2010. Collection of pesticide sales data was discontinued after 2015.

In 2017 the City's Pesticide Toxicity Report showed that herbicide use intensity between 2010 and 2016 fluctuated, reaching a high of 23 kg of active ingredient per hectare in 2011, 2013, and 2016. No data were available to assess how residential and commercial pesticide use intensity has changed.

The Coalition for a Healthy Calgary and Prevent Cancer Now raised serious concerns about the City's Integrated Pest Management program in a 2017 submission to the City. The concerns include lack of disclosure about which pesticides the City uses and how they are applied, lack of non-chemical treatments, the scientific basis for City decision-making regarding pesticide use, the monitoring of and research into health effects, and the adequacy and thoroughness of the federal regulatory system. Public consultation by the City of Calgary in 2017/18 showed broad support among Calgarians for those concerns.

According to Statistics Canada, across the country, the percentage of households with a lawn or garden that use pesticides



remains around 30%. Three-quarters of those households use herbicides.

In 2005 Alberta Environment found that pesticide use had increased pesticide concentrations in the Bow River downstream of Calgary. High concentrations of pesticides associated with urban use (2,4-D, MCP, and diazinon) were detected, with a statistically significant increase in all 3 products. In some cases, guidelines for irrigation and aquatic life had been exceeded. That same year, the provincial pesticide index showed that water quality in the Bow was excellent upstream of Calgary but fair downstream of the city.

As of 2007, municipal bylaws regulating pesticide use on private property covered 43% of Canadians. The ability to pass pesticide bylaws was upheld by the Supreme Court, including using the precautionary principle to regulate pesticides. Research shows that bylaws reduce pesticide usage between 51% and 90%, whereas education and outreach result in only a 10% to 24% reduction.

In 2016 the Canadian Association of Physicians for the Environment and Prevent Cancer Now co-published survey results showing that 62% of Albertans support a law to "phase out the use and sale of all but the safest pesticides for lawns and gardens," while one-third disagree. The City of Calgary estimates that the annual cost of education and outreach to reduce pesticide use would be \$197,000 to \$358,000. A bylaw would cost \$544,000 to \$1.124 million.

There has been some positive movement, such as the provincial ban on weed and feed products. However, the overall sustainability trend is negative because of pesticide impact on the Bow and because pesticide use is not declining.

LINKAGES

Stormwater runoff brings pesticides into rivers, streams, lakes, and wetlands, contaminating water supplies and harming aquatic ecosystems. Pesticides bioaccumulate in animals, posing a risk to both animal and human health.

Half of Albertans agree that pesticides pose a threat to the environment, while two-thirds agree that pesticides pose a threat to children and pets. Public opinion on pesticide use is important, and so is the science. We need to exercise precaution given that the scientific assessment of the effects of pesticides on human health is inadequate.

DEFINITIONS

Pesticides include herbicides, fungicides, and insecticides and exclude mosquito control products, pruning paint, moss control, and rodenticides.

TAKE ACTION & GET INVOLVED

- Visit Calgary's pesticide-free parks and ask your councillor and mayor to create more.
- Support organizations that advocate for reduced pesticide use in the city, like the Canadian Association of Physicians for the Environment (cape.ca).

Surface Water Quality



THE FACTS

Between 2013 and 2015, average fecal coliform counts below Calgary at Carseland Weir decreased significantly from 167 to 33. In that same period, *E. coli* counts decreased from 164 to 23. Between 1996 and 2010 in the Bow River downstream of Calgary at Highway 22X, the fecal coliform standard was exceeded in 61 of 129 samples and the *E. coli* standard was exceeded 6 times out of 123 samples. Historical site comparison is difficult as monitoring site locations have changed over time.

IMPORTANCE

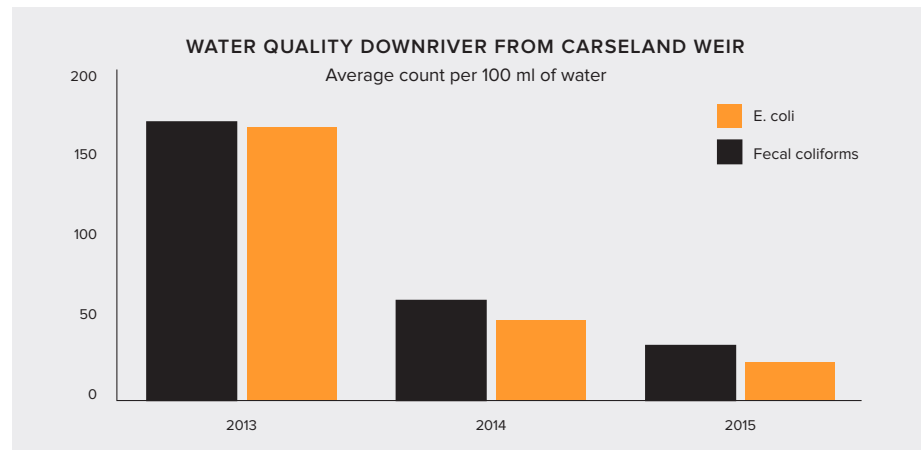
Calgarians depend on the Bow and Elbow Rivers and other water bodies (including aquifers) for drinking water, industrial use, recreation, and tourism, as well as for the disposal of wastewater. Ensuring high-quality water helps maintain and improve both human and aquatic health.

TREND

Overall water quality in the Bow River upstream of Calgary was rated excellent by the Government of Alberta 16 years out of 20. Downstream of Calgary, water quality is poorer, but it was still rated as good in 17 years out of 20.

In 2016 Alberta Environment rated the Bow downstream of Calgary as “fair” in terms of nutrients that stimulate aquatic weeds. Monitoring of the Bow shows that unnaturally high aquatic plant growth results in low levels of oxygen, which are a threat to fish. As well, despite gains from improved wastewater treatment, bacterial pollution downstream of Calgary has increased in recent years.

The City’s Calgary Watershed Report 2010–2012 reported that water quality in the Elbow River upstream of Calgary was deteriorating, primarily due to pollution sources near the city. The City’s data showed increased fecal coliforms, phosphorus, and suspended solids that affect the ability to treat water for human consumption. Within Calgary, a 4-year advisory against swimming or wading in the river from Sandy Beach to 9 Avenue SE remains in effect due to contamination from fecal coliforms.



The 2010–2012 report stated that water quality in the Nose Creek watershed was marginal to poor. Key concerns are bacterial contamination and excessive algae and aquatic weed growth due to high levels of phosphorus. Livestock watering is the only acceptable use of water from the watershed’s streams. Nutrients and fecal coliforms from Nose Creek are among the larger sources of contamination in the Bow within Calgary.

According to the Bow River Basin Council’s 2005 State of the Bow report, inside Calgary, water quality is primarily affected by stormwater runoff, with suspended solids being the biggest concern. Downstream of the Calf Robe Bridge, water quality in the Bow is heavily influenced by discharges from the City of Calgary’s wastewater treatment plants.

Better management of contaminants has provided some stability, such as reducing the risk of fish kills in the Bow below wastewater treatment plants and improving the health of some riparian lands. Whether this stability will lead to sustainability remains to be seen. Calgary’s water quality is currently not sustainable because of conditions in the Nose Creek watershed, impacts on the Bow downstream of Calgary, the downward trend in water quality in the upper Elbow and its implications for Calgary’s water supply, and bacterial contamination in the lower Elbow.

LINKAGES

Natural processes contribute to good water

quality, so maintaining healthy aquatic and riparian ecosystems is important to ensuring good quality water. The way we live our lives, though, will have the greatest impact, positive and negative, on water quality. Key elements are policies, laws, education, and enforcement, all of which can encourage good behavior and control activities detrimental to water quality.

DEFINITIONS

Escherichia coli (*E. coli*) and fecal coliforms are bacteria found in the intestinal tracts of mammals, including people. Both indicate contamination that may threaten human health. Health Canada uses *E. coli* as the most reliable indicator of bacterial contamination of freshwater bodies.

TAKE ACTION & GET INVOLVED

- Support policies and legislation that aim to eliminate water pollution.
- Encourage education, monitoring, and enforcement related to water contamination.
- Get involved in the Bow River Basin Council (brbc.ab.ca).



Within Calgary, a 4-year advisory against swimming or wading in the river from Sandy Beach to 9 Avenue SE remains in effect due to contamination from fecal coliforms.

Christmas Bird Count



THE FACTS

In 2018, 73 different species, a total of 61,717 birds, were counted by 138 volunteers on December 16 between 8:00 a.m. and 6:00 p.m. Volunteers contributed a total of 238 hours to the count.

IMPORTANCE

The Christmas Bird Count represents over 100 years of citizen engagement in and contribution to science. Birds are intricately linked to our ecosystems, and long-term changes in their populations can show us where our environmental protection is lacking.

Birding is one of North Americans' favourite pastimes, so presence or absence of birds is something many people are attuned to. Perhaps the seminal event in the birth of the modern environmental movement was the 1962 publication of Rachel Carson's *Silent Spring*, which sounded an alarm about the loss of bird species due to the use of lethal pesticides.

TREND

The diversity of species counted in the 2018 Christmas Bird Count increased 14% from the 2017 count of 64 species. Total individuals counted has fluctuated over time. In 2009, 53,950 total individuals were counted. In 2012, that number was 66,599 and in 2018, it was 61,717. The record species count of 78 was recorded in 2003. The 20-year average species count is 66.

From a historic high of 27,450 in 2004, Canada Goose numbers steadily declined to 7,012 in 2009 – though the count of 17,268 birds in 2018 was a significant rebound. Northern Flicker populations have been steadily rising around Calgary. In the 2005 count, 65 were recorded; in 2009, it was 102, and in 2018, it was 314. Since 2003, there has been a dramatic increase in Bohemian Waxwings, which averaged 4,000 to 5,000 before 2003 and more recently have regularly topped 15,000, with 16,835 sightings in 2018. There is some evidence that the increase is, in part, due to the proliferation of fruit-bearing trees in Calgary.

In 2018 there were unusually high counts

of Juncos (392), Redheads (19), and American Three-Toed Woodpeckers (3) but unusually low counts of Gray Partridges (14), Red Crossbills (3), and White-Winged Crossbills (147). Three species on the low end of the threatened species scale were counted this year – the Great Blue Heron, Canvasback, and Ruddy Duck.

On a note of caution, annual differences in weather conditions, food availability, and the number of volunteer observers can heavily influence the final tally of birds in a given year. For example, in -29°C weather in 2008, only 30,300 birds were counted.

LINKAGES

Climate change is disrupting the migratory patterns and home ranges of many birds. Habitat loss, with accompanying biodiversity loss, in almost all major ecosystems on Earth is shrinking the available habitat of birds in all regions of the world.

Nature observation is a relaxing pastime that can have significant health benefits and can encourage interaction with other community members. Birds also help to connect city dwellers with nature's rhythms: nothing marks spring in Calgary like the appearance of the first Robin.

The State of Canada's Birds 2019, published by the North American Bird Conservation Initiative, reports on 50 years of data showing a strong recovery of waterfowl and birds of prey and a healthy increase in wetland birds and forest birds. It sounds an alarm, however, about decreased populations of shorebirds, grassland birds, and aerial insectivores – down 40%, 57%, and 59%, respectively.

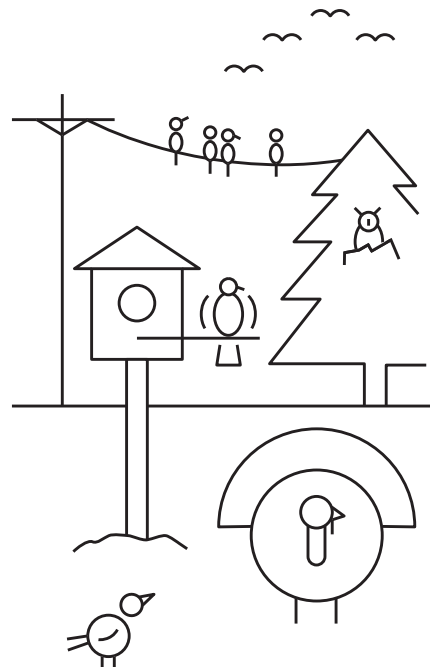
According to Pembina Institute, there are 22 million to 170 million breeding birds in the 35 million acres that could eventually be developed for tar sands, with the potential to lose 6 to 160 million birds over the next 30 to 50 years. Species found in Calgary that are either on the top 20 birds-in-decline list or endangered by tar sands development include the Evening Grosbeak, Bohemian Waxwing, and Boreal Chickadee.

DEFINITIONS

The Calgary Christmas Bird Count is part of the National Audubon Society's North American Christmas Bird Count. The 2019 count was the 120th year of the count in North America and the 66th in Calgary. The survey involves an all-day census of birds for each day between December 14 and January 5 and covers a 12.5 km radius from the Louise Bridge. The count is coordinated locally by the Calgary Field Naturalists' Society (also called Nature Calgary) and is conducted by volunteer observers.

TAKE ACTION & GET INVOLVED

- Naturalize your yard with prairie species that attract birds.
- Support a ban on the cosmetic use of pesticides in Calgary.
- Get involved in the Calgary bird counts (naturecalgary.com).



Water Consumption



THE FACTS

In 2018 Calgary's average per capita water consumption was 362 litres per capita per day (lpcd), showing an 11% decline from 2012 and continuing a downward trend since the 1970s. Per capita residential use was 228 lpcd.

IMPORTANCE

Like all living things, humans depend on a clean and reliable supply of water. It is important to reduce per capita water consumption, but it is even more important to reduce total diversion.

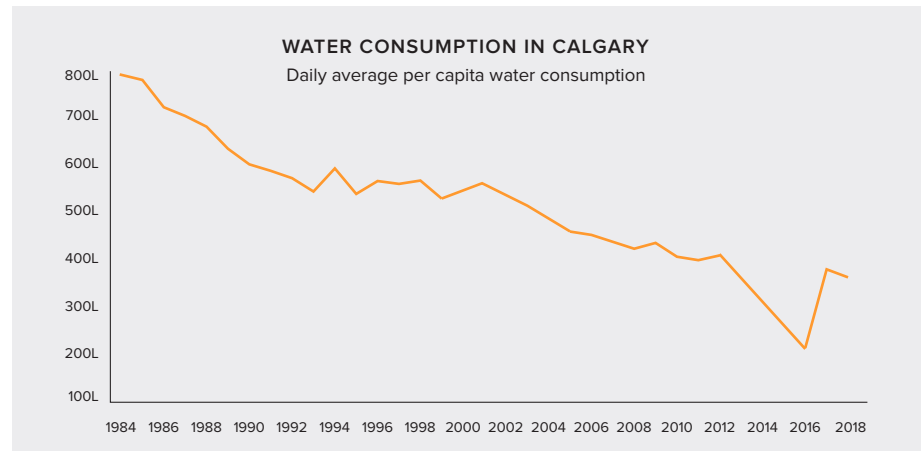
Calgary shares its water with many users upstream and downstream of the city, which means that solutions must be developed in cooperation and coordination with other municipalities, industries, and other levels of government.

TREND

Since the 1970s, Calgary's per capita water consumption has steadily declined, putting Calgary on course to achieve its objective of reducing per capita water consumption to 350 litres per day by 2033, and of stabilizing or decrease total water withdrawals even as population increases.

Despite reduced per capita water use, Calgary is facing an uncertain water future. Annual river water supply is falling as a consequence of climate change. Climate change and land development are resulting in higher, more frequent flood flows. Climate change will increase temperatures during the warm, high-demand periods of the year, leading to increased water use for lawn and crop irrigation in the Bow River watershed.

The City's water licences are forecasted to be too small to meet peak demand in 2036 and daily demand sometime before 2046. The provincial government does not issue new water licences in the watershed and has challenged the legal right of the City to continue supplying Airdrie, Strathmore, and Chestermere with water or to supply water to additional communities. The City's water licences are lower priority than licences of the irrigation districts downstream, which have a right to demand that the City restrict



or cease diverting water during low-flow periods.

Unless conservation efforts are successful, the City will need to enter the water market and buy licensed allocations from other water users. The water market is in its infancy and is complicated by potentially significant consequences for the viability of smaller communities, the reliability of peak electrical production, and agricultural profitability.

The City's future water use is not sustainable, primarily because of legal constraints and impacts from climate change and land development.

LINKAGES

High levels of water consumption put pressure on existing municipal infrastructure. As water demand increases, costly upgrades to treatment plants, pump stations, reservoirs, and pipes are required. We should strive to reduce both water use and water loss in the system. To encourage citizens to conserve water, Calgary City Council passed a bylaw in 2002 requiring that water metres be installed in every home by 2014.

Since the 1980s, the City has managed to reduce water main breaks from about 1,800 a year to less than 400. In saving water, energy is also conserved, since large amounts of electricity are required to power the pumps and other equipment used to process and distribute water.

Excessive withdrawals of water for human water consumption affects aquatic life, since it disrupts and damages natural systems.

DEFINITIONS

The average amount of water used per person per day includes industrial, commercial, institutional, and residential consumption, divided by the total population. Consumption also includes public use, leakage, and fire fighting. It is difficult to compare usage with other cities because of different ways of calculating water use.

TAKE ACTION & GET INVOLVED

- Don't buy bottled water.
- Retrofit your home with water conservation devices.
- Xeriscape your lawn so that it thrives on rainfall alone.
- Learn about water conservation through permaculture design (permaculturecalgary.org).
- Read about the work of the Bow River Basin Council (brbc.ab.ca).
- Support organizations that advocate for water conservation, like the Alberta Wilderness Association (albertawilderness.ca).



Since the 1980s, the city has managed to reduce water main breaks from about 1,800 a year to less than 400.

Resource Use Indicators



ECOLOGICAL FOOTPRINT

In 2014 Calgary's ecological footprint was estimated at approximately 12.4 ha/person.

The global average ecological footprint was 2.75 ha/capita and the fair share (based on what the earth can provide) was only 1.72 ha/capita. **Based on the 2019 population of Calgary, our footprint represents a total land area of approximately 117,000 km² – about 142 times the actual size of our city.**



POPULATION DENSITY

In 2017 Calgary had a population density of 2,473 persons/km² based on a population of 1,246,337 and a built-up area of 504 km².

This was an increase of 5.3% from the 2012 density of 2,348 persons/km².



TRANSPORTATION SPENDING

In 2018 the City of Calgary spent just under \$1 billion (net) on transportation, the largest item in the City's budget.

Fifty-seven percent of the money was for public transit, in line with the long-term average.



TRANSIT USAGE FOR WORK TRIPS

City-wide in 2016, transit accounted for 14% of all work trips, a decline from 2011 (17%) and 2006 (16%).

In 2017 transit accounted for 41% of all trips into downtown Calgary during the morning commute, a substantial decrease from 2013/14, when more than half of downtown trips were made by transit.



DOMESTIC WASTE

In 2018 a total of 437,000 tonnes of waste went to Calgary landfills, or 345 kg/capita. This is down from 368 kg/capita in 2017 and is only 20% of the 1,688 kg/capita registered in 1982. **WRS's goal is for 70% diversion of waste from landfills by 2025.** In 2017 the City's Waste and Recycling Services (WRS) collected 268,000 tonnes of garbage from multi-family housing and businesses, or approximately 320 kg/capita – a 4% reduction since 2015.



ENERGY USE

In 2017 Calgary's per capita final energy demand was the equivalent of 78.2 barrels, up from 71.3 barrels in 2016. From a low of 60.5 barrels of oil equivalent in 1995, **our per capita consumption has increased almost 30%.** In 2017 Alberta emitted 62.4 tonnes of CO₂e per capita – **over 3 times the Canadian average of 19.4 tonnes per capita.**



Ecological Footprint



THE FACTS

In 2014 Calgary's ecological footprint was estimated at approximately 12.4 ha/person. The global average ecological footprint was 2.75 ha/capita and the fair share (based on what the earth can provide) was only 1.72 ha/capita. Based on the 2019 population of Calgary, our footprint represents a total land area of approximately 117,000 km² – about 142 times the actual size of our city.

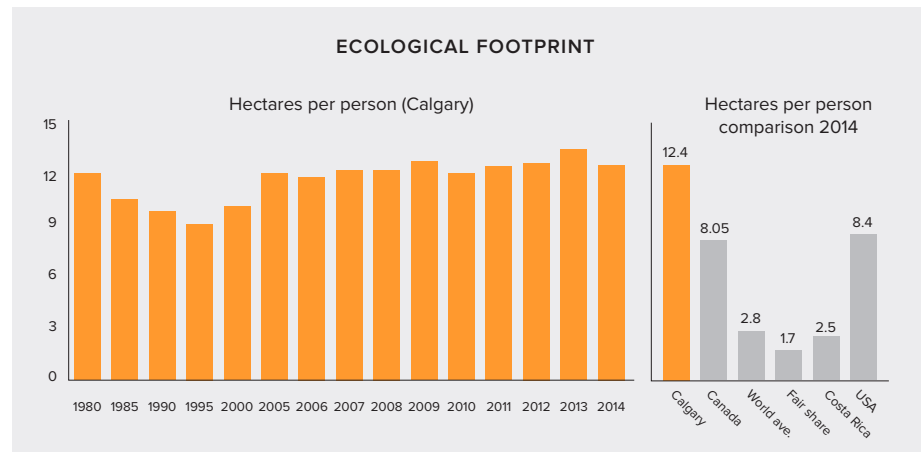
IMPORTANCE

The concept of ecological footprint helps us to determine whether our lifestyle is sustainable from a global perspective and to identify wasteful practices and effective strategies for eliminating or adjusting them. From an ethical standpoint, it challenges us to examine our lifestyle in relation to what the earth can provide. It underlines the need to move toward a less consumptive lifestyle that enhances quality of life for all Calgarians. The natural world sustains life. Every species loss and habitat loss reduces an ecosystem's health and resilience and degrades the life support systems that humans cannot live without (e.g., clean water). On a finite planet, our overconsumption is necessarily linked to the underconsumption of many other people on the planet.

TREND

It is estimated that in 1900 Calgary's footprint was 1 ha/person, and by 1950, it had risen to 2 hectares. By 1960, estimates of Calgary's footprint had risen to approximately 5.1 ha/person. Canada's footprint was about 6.2 ha/person in 2010.

Calgary's footprint was over 3 times the world average in 2016 and just over 5 times the global fair share. Countries such as Sierra Leone (1.0 ha/person), and most of Central and Southern Africa, use far below the global fair share. Countries such as Costa Rica and Cuba maintain a high quality of human development with relatively small footprints – 2.7 and 1.8, respectively. Countries like Germany are very competitive in the global economy and have a far smaller footprint than Canada's.



Why do we have such a big footprint? A 2009 City of Calgary study showed that Calgary had the highest energy land demand (the area of land required to sequester GHGs produced in energy consumption) of all Canadian municipalities. Energy land demand is particularly high because of Alberta's dependence on coal- and natural gas-derived electricity compared to hydro-derived electricity in other provinces. Calgarians also live in larger homes, own more and bigger automobiles, and spend more on consumer products than other Canadians. In 2009 Montreal had the lowest footprint of any large Canadian city.

Overshoot day is the date when all of the available bio-capacity of the planet for a particular year has been consumed. Beyond that date, consumption is at the expense of degraded ecosystems. The earth first experienced an ecological overshoot in 1970. In 2019 overshoot day arrived on July 29, the earliest date in history.

LINKAGES

Ecological footprint is an economic indicator in that it demonstrates the resource cost of our lifestyles and enables us to reflect on the unequal access and use of resources throughout our city, country, and planet. Reducing energy use and water consumption and increasing population density and transit usage are important means to reduce ecological footprint.

We know from the 2019 World Happiness Report that above a basic amount, there

is no correlation between income and happiness. Reported happiness has not increased since the 1950s, when our material consumption was only a fraction of what it is today.

DEFINITIONS

An ecological footprint estimates the amount of productive land needed (1) to sustain a given human population relative to annual consumption levels of food, forests, energy, and manufactured goods, and (2) to deal with the production of wastes and pollutants that result from those activities.

Calgary's ecological footprint is based on the annual estimates of the ecological footprint of nations produced by Global Footprint Network. Ecological footprint is closely related to income, so for this indicator, we started with the Canadian ecological footprint. We then calculated Calgary's footprint by multiplying the Canadian footprint by the ratio of Calgary's average total income for economic family to that of Canada. Average income data comes from Statistics Canada.

TAKE ACTION & GET INVOLVED

- Eat less meat, consider giving up your car, and buy locally whenever possible.
- Calculate your ecological footprint and explore how to reduce it (footprintnetwork.org).

Transportation Spending



THE FACTS

In 2018 the City of Calgary spent just under \$1 billion (net) on transportation, the largest item in the City's budget. Fifty-seven percent of the money was for public transit, in line with the long-term average.

IMPORTANCE

In the future, the Calgary region will require unprecedented levels of growth in productivity to maintain the prosperity enjoyed during the past 4 decades. An effective transportation system is essential to maintaining prosperity. Unless wisely used, spending on transportation will be a drag on improvements in productivity and quality of life.

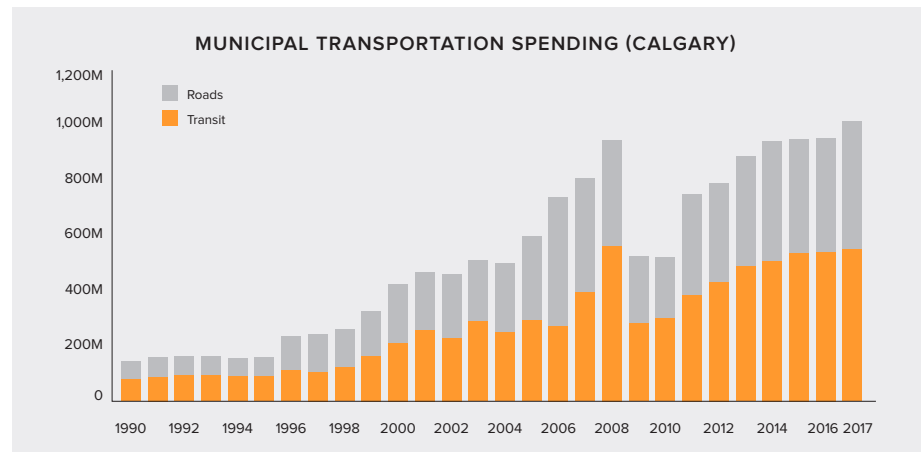
TREND

The City's transit budget is skewed toward operations, which accounts for two-thirds of transit spending. This is of particular concern since provincial grants to municipalities have not kept pace with growth and have shifted away from operations to construction projects. If these trends continue, operational budgets may be reduced and new construction will place greater demands on operational budgets.

In 2018 the City received \$177 million in revenue from transit fares and other transit income and \$58 million from parking revenue. Both sources of revenue have dropped from their peaks in 2015 – a 10% decrease for transit and 9% for parking. The City also receives levies paid by developers and grants from the provincial and federal governments that include funds for transportation.

The City has a target that transit fares and other revenue should cover 55% of transit's operating costs. This policy will deliver similar net operating costs whether urban sprawl continues or a more compact city develops. The City's parking policy requires that 100% of enforcement revenue and the greater of 65% or \$11 million of net Calgary Parking Authority revenue be paid to the City. Road users are not required to contribute to the costs of the road system.

The lack of a cost-recovery policy for roads is a serious concern. It is estimated that if



urban sprawl continues, the City will need an additional \$8.8 billion (in 2009 dollars) over the next 60 years to pay for roads beyond what a more compact city needs. This is one symptom of the cost-revenue gap for roads: estimates have shown that road users Canada-wide reimburse governments for, at best, a quarter of the costs of the road network.

Based on replacement value, roads in 2017 accounted for 84% of Calgary's transportation infrastructure and transit accounted for the remaining 16%. Although most transit and road infrastructure is in good condition, the 10-year funding gap for Calgary's transit system is over \$1.5 billion, while the funding gap for the road system is over \$1 billion.

The cost of transportation for households has been steadily rising, with private-vehicle use accounting for 90% of those costs. Fourteen percent of total household expenditures is for transportation.

A study of Calgary neighbourhoods found that average personal vehicle travel per household ranged from 16,200 km to 45,600 km annually, resulting in expenditures for gas alone of between \$2,060 and \$6,169 per year (in 2007 dollars) and greenhouse gas emissions of between 5.0 and 15.1 tonnes of CO₂e. As well, research by Sustainable Calgary, reported in *Affordable Living: Housing + Transportation*, has shown that a Calgary family can dramatically expand its housing options and home affordability by not owning a car or by

selling one already owned.

LINKAGES

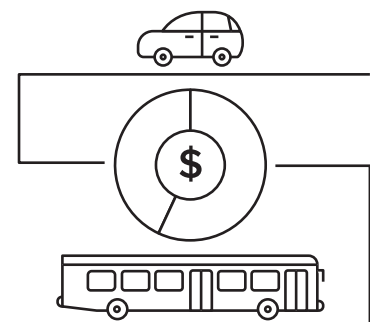
The form a city takes is linked to its transportation system. In Calgary, the system has been designed primarily to accommodate cars, often overlooking the needs of transit users, pedestrians, and cyclists. Car-oriented design reduces the potential for personal interaction and imposes higher costs on disadvantaged, low-income households and on others among society's most vulnerable members.

DEFINITIONS

Data on City of Calgary transportation expenditures do not include construction of roads within new subdivisions, provincial government expenditures (e.g., Stoney Trail), and spending by the Calgary Airport Authority.

TAKE ACTION & GET INVOLVED

- Get involved with Bike Calgary (bikecalgary.org) by donating, volunteering, or taking the Commuter Cycling Skills Course.



Domestic Waste



THE FACTS

In 2017 the City's Waste and Recycling Services (WRS) collected 268,000 tonnes of garbage from multi-family housing and businesses, or approximately 320 kg/capita – a 4% reduction since 2015.

In 2018 a total of 437,000 tonnes of waste went to Calgary landfills, or 345 kg/capita. This is down from 368 kg/capita in 2017 and is only 20% of the 1,688 kg/capita registered in 1982. WRS's goal is for 70% diversion of waste from landfills by 2025.

IMPORTANCE

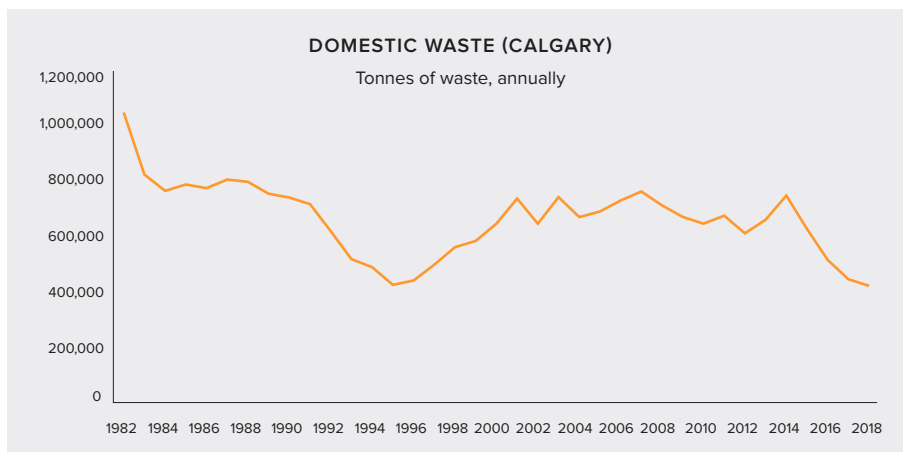
In a sustainable community, waste becomes obsolete. Our economic system should only use materials that can be reused or reabsorbed safely back into ecosystems. Waste to landfills is costly, it takes valuable land away from other more productive uses, and its decomposition generates methane, a greenhouse gas 25 times more potent than CO₂. Hazardous and persistent waste such as heavy metals and plastic cause health risks to animals and to humans.

TREND

The Blue Cart program continues to operate city-wide and provides weekly collection to over 324,000 single family homes up to and including fourplexes. WRS also operates 36 networks of community recycling depots where 56,000 tonnes of recyclables were collected in 2017.

The Household Hazardous Waste Drop-off Program, in partnership with the Calgary Fire Department, allows Calgarians to divert chemicals and other hazardous materials from landfills. Residents can drop off hazardous waste such as surplus paint, car batteries, antifreeze, used oil and filter, garden chemicals, and aerosols. In 2017, 3,058 tonnes of hazardous waste were successfully diverted from landfill sites.

Prior to the Green Cart program (rolled out in the second half of 2017), WRS recorded 29,004 tonnes of organic materials diverted from landfills. After the Green Cart program implementation, a total of 37,748 tonnes of organic materials were diverted.



News in 2019 that the City of Calgary was sending 2,000 tonnes of plastic containers to landfills helped focus people's attention on the critical situation of plastic use and waste. Some jurisdictions have implemented bans on plastic straws and bags and even on single-use plastics in general. The average Canadian uses 100 kg of plastic every year. Since the 1950s, global production of plastics has increased from 2 million to 330 million tonnes per year. Ten to 20 million tonnes of plastic find their way into the oceans annually. Of the 8.3 billion tonnes of virgin plastic ever produced, only 9% has been recycled.

LINKAGES

A recent study reported in the *Guardian* found that 83% of samples of tap water tested in 7 countries were found to contain plastic microfibres. Another 2019 study revealed plastics contamination in more than 90% of bottled-water samples from 11 different brands.

Did you know that 80% of items stored in a home are used only once a month? The average car is parked 92% of the time.

The aspirational waste management goal of the City of Calgary is to achieve zero waste, which means that all discarded materials are resources that can be reused and no garbage is sent to landfills. While WRS programs divert a considerable amount of waste from landfills, the key goal should still be reduction of waste in general. This means reducing consumption and reducing the use of materials. In 2019

the world set a record for gross volume of materials consumed to feed our high-energy consumer economy.

A circular economy keeps products and materials circulating within the economy at their highest utility and value through waste prevention, improved design, reuse, recycling, remanufacturing, and innovative business models.

DEFINITIONS

This indicator measures how much waste has been diverted from the landfill sites through the City of Calgary's waste diversion programs. Residential and business waste is reported from City of Calgary residential collection. Total waste to landfill is measured at Calgary's 3 landfills – Spyhill, Shepard, and East Calgary. Data were collected from Waste and Recycling Services 2017 Historical Data.

TAKE ACTION & GET INVOLVED

- Advocate for Extended Producer Responsibility policy and legislation at both the local and provincial government levels.
- Learn more about achieving zero waste and reducing plastic use from organizations like Zero Waste Canada (zerowastecanada.ca), Plastic-Free YYC (plasticfreeyyc.com), and the Recycling Council of Alberta (recycle.ab.ca).

Population Density



THE FACTS

In 2017 Calgary had a population density of 2,473 persons/km² based on a population of 1,246,337 and a built-up area of 504 km². This was an increase of 5.3% from the 2012 density of 2,348 persons/km².

IMPORTANCE

Compact cities are an important marker of sustainability because they help preserve surrounding natural environments and farmland. They make transit usage and other alternative modes of transportation more viable, which in turn leads to reductions in car usage and air pollution.

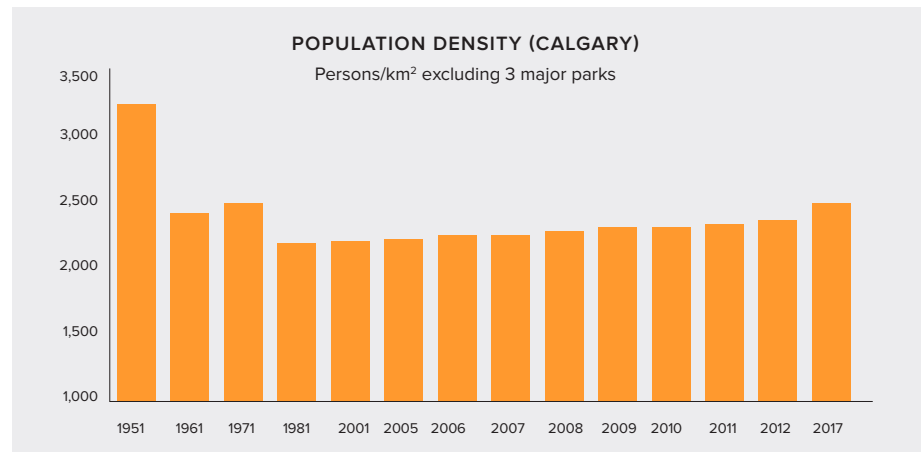
TREND

Until the early 2000s, Calgary's population density had been in steady decline since at least 1951, coinciding with the rise to dominance of the automobile. Per capita vehicle registrations in Calgary rose from 0.276 in 1961 to 0.817 in 2015. In 2017 the density of our city was almost 25% less than it was in 1951. If Calgary's current density matched that of 1951 density, there would be almost 400,000 more people living in the city.

Data from the 2006 census show that Calgary was almost 30% more compact than Edmonton, on par with Winnipeg and much less dense than Toronto, Montreal, or Vancouver.

In Calgary, the average approved new suburb density has increased from 13.5 units/ha in 1995 to 21.1 units/ha in 2014. Established, fully built-out community densities in units/ha vary across Calgary: Britannia 7.4, Dalhousie 13.7, Sunnyside 42.7, Bankview 51.6, and Beltline 65.9. The 2008 Municipal Development Plan requires new suburban development to be in the range of 18 to 22 units/ha.

In their study of 32 major cities around the world, researchers Peter Newman and Jeffrey Kenworthy recommend densities of 30 to 50 units or above per residential hectare for public transit-oriented urban lifestyles (3,953 persons/km²). While some progress has been made in Calgary, the City must make a greater effort to increase urban densities. Typical European city



densities, for example, are in the range of 4,000 to 5,000 persons/km².

City of Calgary policy requires 5 years of serviceable land supply. In 2019 city council approved another 14 suburban communities despite the fact that Calgary Snapshots 2015 noted that the city had 17 km² of serviced land available: enough to house almost 160,000 people (15 years of growth at current growth rates). This was done despite the City's 2018 Municipal Development Plan/Calgary Transportation Plan progress report showing that the City was not reaching its targets for growth in established communities.

LINKAGES

As cities become more compact and active transportation infrastructure is built, a greater proportion of the population will choose to walk, cycle, or use public transit. Fewer vehicles means fewer accidents. In 2016 pedestrian collisions and fatalities cost Calgary an estimated \$120 million. Fewer cars and more transit, walking, and biking lowers air pollution and can lead to lower levels of obesity and heart and respiratory disease. One study showed that cycling 20 minutes per day can reduce the risk of heart disease by 50%.

A compact city can put amenities within reach of those who cannot drive or afford a vehicle, such as the elderly, youth and children, and the poor. Higher density can also mean shorter commuting distances, less time spent in traffic, and more time spent with family and friends

and enjoying active leisure.

High-density living results in important economic benefits. A study commissioned for the City of Calgary estimated that over the next 30 years, business-as-usual low-density sprawling development will cost Calgarians approximately \$10 billion more than would a more compact form of development within our existing footprint.

DEFINITIONS

Our density calculation is based on all of the land currently in use for residential, commercial, and industrial purposes and roadways. It does not include parks, the airport, or land within the legal boundary but not yet developed. Densities are typically measured in persons per square kilometre.

TAKE ACTION & GET INVOLVED

- Let your city councillor and mayor know that you support density and an end to sprawl.
- Support organizations that advocate for less urban sprawl, such as Sustainable Calgary (sustainablecalgary.org), the Arusha Centre (arusha.org), and Calgary Climate Hub (calgaryclimatehub.ca).

Transit Usage for Work Trips



THE FACTS

City-wide in 2016, transit accounted for 14% of all work trips, a decline from 2011 (17%) and 2006 (16%). In 2017 transit accounted for 41% of all trips into downtown Calgary during the morning commute, a substantial decrease from 2013/14, when more than half of downtown trips were made by transit.

IMPORTANCE

In a sustainable community, the movement of people and goods is accomplished using the most efficient means possible. The more we use our cars or build our city to support the movement of the automobile, the less livable the city becomes. Sustainability is enhanced when the need for costly and inappropriate transportation infrastructure and movement is minimized. Thousands of people move to Calgary each year, which puts increased pressure on the transportation system.

Exacerbating the problem is the fact that many people do not live near where they work. Population growth has concentrated in the outer edge of the city, where transit usage is below average. In Calgary, for example, just under half of those living within 5 kilometres of their workplace walk, cycle, or take transit. At 10 to 14 kilometres, that percentage drops to a quarter of commuters.

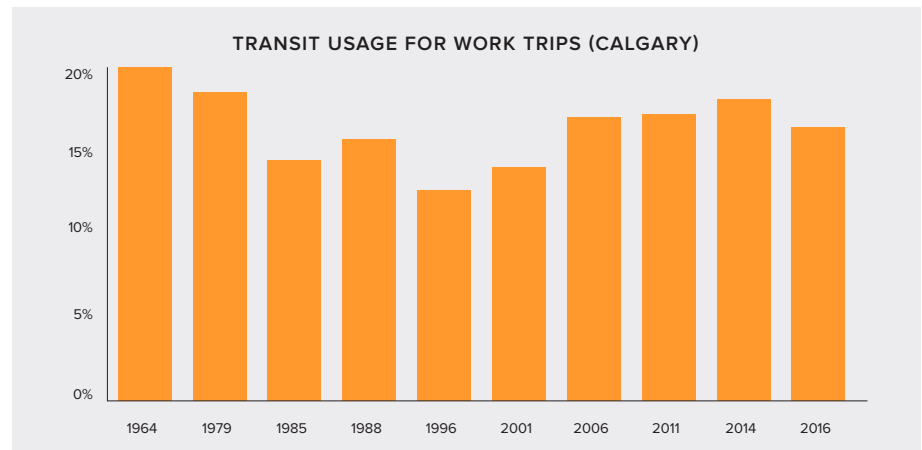
TREND

The decline in work trips by transit means that Calgary has fallen further behind Toronto (24%), Montreal (22%), Vancouver (20%), and Ottawa-Gatineau (18%). Calgary ranks only slightly ahead of Winnipeg, Halifax, Edmonton, and Quebec City for commuting by transit.

Despite recent gains in ridership, city-wide transit usage has still not reached the peak of about 20% in 1964. Those who benefit the most from transit are 15- to 24-year-olds, lower-income individuals, and those living within 5 to 15 kilometres of their workplace.

LINKAGES

The primary effect of low transit usage is high personal automobile usage, resulting in more congested and dangerous



roads, polluted air, and higher emission of greenhouse gases (GHGs). Noise and visual pollution are also products of roads and parking lots, both of which use valuable land that displaces potential green space or housing developments.

Living in a car-dependent city is expensive. In 2017 Alberta households spent \$14,120 on private transportation, almost 25% more than the average Canadian household. The International Energy Organization reported in 2020 that Canada has the least fuel-efficient, highest GHG emitting light truck fleet in the world. Light trucks and SUVs are the largest and fastest growing market share and their fuel efficiency has actually been decreasing over time. In Alberta, 75% of purchased vehicles from 2016 to 2018 were light trucks, compared to 54% in Canada. Alberta has 11.6% of Canada's population and purchased 13.7% of all light trucks. According to a Pembina Institute report, the GHG emissions per km per person are over 400 grams of CO₂e for SUVs and less than 50 grams for light rail. A pickup truck emits 5 times the GHGs of a compact car. The Ford F150 4X4 and Chevrolet suburbans produce more GHGs than any other personal vehicle on the road.

In contrast to personal vehicles, Calgary's LRT runs on wind energy – one of the cleanest sources of energy and a source that is abundant in southern Alberta. Biking and walking emit no GHGs!

The amount of money that Calgarians spend on private vehicles in just 1 year

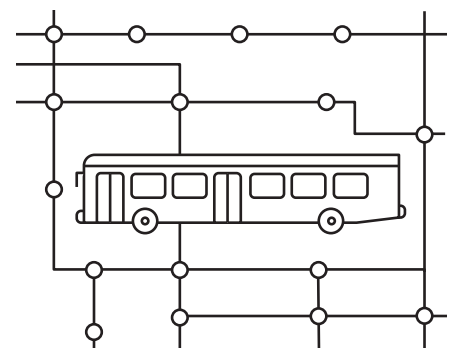
could fund 2 Green Lines. It could also fund the construction of over 200 km of a streetcar network or 12,000 km of separated bike tracks. It makes a lot of "dollars and sense" to move rapidly to a transit- and active transport-oriented city in which nobody has to own a private vehicle.

DEFINITIONS

Information for the downtown commute was derived from Calgary Transit surveys. The city-wide data are derived from the Canada census. Transit usage includes community shuttles, buses, and light rail transit (LRT).

TAKE ACTION & GET INVOLVED

- Walk, cycle, rollerblade, or use transit whenever possible.
- Consider all the costs in choosing your mode of transportation.
- Check out the programs and information at Bike Calgary (bikecalgary.org).



Energy Use



THE FACTS

In 2017 Calgaryans' per capita final energy demand was the equivalent of 78.2 barrels, up from 71.3 barrels in 2016. From a low of 60.5 barrels of oil equivalent in 1995, our per capita consumption has increased almost 30%. In 2017 Alberta emitted 62.4 tonnes of CO₂e per capita – over 3 times the Canadian average of 19.4 tonnes per capita.

IMPORTANCE

For over 100 years, we have had a good run with cheap and accessible fossil fuels, but they are getting more expensive and less accessible and are creating a climate change emergency. We need to move rapidly to cleaner sources of energy. We also need to reduce our consumption of energy through efficiency and reducing the amount of stuff we consume.

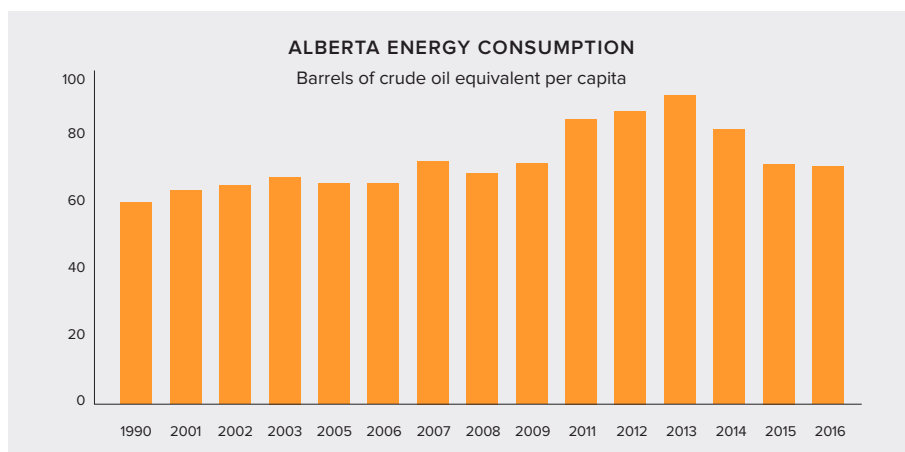
TREND

Per capita final energy demand increased 9.7% from 2016 to 2017. Final demand is at the highest rate since 1990, excluding the years 2011 to 2014, when it ranged from 82.4 to 92.5 barrels equivalent per capita.

But it is also important to talk about total energy consumed. Alberta's final energy demand for natural gas increased 89% from 2005 to 2017. Most of this increase is attributable to the consumption of natural gas in oil sands operations. Refined petroleum products increased 21% in that same 12-year period. From 1990 to 2017, final demand in Alberta increased 115% – it more than doubled while Alberta's population increased only 67%. There has been a significant reduction in final demand for coal in the past decade.

Since 1990, CO₂e emissions in Alberta have grown 58%, a larger and faster increase than in any other province. In 2017 Alberta emissions were 4.4 times those of BC and 7 times those of Quebec. Since 1990, emissions from oil sands activity have increased from 15.5 to 80.1 megatonnes of CO₂e, and natural gas emissions have increased by more than 40% to 49.5 megatonnes.

The City of Calgary's Low Carbon Economy



2018 reported that without further action, in 2050 our city's greenhouse gas emissions will be 24% higher than the City's 2005 target and 300% higher than its 2050 target of 80% reduction in emissions. Some of the most effective measures to reduce greenhouse gases include retrofitting existing homes; building new homes to the highest efficiency standards; and increasing parking fees to encourage transit use, biking, and walking.

Compared to other major cities, Calgaryans own the most vehicles (1.47 per household) in Canada. More of us drive trucks, vans, and SUVs than in any other major city in Canada. We drive more kilometres than other urban dwellers except Edmontonians. Fewer Calgaryans take transit to work than people in Victoria, Vancouver, Montreal, Toronto, or Ottawa.

LINKAGES

In 2017 installed wind capacity represented almost 10% of Alberta's total electricity generation capacity. In 2019 several solar projects in Alberta were underway and set to deliver power at approximately 5 cents per kilowatt hour. As costs have plummeted, installed solar capacity in Canada has grown by almost 200 times since 2005.

According to the International Monetary Fund, Canada directly subsidizes fossil fuels at a rate of \$1 billion annually, with air pollution and associated health care costs adding up to another \$33 billion. Those dollars could help us build transit, hire

teachers to reduce class sizes, and provide all Calgaryans with a living wage.

Reducing the release of the CO₂, ozone, and nitrogen dioxide produced by fossil fuels will bring relief to those who suffer with asthma and other cardio-pulmonary diseases and will allow us to divert billions of health care dollars to the neglected areas of prevention and primary care.

About 27% of the energy consumption in our city can be attributed to automobile use. Achieving the land use targets in the City's Municipal Development Plan will allow us to reduce transportation emissions by about 16% by 2050.

DEFINITIONS

This indicator includes electricity usage, natural gas usage, and petroleum product usage, and captures residential, industrial, and commercial energy consumption. The data are derived from the Statistics Canada Annual Reports on Energy Supply and Demand in Canada and the Energy Statistics Handbook 2012. The per capita figures are for Alberta. Final energy demand is all energy supplied to the final consumer for all energy uses.

TAKE ACTION & GET INVOLVED

- Download and read the City of Calgary's Climate Resilience Strategy. Advocate for its policies.
- Check out the energy research of Pembina Institute (pembina.org).
- Become a member of the Calgary Climate Hub (calgaryclimatehub.ca).

Wellness Indicators



ACCESS TO PREVENTIVE & ALTERNATIVE HEALTH CARE

Approximately 3.2% of Alberta's 2016/17 health budget was allocated to preventive health care.

This preventive budget covers the portfolios of population and public health, research and education, and cancer research and investment. There were no data available on the proportion of the preventive health care budget allocated to the Calgary region since the creation of Alberta Health Services in 2009.



SUPPORT FOR THE MOST VULNERABLE

The Assured Income for the Severely Handicapped (AISH) program provides financial and health benefits to eligible adult Albertans with a permanent medical condition that prevents them from earning a living. **The program provides support to more than 66,000 Albertans. In 2018 an AISH registrant received \$1,649 per month through the AISH program, or 92% of the low-income cutoff (LICO).**



CHILD & YOUTH WELLNESS

In 2017 approximately 26% of Alberta youth aged 12 to 17 years were overweight or obese.

In 2015 approximately 21% of Calgary youth aged 12 to 17 years were overweight or obese. That same year, the Canadian Medical Association declared obesity a chronic disease.



SELF-RATED HEALTH

In 2017, **65.7% of Calgarians 12 years of age and older self-rated their health as very good or excellent**; 8.9% rated their health as fair or poor – down from previous years and among the lowest in the country. In 2017, **73.8% of Calgarians rated their mental health as very good or excellent – the highest percentage since 2005.** In the same year, 5% of Calgarians rated their mental health as fair or poor – the highest since 2005.



HEALTHY BIRTH-WEIGHT BABIES

In the period of 2015 to 2017, 92.3% of newborns in Calgary had a healthy birth weight.

Calgary has the highest incidence of low birth weight in Alberta. Nunavut and Alberta consistently have the highest rates of low-weight births (first and second, respectively) in Canada, but as of 2009, **Canada had the highest rate of healthy birth weights among the G7 countries.**



CHILDHOOD ASTHMA HOSPITALIZATION RATE

In 2017 there were **3,295 emergency visits related to childhood asthma to all hospitals in Calgary.**

This was up from the 3,091 visits in 2016 but much lower than the 3,714 visits in 2014.



Access to Preventive & Alternative Health Care



THE FACTS

Approximately 3.2% of Alberta's 2016/17 health budget was allocated to preventive health care. This preventive budget covers the portfolios of population and public health, research and education, and cancer research and investment. There were no data available on the proportion of the preventive health care budget allocated to the Calgary region since the creation of Alberta Health Services in 2009.

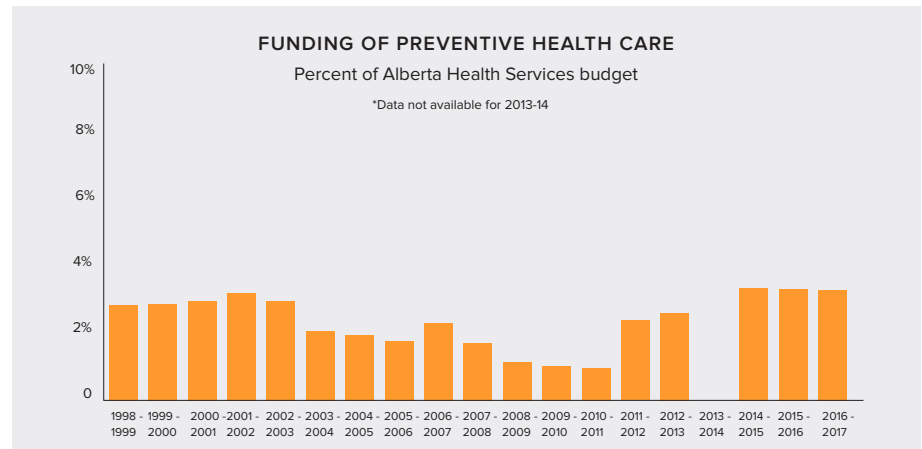
IMPORTANCE

According to the World Health Organization, chronic diseases are the leading cause of death and disability worldwide. These diseases include diabetes, cancer, and cardiac diseases, all of which can be prevented by adopting a healthy lifestyle. According to the Auditor General of Alberta's report in September 2014, in Alberta, people suffering from chronic diseases account for two-thirds of hospital inpatient care and one-third of all visits to physicians. Alberta has the highest health care expenditure per capita in Canada, with the majority of spending allocated to treating and managing chronic diseases, as reported by the AHS Chronic Disease Prevention Action Plan 2015–18.

Preventive health care programs that promote exercise, healthy eating, and smoking cessation can eliminate approximately 80% of all heart diseases, 80% of diabetes, and 40% of cancers. Statistics Canada reported that while there was a modest decrease in the number of Albertans suffering from diabetes and hypertension from 2011/12 to 2013/14, the number of Albertans who are obese and overweight increased in the same period.

TREND

Despite an increase in Alberta's preventive health budget in the last 10 years, over the last two decades, the proportion of the health care budget dedicated to prevention has remained constant (about 3%), despite a change in the portfolios under the health budget. In the year 2000, the preventive health budget covered the Protection, Promotion and Prevention and the Alberta Alcohol and Drug Abuse Commission portfolios. In 2017 the preventive health



care budget covered the additional 2 portfolios of Research and Education and Cancer Research and Investment.

Alberta's preventive health care budget has seen various peaks and troughs. In 1999 the proportion of the provincial health budget allocated to preventive health care was 2.8%. In 2010/11, that proportion reached an all-time low of 0.94%.

LINKAGES

Albertans spend considerable time at work in increasingly sedentary jobs. It is therefore important to integrate physical activity into the daily commute. It is also important to provide opportunities for physical activity in non-work hours, whether this means creating more walking areas, promoting sports programs, or integrating green spaces in the city's plan.

According to the 2019 Alberta Survey on Physical Activity, 64% of Albertans get enough physical activity to achieve health benefits. Among these activities, walking was found to be the most popular.

Urban agriculture can encourage healthier diets by providing fresh greens and vegetables. It can also reduce energy consumption and the ingestion of harmful chemical preservatives. Though some animals are grown in urban areas, it is rare. Local and urban agriculture can support a move away from animal-based diets.

In the 2019 report Healthy Places, Sustainable Calgary showed that

communities with low incomes have less access to green spaces, sidewalks, and pathways, causing them to disproportionately experience poorer health outcomes. This inequity should be taken into consideration during planning and development of community areas in order to encourage active transportation. In the 2016 Chronic Disease Prevention Survey conducted by the Alberta Policy Coalition for Chronic Disease, over 90% of Calgarians supported implementing active transportation policies, enhancing green spaces, and encouraging physical activity in schools.

DEFINITIONS

Preventive health care includes all interventions that reduce the risk of diseases or injury, including health promotion, tobacco cessation initiatives, healthy living programs, cancer prevention research, and immunization. There were no available data regarding alternative health care.

TAKE ACTION & GET INVOLVED

- Write your MLA in support of a health strategy focused on prevention of chronic diseases.
- Contact your councillor and ask them to integrate physical activity and health into city planning.
- Take part in the programs offered by the YMCA (ymcocalgary.org) or YWCA (ywcacalgary.ca).
- Learn about meat-free eating at ForkSmart (forksmart.com).

Child & Youth Wellness



THE FACTS

In 2017 approximately 26% of Alberta youth aged 12 to 17 years were overweight or obese. In 2015 approximately 21% of Calgary youth aged 12 to 17 years were overweight or obese. That same year, the Canadian Medical Association declared obesity a chronic disease.

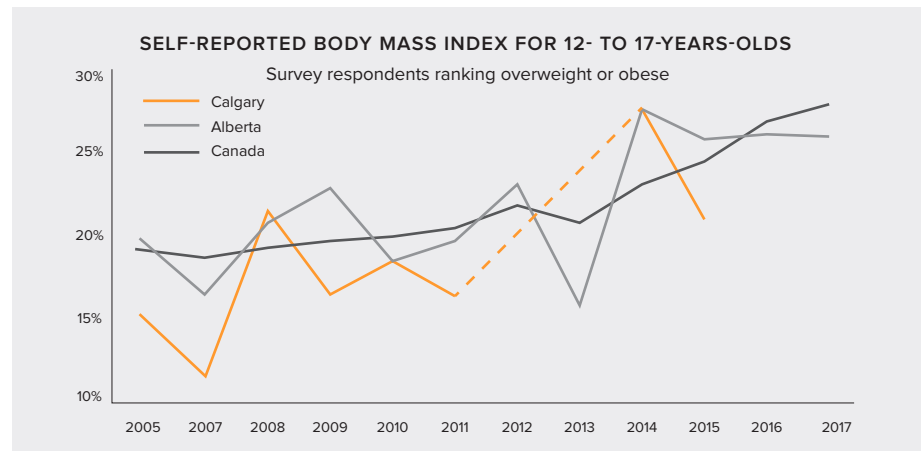
IMPORTANCE

In a sustainable community, youth are physically, emotionally, and spiritually healthy. Overweight and obese youth tend to have a negative body image and reduced self-esteem, and they are more likely to be discriminated against and socially marginalized. Academic performance is also negatively affected. Overweight and obese youth are far more likely to have life-long debilitating chronic diseases, including asthma, type 2 diabetes, and heart disease.

TREND

Data on overweight/obese children and youth are inconsistent with respect to age bracket and method of capture (self-reported or measured) and are infrequently collected. According to the Canadian Community Health Survey (CCHS), from 2005 to 2015 the percentage of Calgary youth aged 12 to 17 years who are either overweight or obese increased from 15.2% to 21%. In Alberta, between 2005 and 2017, the rate of overweight or obese youth went from 19.7% to 26% of youth; in Canada, over the same time period, the rate rose from 19.4% to 27.9%.

Obesity rates among children and youth (2-17 years) in Canada have nearly tripled in last 30 years. In 1978/79, 23% of children and youth were overweight or obese, compared to 35% in 2004 and 30% in 2017. Alberta Health Services reported that in 2017, 30% of youth entering adulthood met the criteria for being overweight or obese. Research reported in 2019 in the *Canadian Medical Association Journal* suggests that substantial increases in incidence of cancer among younger Canadians may be associated with obesity. According to a 2017 UNICEF Report Card, Canada ranked 17th out of 29 countries in child well-being.



LINKAGES

Both diet and physical activity are linked to rates of overweight and obesity, with food playing the most important role. Children and youth appear more likely to face poor emotional and physical health outcomes when they are exposed to household food insecurity. According to Alberta Health Services, food-insecure adolescents and adults are at elevated risk of nutritional inadequacies because they generally consume insufficient amounts of several essential nutrients (e.g., protein, vitamin A, folic acid, zinc, and vitamin B12). In Alberta, 1 in 10 individuals experiences food insecurity, with 17% of children living in food-insecure households. Research has shown that low income is significantly associated with childhood obesity.

In 2018 ParticipACTION released its report card on physical activity for children and youth. Only 62% of 3- to 4-year-olds and 35% of 5- to 17-year-olds met the guidelines. A report by the University of Calgary's O'Brien Institute for Public Health comparing 37 countries shows that Canada's current infrastructure and programs are not sufficient to get children as active as they should be.

The CCHS found that for 6- to 17-year-olds, the likelihood of being overweight or obese rises with time spent watching TV, playing video games, and using the computer. It also found that those children and adolescents who eat 5 or more servings of fruit and vegetables a day are substantially less likely to be overweight or

obese than those who consume less.

The financial costs of obesity are enormous. Some studies suggest a cost of 2% to 3% of the health care budget, which adds up to billions of dollars for the province. A study by the Alberta Centre for Active Living estimated that compared to an active person, an inactive person spends 38% more days in hospital care and has 5.5% more family physician visits, 13% more specialist services, and 12% more nurse visits.

DEFINITIONS

The core data for this indicator are reported in the Statistics Canada, Canadian Community Health Survey (Table 105-0501, Table 105-0508, and Table 13-10-0096-20). Overweight and obesity rates are calculated using body mass index.

TAKE ACTION & GET INVOLVED

- Advocate to make food literacy a core component of K-12 education.
- Check out the services and programs at the Alex Community Food Centre (thealexafc.ca).
- Check out the Raising Healthier Generations program at Vivo (vivo.ca).



In Alberta, 1 in 10 individuals experience food insecurity, with 17% of children living in food-insecure households.

Healthy Birth-Weight Babies



THE FACTS

In the period of 2015 to 2017, 92.3% of newborns in Calgary had a healthy birth weight. Calgary has the highest incidence of low birth weight in Alberta. Nunavut and Alberta consistently have the highest rates of low-weight births (first and second, respectively) in Canada, but as of 2009, Canada had the highest rate of healthy birth weights among the G7 countries.

IMPORTANCE

By promoting practices and behaviours that lead to healthy birth weights, we can protect one of Calgary's most important resources – its children. A healthy birth weight is key to getting a good start in life. Low birth weight is strongly associated with poor health outcomes.

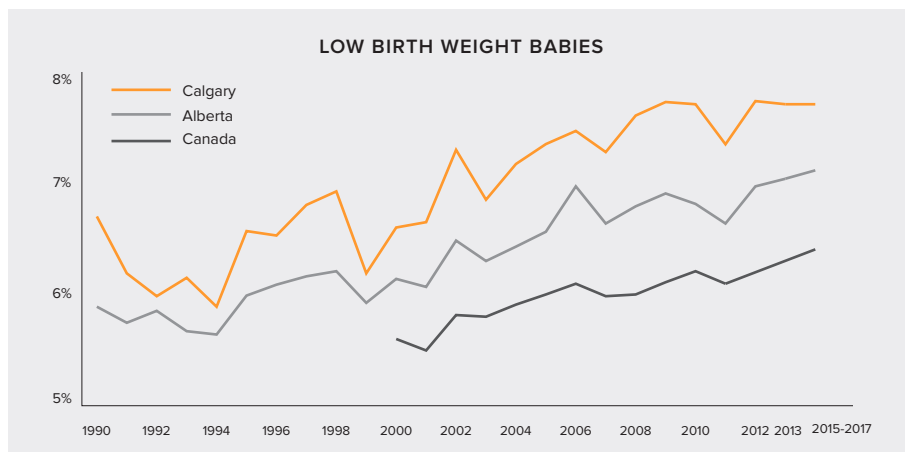
TREND

Since 1990, the incidence of low birth-weight babies in Calgary has varied widely, ranging from a low of 5.9% in 1994 to a high of 7.74% in 2012. Between 1990 and 2000, the incidence of low birth weight averaged 6.4%. Since 2000, it has averaged 7.4%.

In 2015 there were 16,671 births in Calgary. If the city had achieved the national average for low birth weights, 217 fewer infants would have been born with a low birth weight in our city.

Historically, Calgary has had a higher incidence of low birth-weight babies than the rest of Alberta. Several factors may help to explain this trend, including the larger proportion of mothers over 35 in Calgary; the higher rate of multiple births in the city; and Calgarians' access to fertility drugs and advanced levels of care, which can facilitate risky pregnancies and sustain low birth-weight babies.

The incidence of low birth weight is higher in mothers below and above the 25- to 29-year age group. From 2005 to 2007, 1 in 10 babies born to women over 40 had a low birth weight. The National Council of Welfare estimates that up to 75% of infant deaths can be attributed to low birth weight. Low birth-weight babies are approximately 20 times more likely to die as infants than normal birth-weight babies.



In 2008/9, the Canadian average incidence of low birth weight was 5.9%, and in Quebec, the province with the lowest incidence, it was 4.9%.

The estimated additional lifetime health care cost for a low birth-weight baby is more than \$675,000. It can exceed \$50,000 for the first year of life.

In 2017 Canada's incidence of low birth weight was 6.5%, the same as the OECD average but significantly higher than Nordic countries, which averaged under 5%. Additionally, Canada and Alberta have seen a steady increase in incidence of low birth weight since 2000, whereas most European countries have been stable.

LINKAGES

Low birth-weight babies are more at risk of developing health complications such as asthma and hearing problems. They are also more likely to have developmental disabilities and to perform poorly in school. The economic costs associated with low birth-weight babies are enormous. They are 2 to 4 times more likely to be hospitalized during the first 5 years of life than normal birth-weight babies, and they are the Calgary Health Region's fourth-highest category of expenditure.

Chronic pre-existing medical conditions such as hypertension, type 1 diabetes, and asthma are associated with preterm births, low birth-weight babies, and small-for-gestational-age babies.

Research by the UK's Equality Trust shows that the most important positive determinant of a host of health indicators is the level of economic equality in a country. Poverty is one of the most potent factors contributing to low birth weights in Canada. Low-income families may have less knowledge about prenatal health and reduced access to nutritional foods, and they are more likely to practice high health-risk behaviours such as smoking during pregnancy.

DEFINITIONS

The Calgary Health Region defines a healthy birth weight as over 2,500 grams (5.5 pounds). This standard was set by the World Health Organization and is used internationally to monitor birth weights. Low birth weight occurs as a result of shortened gestation and/or inadequate fetal growth. Data were derived from the Government of Alberta's Alberta Reproductive Health: Pregnancies and Births, Surveillance Reports.

TAKE ACTION & GET INVOLVED

- Support organizations that work to ameliorate and eliminate women's exposure to racism, poverty, and income inequality: the Women's Centre of Calgary (womenscentrecalgary.org), Basic Income Calgary (basicincomecalgary.ca), the Alex Health Centre (thealex.ca), and Vibrant Communities Calgary (vibrantcalgary.ca).

Support for the Most Vulnerable



THE FACTS

The Assured Income for the Severely Handicapped (AISH) program provides financial and health benefits to eligible adult Albertans with a permanent medical condition that prevents them from earning a living. The program provides support to more than 66,000 Albertans. In 2018 an AISH registrant received \$1,649 per month through the AISH program, or 92% of the low-income cutoff (LICO).

IMPORTANCE

It has been said that the strength of a chain is measured by its weakest link. A society that cannot help its most vulnerable citizens meet their basic needs and participate fully in community life is not a sustainable society. Because of the social stigma that has long accompanied people with disabilities, they are particularly vulnerable to poverty and social isolation.

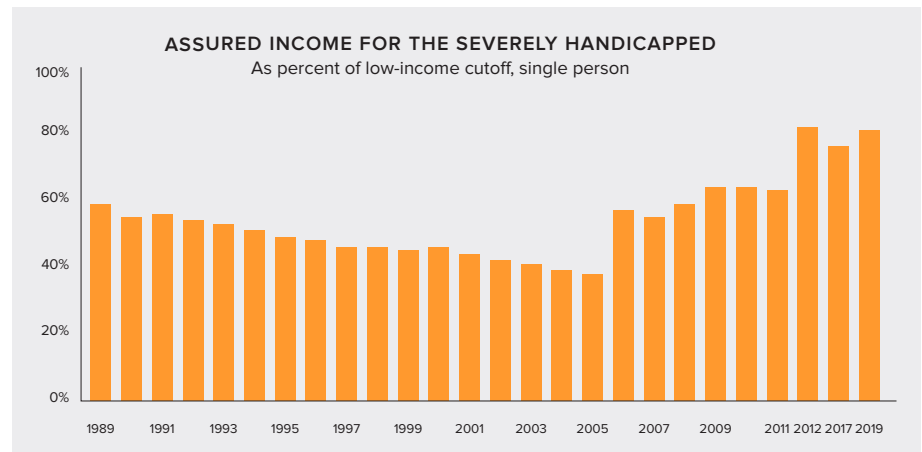
TREND

By 2005, AISH had dropped to only 38% of the LICO. Between 2005 and 2014, AISH rates improved after concerted pressure and lobbying from disability groups, rising to 98.3% of the LICO – almost to the poverty line. This was a marked improvement from 64% in 2009. AISH incomes have fallen in relation to the LICO since 2014. AISH was, for the first time, indexed to inflation in January 2019, but it was de-indexed 9 months later. Alberta has the highest AISH benefit level of all provinces.

Those on social assistance but not deemed severely handicapped receive much less. In 2018 a single person with a disability on provincial Income Support (but not on AISH) received \$10,301, or 48% of LICO, while a person unable to find work received even less – \$8,106, or 38% of LICO. A single parent with 1 child on Income Support had an income that was 76% of the LICO. With some fluctuations, these rates have been more or less constant for 30 years.

A total of approximately 250,000 Albertans receive support through provincial Income Support, seniors' benefits, and AISH.

In 2012, 12.5% of Albertans aged 15 or



older had some form of disability. Of those suffering from a disability in Canada, 14% suffer from a very severe disability. Male seniors (aged 65+) in Alberta were more likely to report some form of disability than their Canadian counterparts, while the younger males, such as those aged 15 to 24 and 25 to 44, had lower rates than their Canadian counterparts. The rates for females in Alberta were similar to the national averages.

LINKAGES

Many people with a disability live in a state of constant food insecurity, often in inadequate housing, and are at high risk of becoming homeless. In Alberta, the homeless are not eligible for Income Support.

Urban sprawl creates problems in everyday living for disabled citizens. As the city spreads outward, transportation links are fewer and travel distances and times increase. A convenient, accessible public transportation system can be a lifeline for citizens with disabilities, who may not have access to a car or be able to drive.

The needs of people with disabilities and limited mobility should factor into every decision we make about the form of our city. For example, when planning new crosswalks and intersections, we should design them with consideration for those citizens whose sight is impaired and for those who cannot walk very fast or are in wheelchairs, as well as for parents with strollers.

DEFINITIONS

Information for this indicator comes from the Welfare in Canada report, established by the Caledon Institute of Social Policy to maintain data previously published by the National Council of Welfare. In 2018 the Maytree Institute assumed responsibility for updating the series. The LICO is one of 3 commonly used proxy measures for poverty in Canada.

Other data derive from Alberta Official Statistics, Prevalence of Disability by Age Group and Sex, Alberta and Canada; Statistics Canada, Canadian Survey on Disability, 2012; and Statistics Canada, A Profile of Persons with Disabilities among Canadians Aged 15 Years or Older, 2012.

TAKE ACTION & GET INVOLVED

- Write your MLA and the premier asking them to raise government support for persons with a severe disability to at least the low-income cutoff and to index to inflation AISH and other income support programs.
- Connect with the Disability Action Hall (actionhall.ca), a group of people with disabilities and their allies.



Self-Rated Health



THE FACTS

In 2017, 65.7% of Calgarians 12 years of age and older self-rated their health as very good or excellent; 8.9% rated their health as fair or poor – down from previous years and among the lowest in the country.

In 2017, 73.8% of Calgarians rated their mental health as very good or excellent – the highest percentage since 2005. In the same year, 5% of Calgarians rated their mental health as fair or poor – the highest since 2005.

IMPORTANCE

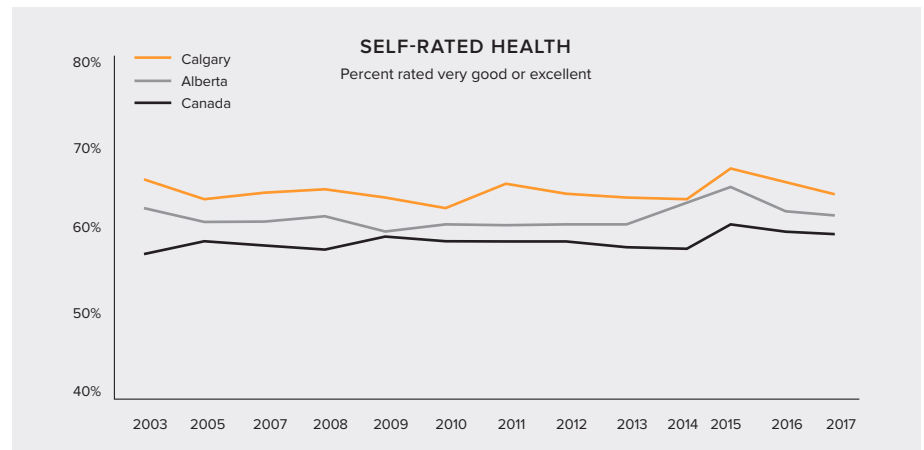
A person's mental and emotional sense of well-being is often as important as objective assessments of physical health. The notion of self-rated health provides not only an individual's subjective assessment of physical, mental, and emotional health, but also an indirect assessment of family well-being, connection to community, economic well-being, and sense of security.

TREND

Between 2003 and 2010, Calgarians' self-rating of very good or excellent health fluctuated between 64.2% in 2010 and 69.4% in 2015. The average over that time was 66.15%. Calgary consistently rates higher than both the Canadian average and the Alberta average when it comes to self-rated health. Among the provinces, Alberta consistently ranks first or second in self-rated health, with Newfoundland and Labrador being its main rival for the number 1 spot.

In comparison with other local health regions, Calgary has consistently ranked near the top, with Vancouver districts reporting slightly higher satisfaction over time.

On the other end of the spectrum, between 2003 and 2013, Calgarians reporting fair or poor health has ranged from 7.6% in 2003 to 9.9% in 2010. There is a small but noticeable upward trend in this indicator. Calgary has consistently scored better than the Alberta and Canadian averages. Calgary generally scores better than most local regions in Canada, though Quebec



health regions consistently report lower rates of fair or poor health.

From 2003 to 2017, Calgarians' self-rated mental health was at the high end compared to other health regions. Reports of excellent or very good mental health ranged from 80.4% in 2007 to 71.5% in 2017. The data show a noticeable downward trend over time. Newfoundland districts consistently report high levels of self-rated mental health. Generally, large cities seem to report lower mental health well-being.

What about self-rated health across age groups? The most recent data, from 2012, show that self-rated health in Calgary was highest among those aged 35 to 44 and lowest among those aged 65+. Self-rated mental health was highest among those aged 12 to 19 and lowest among those aged 45 to 54. Life satisfaction was down overall: it was highest among those aged 35 to 44 (93.4%) and lowest among those aged 65+ (89.1%).

LINKAGES

A research paper in the *British Medical Journal* found that poor self-rated health was a strong predictor of increased mortality in all sub-groups. A 2015 Statistics Canada analysis reports that rates of mood and anxiety disorders have increased in Canada from 8.6% of the population to 12.4%. A Canadian Institute for Health Information report covering data from 2005 to 2008 found that in Calgary, the most socially and

economically marginalized citizens (based on a deprivation scale) were more than twice as likely to be hospitalized for mental illness and about 20% less likely to report excellent or very good health.

When citizens have a strong sense of wellness, we can expect less absenteeism from work or school, less stress, a more productive economy, and a smaller burden on the health system. Healthy individuals are more likely to engage in preventive care, to take more responsibility for their own care, and to be active in the community.

A 2005 Statistics Canada report found that "a strong sense of community belonging was associated with substantially better self-reported physical and mental health."

DEFINITIONS

The data for this indicator come from the Canadian Community Health Surveys. The question asked was "Compared to other people your age, how would you describe your state of health (mental health)? Excellent, Very Good, Good, Fair, or Poor."

TAKE ACTION & GET INVOLVED

- Write to your MLA and MP to let them know that you support policy for universal pharmacare and dental care.
- Familiarize yourself with the work of the Calgary Urban Projects Society (cupscalgary.com) and the Drop-In Centre (calgarydropin.ca).

Childhood Asthma Hospitalization Rate



THE FACTS

In 2017 there were 3,295 emergency visits related to childhood asthma to all hospitals in Calgary. This was up from the 3,091 visits in 2016 but much lower than the 3,714 visits in 2014.

IMPORTANCE

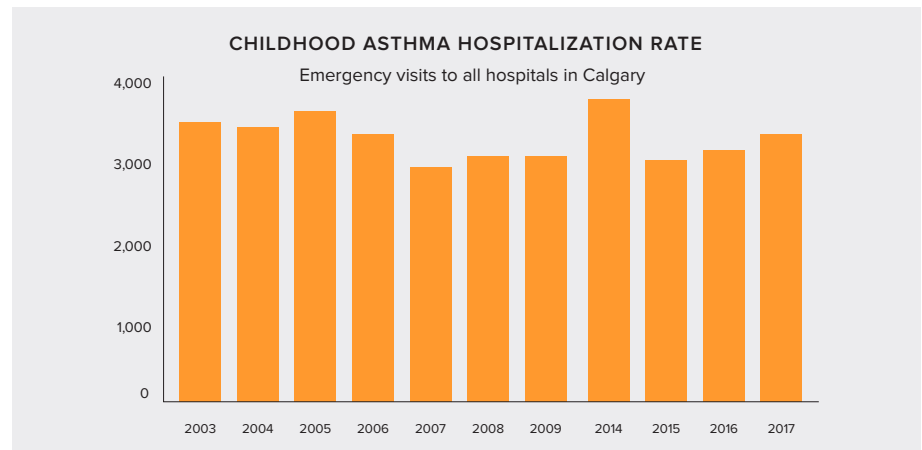
Asthma sufferers are like canaries in the coal mine in terms of indicating the health of our city and its air quality. Asthma is a growing problem globally, with as many as 300 million asthma sufferers worldwide. These numbers are increasing, and researchers are struggling to find out why. In Canada, approximately 20 children and 500 adults die each year from the disease. Regardless of the severity of the condition, people who have asthma face a variety of challenges, including reduced activity levels, sensitivity to certain environments, and more days off from work and school.

TREND

In 2017 there were 3,295 emergency visits related to childhood asthma to all hospitals in Calgary compared to 3,292 visits in 2006. Within the group aged 14 years or younger, the per capita rate of visits in 2017 was almost half that of 2006.

Long-term trends indicate that asthma rates in children were at their lowest in the late 1970s, had increased substantially by the late 1990s and early 2000s, and have been decreasing since that time. Reductions in asthma-related hospital visits and admissions over the past 20 years are likely related to some reduction in the number of children diagnosed with asthma but also to more effective treatment and control of the condition, including the work of Alberta Health Services through the Community Pediatric Asthma Service, which aims to help families manage childhood asthma.

Compared to data from the 1970s, today's childhood asthma rates are still very high. Statistics Canada figures show that in 1978/79, 2.5% of children under 15 in Canada were diagnosed with asthma. By the mid-1980s, that rate had risen to 3.1%, and by 1994/95, the rate was approximately 11.2%.



A 2010 Statistics Canada report showed that across the Prairie Provinces, rates were 10.3% (1994/95), 10.9% (2000/1), 11.7% (2006/7), and 9.6% (2008/9).

Though there are no overall estimates for rates of asthma for the 2- to 17-year age group, the available data suggest that in the range of 35,000 to 50,000 young people in Calgary may be suffering from this disease.

Research from 2003 suggests that at that time, Canada had one of the highest rates of child and adult asthma in the world, along with the UK, Ireland, Australia, and New Zealand.

LINKAGES

A 2019 *Lancet* study on asthma induced in children by automobile pollution found that in Toronto, almost 600 new asthma cases per year are attributable to nitrogen dioxide pollution – almost 30% of all new cases.

The Canadian Institute for Child Health warns that the growing burden of chemicals to which children are exposed is likely a significant factor in the development of asthma. Airtight homes and offices seal chemical emissions from sources such as carpets, glue, plywood, and paint, thereby concentrating asthma triggers within our living environments. The use of pesticides in city parks and on private lawns and gardens is another area of concern.

Dealing with asthma is costly to the health care system. Since physical exercise can

trigger asthma attacks, young asthmatics may not be physically active enough to maintain wellness, which could lead to health problems later in life. Asthma is also a serious issue in our schools, not only for the health of children but also for its effect on their education. One-quarter of all time lost from school is as a result of asthma. There is evidence that the disease affects children's math and reading scores and that these effects worsen with asthma severity.

DEFINITIONS

Asthma is a chronic inflammatory condition in the airways of the lungs. Symptoms such as chest tightness, wheezing, and coughing are sudden or persistent and can vary from mild to life threatening. Inpatient asthma cases include only those for whom asthma was the most significant condition leading to a hospital stay. The data for this indicator come from Alberta Health Services.

TAKE ACTION & GET INVOLVED

- Write your councillor and mayor to support eliminating the use of chemical-based household cleaning products and garden pesticides.
- Learn about the work of the Alberta Children's Hospital Foundation (childrenshospital.ab.ca) and Asthma Canada (asthma.ca).

The Pandemic – a Clear Warning and a Way Forward

As we go to press, we find ourselves in the grip of a global pandemic with the novel corona virus (COVID-19). **The pandemic reinforces the urgency to act on the recommendations contained in this report** to improve social equity, protect ecological integrity, create an inclusive and resilient economy, and act decisively on climate change.

As a society, we are responding in both predictable and unpredictable ways – some moving us toward a just transition, some moving us further away. On the one hand, we are thinking more seriously about what a city designed for people looks like. On the other hand, the pandemic is amplifying existing inequalities.

Air pollution, along with air and automobile traffic, is drastically reduced. There's a shift toward active transport and a growing appreciation for the parks and pathways in our city. Existing roads and pathways are being restructured to facilitate local leisure activity. We need to invest in extensive active transport networks to provide safe, healthy travel choices to all Canadians, during this pandemic and beyond, while reducing our carbon footprint.

As we build a new post-carbon economy, it is likely to be a much more local economy. The Be Local campaign has gathered steam and is demonstrating that we do have alternatives, especially with regard to locally grown and processed food.

We have seen how disadvantaged groups are particularly vulnerable in this crisis. We are experiencing record high unemployment, especially among low-income earners, leading to an even larger gap in income inequality. At the same time, we have become acutely aware that the most vulnerable in our society need protection. Many more of us are open to the possibility of a basic income for all. We have become more aware of the need for affordable housing for all and for coordinated national, provincial, and municipal strategies to make it happen.

We see evidence around the world that where good governance prevails, societies are faring much better, reinforcing the fact



“On the one hand, we are thinking more seriously about what a city designed for people looks like. On the other hand, the pandemic is amplifying existing inequalities.”

that the state is still crucial to our well-being. We see that women leaders are taking centre stage in the response to this unprecedented crisis: the women at the forefront of Canada's coordinated national and provincial health care response are an inspiring example. We are seeing that businesses big and small need good governance just as much as the citizenry does.

We see that reliance on the fossil fuel industry makes us socially, ecologically, and economically vulnerable. This crisis has given us insight into how to maintain well-being and quality of life in a shrinking economy. We need to use this insight, and the crisis as a whole, as a catalyst to a radically new economy.

We see the value new immigrants bring to our communities. Often working for meagre wages as retail workers, caregivers, food workers, and delivery personnel, they incur great risks to their personal health to keep our economy afloat.

The pandemic reminds us that our social infrastructure is vital. Health care and education are not expendable items in a crisis – they are the key to our survival.

Science warns us that pandemics will occur more frequently, and climate change will worsen, if we do not protect the planet's vital ecological life-support systems. When we degrade nature, we impair its regenerative capacity. This pandemic crisis is a precursor to more enduring emergencies – the climate crisis and biodiversity loss. We now know that we do have the capacity to act quickly and decisively, to radically reorganize society on a more sustainable foundation, and to take care of each other in the transition.

These are preliminary thoughts on a pandemic we do not yet fully comprehend. Sustainable Calgary will be producing a more comprehensive response to life after the pandemic in the coming weeks.

Local organizations all over our city work toward sustainability every day. Get involved.



Crime Rate & Rate Of Victimization

Women's Centre of Calgary:
womenscentreocalgary.org



Leisure Activity

YMCA: ymccalgary.org
YWCA: ywccalgary.ca



Membership in Community Associations

Federation of Calgary Communities:
calgarycommunities.com



Number of & Attendance at Arts Events

Calgary Folk Music Festival:
calgaryfolkfest.com
GlobalFest: globalfest.ca
Sled Island: sledisland.com



Sense of Community

Calgary Immigrant Women's Association: ciwa-online.com



Volunteering

Volunteer Centre of Calgary (Propellus): propellus.org



Housing Affordability

Calgary Homeless Foundation:
calgaryhomeless.com
Southern Alberta Co-operative Housing Association:
sacha-coop.ca



Oil & Gas Reliance Index

Be Local:
belocal.org



Unemployment Rate

Basic Income Calgary:
basicincomecalgary.ca



Hours Required to Meet Basic Needs at Minimum Wage

Vibrant Communities Calgary:
vibrantcalgary.com
Arusha Centre Calgary Dollars:
calgarydollars.ca



Food Bank Usage

Calgary Food Bank:
calgaryfoodbank.com
Leftovers Foundation:
rescuefood.ca



Income Equity: Gap between Rich & Poor

Canadians for Tax Fairness: taxfairness.ca



Adult Literacy

Calgary WordFest: wordfest.com
Further Education Society:
furthered.ca



Average Class Size

Calgary Bridge Foundation for Youth: cbfy.ca



Daycare Worker Salaries

Time for Child Care:
timeforchildcare.ca



Grade 6 Achievement Scores

Support your local public library and help build a culture of reading in your community.



Library Usage

Calgary Public Library:
calgarylibrary.ca
Little Free Library:
littlefreelibrary.org



Representativeness of Electoral System

Fair Vote Canada:
fairvote.ca



Municipal Campaign Finance

As your MLA and the premier to ensure public disclosure of donors and donations to municipal candidates.



Effectiveness of Planning

Federation of Calgary Communities:
calgarycommunities.com



Fiscal Balance

Calgary Climate Hub:
calgaryclimatehub.ca
Calgary Alliance for the Common Good:
calgarycommongood.org



Valuing Cultural Diversity

Action Dignity (Calgary Ethno-Cultural Council):
actiondignity.ca



Air Quality

Calgary Climate Hub:
calgaryclimatehub.ca



Food Grown Locally

Calgary Horticultural Society: calhort.org
Calgary Harvest:
calgaryharvest.org



Pesticide Use

Canadian Association of Physicians for the environment:
cape.ca



Surface Water Quality

Bow River Basin Council:
brbc.ab.ca



Christmas Bird Count

Nature Calgary:
naturecalgary.com



Water Consumption

Calgary Permaculture Guild:
permaculturecalgary.org
Bow River Basin Council:
brbc.ab.ca
Alberta Wilderness Association:
albertawilderness.ca



Ecological Footprint

Global Footprint Network:
footprintnetwork.org
Slow Food Calgary:
slowfoodcalgary.ca



Transportation Spending

Bike Calgary:
bikecalgary.org



Domestic Waste

Zero Waste Canada:
zerowastecanada.ca
Plastic-Free YYC:
plasticfreeyycc.com
Recycling Council of Alberta:
recycle.ab.ca



Population Density

Sustainable Calgary:
sustainablecalgary.org
Arusha Centre: arusha.org
Calgary Climate Hub:
calgaryclimatehub.ca



Transit Usage for Work Trips

Bike Calgary:
bikecalgary.org



Energy Use

Pembina Institute: Pembina.org
Calgary Climate Hub:
calgaryclimatehub.ca



Access to Preventive & Alternative Health Care

Fork Smart: forksmart.com
YMCA: ymccalgary.org
YWCA: ywccalgary.ca



Child & Youth Wellness

Alex Community Food Centre:
thealexcf.ca



Healthy Birth-Weight Babies

The Alex Health Centre:
thealex.ca



Support for the Most Vulnerable

Disability Action Hall:
actionhall.ca



Self-Rated Health

Calgary Urban Projects Society:
cupscalgary.com
Drop-In Centre:
calgarydropin.ca



Childhood Asthma Hospitalization Rate

Alberta Children's Hospital Foundation:
childrenshospital.ab.ca
Asthma Canada: asthma.ca