

Civic Census Review

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Executive Summary

The Returning Officer completed a review of the value of conducting an annual civic census. The review included engagement through online surveys, focus groups, and discussions with subject matter experts, and conversations with municipalities from across Canada on census and census-type data. While the review was underway, the provincial government announced that provincial grants for The City of Calgary will no longer be tied to the population data collected through the civic census. This new information was shared with internal stakeholders.

The review and consultations confirmed that Administration supports the continuation of a civic census for The City of Calgary. The frequency and accuracy of the census data is important to all users. Regularly and consistently collected data informs The City's ability to plan for services and programs, measure results, modify requirements and ensure well informed decisions are made. There was consensus among stakeholders that if an annual census is not supported, a biennial census would provide value. The addition of time between censuses would be used to validate the addition of new questions, support planning and allow for estimation models to be developed.

The Returning Officer recommends conducting a civic census in 2020 and 2022, no civic census be conducted in 2021, and will report back with an evaluation of a biennial census in 2022.

History of the Calgary Civic Census

The City of Calgary has conducted an annual Civic Census since 1958 with data available within two months of completion. In 1984, 1994 and 2005 extensive reviews of the Civic Census were undertaken. In all three cases, Council confirmed to continue with an annual census as laid out in the Civic Census Policy CC005. An extensive review of the Civic Census has not been conducted since 2005 and this report supports the importance of conducting this type of review.

Purpose of Review

The Civic Census Review was directed by Council to examine several themes related to the census and assist with the determination of the future direction for the census. Considerations in the review included:

- a review of current processes to align with new legislated requirements;
- identification of internal and external users of census data and their use of data;
- feedback of internal and external users of census;
- a review of the census question schedule and potential changes or new questions;
- framing of questions;
- identified value of providing census data annually;
- a scan of other municipalities and census programs;

- best practices in other jurisdictions; and
- identifying future alignment with the Federal Census.

Current Practices

The City of Calgary conducts the census annually between April and June in compliance with the *Determination of Population Regulation*. The census follows an annual plan, execute and review cycle:

- September December: Initial planning, process and technology review, change, and implementation.
- January: Finalization of census plans
- February March: Onboarding of temporary staff, census worker hiring
- April June: Census worker training, online and on-street data collection
- June July: Data analytics, off-boarding of temporary staff

Census data is collected in two phases: Census online begins the first week of April and continues throughout the collection period. In-person collection begins the third week of April.

Operational Challenges and Opportunities

Door-to-Door Collection

As our city grows and densifies, successful collection of census data at the door continues to be challenging. Access to high-density residences, language barriers, and privacy concerns are making efficient collection more difficult. There is also an issue generally of over-saturation in door knocking during election years and federal census years, which has been brought-up by Statistics Canada, and was the basis for their request for The City of Calgary not to conduct a civic census in 2021.

High-Density Residences

High-density residences pose a particular challenge to census collection. Facilitating access to multi-residential buildings requires the sustained effort throughout the census period. The Census office maintains a list of apartment buildings and property management companies that must be updated prior to collection starting. Letters and information posters are sent to building and property managers at the start of the collection period notifying them of the census dates, contact details of the Census office to obtain information and assistance gaining entry to buildings. Appointments must be set up with property/building managers to grant access for the census takers.

As more apartment buildings and condos are built and occupied, facilitating access requires more time.

Privacy Concerns

Conducting a door-to-door census becomes more difficult as people's perception of privacy changes. Many people either do not answer their doors or are reluctant to give census takers personal information. Census takers are required to visit a dwelling three times before marking it as unoccupied. More often, census takers are having to rely on information provided by neighbours or building managers.

Language Barriers

The Census office provides census takers with two ways to translate the census questions at the door. This has included audio translations, in various languages, of the questions on the census takers iPADs and access to a translation service through 311. Despite the translation methods, census takers often find language barriers prevent to complete collection of census data.

Improvement Cycle

Conducting an annual census restricts the ability to implement innovative technical and process improvements except in small increments. As soon as a census cycle is complete, the Census office must start preparing for the next census.

Improvements the Census office is currently working on include:

- Increasing marketing push for online completion of census
- Identify existing touch points with citizens as new data capture points (e.g., in-person outreach; directing 311 calls for optional census completion; recreation and partner facilities such as libraries, civic partners).
- Exploring innovation opportunities (e.g., social media, app).
- Strengthening internal census partnerships.

Future of Census Questions

Framing

The Census office has engaged with the Human Resources partners who design the employee survey to review the wording and presentation of the census questions to ensure the questions meet survey methodology and diversity and inclusion best practices.

Additional Questions

Based on feedback during the focus group, a desire exists to add questions to the census on a set schedule.

Current Questions

The questions and frequency of questions included in the census are set by Council Policy CC005 Civic Census Policy.

Base Questions

The Civic Census includes the following base questions that are asked every year.

Question Name	Data collected
Structure Code	The type of structure the dwelling belongs to.
Unoccupied Code	If there are vacant dwelling units available for rent in the house/building.
Total Residents	The total number of persons, including children, living in the dwelling.
Ownership Code	If the dwelling owned by one of the residents.
School Code	The school system supported by the residents of the dwelling.
Number of Children	The number of pre-school aged children living in the dwelling (by year of birth).

Additional Scheduled Questions

The following questions are asked based on a schedule set in Council Policy CC005, with the exception of the Animal Survey, which does not have a set schedule. The current schedule is set only until 2021.

Name	Data Collected	Frequency
Age Gender	The number of residents in each age grouping by gender. Asked in 2019.	 In those years in which the Federal census is conducted. Every third year after a federal census.
Number of Employed	The number of people in the dwelling, 15 years of age or older, who are employed full or part time. Will be asked in 2020.	 Triennial basis, or In conjunction with the Mode of Transportation question.
Mode of Transportation	How the respondent (or another person living in the household that is employed) travelled to work on the last weekday worked. Will be asked in 2020.	 Triennial basis, and In conjunction with the Place of Work Survey.

Name	Data Collected	Frequency
Animal Survey	How many dogs or cats live in the dwelling.	 As required.
Place of Work Survey (Transportation Survey)	This survey is separate from the census, but linked to collection. Census respondents are prompted to complete the survey online following when they complete the census. Will be asked in 2020.	 Every three to four years.

Additional Questions

Additional questions may be added to the census by business units, subject to approval by the Returning Officer. Generally, additional questions have not been scheduled in the same year as the age/gender question.

Census User Engagement

To understand the breadth and value of census data use, engagement was conducted with internal and external data users. A survey, focus group, and follow-up discussions with subject matter experts informed the recommendations of this review. There is clear consensus of support for the continuation of the civic census program.

Survey

An online survey was administrated to users of the 2019 Civic Census results. The survey was fielded from September 3-17, 2019.

Response rate and completion:

- 215 people started the survey.
- 142 respondents completed the survey in full.
- All questions were optional to answer; therefore base sizes vary.

NOTE: With relatively small sample sizes, findings should be interpreted as directional in nature only.

Of 142 respondents:

- 75% thought the Census should be conducted annually.
- Population, at 24%, was the most used data.
- City-wide data, at 41%, was the geographic level most used.

The full survey results are available in Appendix A - Detailed Survey Results on page 18.

Focus Group

A focus group was held on 2019 October 30 with internal census users to gain insight into how census data is used, a review of base questions and additional question, and the frequency of the census. Twenty-four people attended the focus group from business units across the City including:

- Calgary Neighbourhoods Strategic Services
- Resilience Strategy
- Finance-Director Corporate Economics
- Calgary Growth Strategies Geodemographics
- Transportation Planning
- Calgary Parks
- Calgary Housing

Findings of the Annual Census

Usability

Question	Usability	
Unoccupied Code	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics	
Total Residents	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics, Corporate Economics, Calgary Parks	
Ownership Code	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics	
School Code	City Clerks	
Number of Children	Resilience Strategy, Geodemographics	
Age Gender	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics, Corporate Economics, Calgary Parks	
Number of Employed	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics	
Mode of Transportation	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics	
Animal Survey	Calgary Neighbourhoods, Calgary Parks	
Place of Work Survey	Resilience Strategy, Calgary Neighbourhoods, Transportation Planning, Geodemographics, Corporate Economics, Calgary Parks	

Census Frequency

- Geo-Dem could manage with less frequent Census
- Consensus that annual collection is the ideal situation but biennial collection is acceptable.

Benefit of adding Census questions

During the focus group, the participants were asked what additional questions or areas of interest they would like to include in a future census.

Business Unit/Division	Question / Topic	Description / Comments
Geodemographics	Migration	Did you move from another community in the last five years?
	Supply/demand	Monitoring new community growth. Is the development industry building what they said they would?
Transportation Planning	Household auto ownership	Would be useful for travel modeUseful transportation metric
Corporate Economics	How long have you resided in Calgary?	
	Race/culture question	Useful if it's cross-tabulated with home ownership data by community.
Calgary Parks	Outdoor leisure activities	
	Bike/e-bike/scooter usage	Alternate forms of transportation for pathway provision
	Park and open space usage	
Calgary Neighbourhoods	Household income	
Calgary Housing	Affordable housing – is this a subsidized housing unit?	

Partner Discussions

In addition to the focus group, individual discussions were held with internal users and external partners.

School Boards

The City collects the following data for the school boards and provides reports based this data. The school boards pay an annual fee for the collection and reporting service.

- Number of children by year of birth seven consecutive years, including the current year
- Type of school support for all occupied dwellings

Both Calgary school boards have indicated that no longer use the Civic Census reports provided by The City in their enrollment estimates. Discussions are currently underway to negotiate a new contract between the Calgary school boards and The City.

Internal Value of the Census

As Census collection has been siloed from data use, investigating the value of the census for planning was required.

A survey was established for the release of the 2019 Census results in September; however what we've learned is that most users of census data don't use the raw data, they use the projections and geographies developed using census data by Corporate Economics and Calgary Growth Strategies (Geo-Dem).

Internal Partner	Value		
Planning (Calgary Growth Strategies: Geo- demographics)	 Big-Picture Impacts and Risks Calgary's annual population growth is closely tied with its economy, and is particularly volatile during periods of economic downturns and recoveries Annual reporting of population growth is important to accurately capture growth patterns associated with volatile economies Not adequately capturing or accounting for volatile growth patterns could impact forecasts that are relied upon not only by Planning and Development, but by many Departments and groups across the Corporation Growth Strategy and Long-Term Planning Monitoring of housing construction and population growth in newly-approved communities and established areas Monitoring of land use supply and demand constraints in newly-approved communities and established areas Determining appropriate levels and timing of infrastructure and services needed in newly-approved communities and established areas Providing accurate population forecasts to guide and align long-term planning and development goals to the MDP/CTP 		
Local Area Planning	 Determining appropriate land use policies and concepts to apply in specific planning areas Communicating accurate potential growth and development to internal and external audiences Determining appropriate levels of services and infrastructure needed in planning areas City-Wide Planning Determining the accurate level of development and population supported or generated and monitoring the performance and absorption of specific land uses districts or general typologies Providing data to support reviews of Land Use Bylaw, the development of Guidebooks and other special studies 		

Internal Partner	Value
	 Monitoring and reporting of demographic data used to guide service planning and accountability goals and MDP/CTP performance
Corporate Economics	Population data
	Corporate Economics uses annual census data to create population forecasts. These forecasts are used throughout The City for determining and allocating capital budget. Currently, with annual civic census data, the forecasts are accurate to +/- 5000 19 times out of 20. This accuracy is bar none the best numbers any municipality can generate. When the accuracy of the data decreases (due to collection frequency) than increased capital costs will be required to ensure contingency is maintained.
	The only data course of net migration for Calgary is the Civic Census. The province does have some net migration figures, but it would be very difficult to determine where these people land (which municipality) and it doesn't account for intra-province migration.
	There is a volatility in the population that is unique to Calgary, which makes the use of the Statistics Canada 5-year cohort estimates inaccurate for population forecasting.
	The Civic Census is the way to make municipal services and spending efficient.
Transportation Planning	Population Data
	Is used to expand the annual travel survey. Less frequent would cause problems. Also used for Regional Travel Model. Stats Canada data has suppression and rounding, so it's not as good. Dwelling type is used to expand travel survey.
	Mode of Transportation
	(Additional questions) uses the data to understand the commute transportation mode.
	The number of employed is very critical. This data is required to map where the employees are. It is used in conjunction with place of work.
	Place of Work Survey
	Used to update the Regional Travel Model. Is essential to the work of transportation planning. It's better data than stats can because it includes workers with no fixed address combining with census increased response rates.

Internal Partner	Value
Water Resources	 We use both current and projection population numbers to calculate the impacts of densification on our utility network (storm, water and sanitary) Population data is incorporated into our water and sanitary network models We also use this data to determine serviced land supply (census values in hectares of development for greenfield for historical assumptions) In our review of applications, we may use census populations to determine the density of an older neighbourhood to see what the actual flows are in a particular pipe and the potential for growth – it is important for sanitary flow estimations We also correlate population numbers with rainfall flooding data to gain an understanding of the relationship between densification and damage to private property via flooding
	 It would be great to know the true residential and employment job numbers, including if people work from home Raw data would allow us to do more precise servicing calculations Institutional, commercial and industrial data would be great It would be helpful to ask in a census what community do people work in

Municipal Scan

Alberta Municipalities

The following Alberta municipalities conducted an annual census in 2019:

- Airdrie
- Beaumont
- Blackfalds
- Chestermere
- Coalhurst
- Cochrane
- Crossfield
- Edmonton
- Fort Saskatchewan
- Leduc
- Lethbridge
- Spruce Grove
- Red Deer

Information Scan on Civic Census Programs Across Canada

Provincial/Territorial Regulations

Provinces and Territories within Canada may provide municipalities with the authority to conduct a municipal Census. Municipalities may choose to not conduct a Census, even if they are provided with authority from their governing legislation to take steps to do so. The following provinces and territories have included this in their local government act(s). Legislation governing municipalities may also indicate what counts the province will accept as an official reference to population.

Province / Territory	Local Government Legislation	Authority to Conduct a Census	Specific reference to population
British Columbia	Local Government Act	Not specifically but the local government must collect statistical information about current and projected population.	No reference

Province / Territory	Local Government Legislation	Authority to Conduct a Census	Specific reference to population definition
Alberta	Municipal Government Act	Yes	1(x) "population" means population as defined and determined in accordance with the regulations; 604 The Minister may make regulations (a) defining population for the purposes of this Act; (b) respecting the determination of the population of a municipality or other geographic area and establishing requirements for a municipality to conduct a census and provide information concerning population to the Minster
Saskatchewan	Municipalities Act	Yes	 (ee)"population" means population as determined in accordance with the latest census taken pursuant to the Statistics Act (Canada) or by any other means that the minister may direct (2) When making a direction pursuant to clause (1)(ee), the minister may direct the use of different means of determining population for different purposes.
Manitoba	Municipal Act	No reference	A reference in this Act to the population of a municipality or other area means the population of the municipality or area as shown by the most recent census taken and available under the <i>Statistics</i> <i>Act</i> (Canada)
Ontario	Municipal Act	No reference	No reference
Quebec	Municipal Code, Municipal Powers Act, Cities and Towns Act	Yes, if a bylaw is passed to allow it.	No reference
Newfoundland and Labrador	Municipalities Act	No reference	No reference

Province / Territory	Local Government Legislation	Authority to Conduct a Census	Specific reference to population definition
Prince Edward Island	Municipal Government Act	No reference	A reference in this Act to the population of a municipality or other area means the population of the municipality or area as shown by the most recent census acceptable to the Minister.
Nova Scotia	Municipal Government Act	No reference	No reference
New Brunswick	Local Government Act (replaced Municipalities Act in 1973)	No reference	No reference
Nunavut	Consolidation of Hamlets Act, Consolidation of Cities, Towns, Villages Act	Yes, if a bylaw is passed to allow it.	No reference
North West Territories	City, Towns, and Villages Act	No reference	No reference
Yukon	Municipal Act	Yes	A reference in this Act to the population of a municipality or other area means the population of the municipality or area as shown by the most recent census approved by the Minister

Municipalities

While most municipalities in Canada do not conduct a civic census, questions were posed to discover what data is used, and how, for planning purposes. Of the municipalities contacted who do not conduct a census, they all use Statistics Canada federal data, most with an established undercount rate. Population estimates are completed at varying frequencies – either yearly, mid-year, quarterly, or monthly. Some municipalities struggle with the consistency of use (i.e., certain businesses use different counts depending on needs).

Key Questions

- 1. Do you conduct a municipal census?
- 2. What do you rely on as the official population count? (if it's a non-census year)
- **3.** To your knowledge, is the official population count used consistently across your municipality?
- 4. Do you estimate population counts where more accurate data is not available? If so, what data sets and/or methodology do you rely on?
- 5. If you don't rely on an official population count, which data sets do you rely on for planning and analysis purposes?
- 6. What internal practices have helped to overcome gaps in population and other data sets used for planning and analysis? (e.g., creation of a corporate analytics group, data sharing with other agencies)

Summary of Responses

Municipality	Responses
Edmonton (subject to same regulation as Calgary)	 Conducts Census: Yes Official Population Count: Based on census collection. Consistency of Use: Yes, all use population count from the census. Estimate Population Counts: No. Other Data Sets: None Internal Practices: Schedule of census determined by Council. Edmonton will not be completing a census in 2020.
Mississauga	 Conducts Census: No Official Population Count: Approved growth forecast formula/methodology (internally developed) during non-census (federal) years. Consistency of Use: Yes. Estimate Population Counts: Forecast methodology Other Data Sets: N/A Internal Practices: Open data
Ottawa	 Conducts Census: No Official Population Count: Statistics Canada federal census. Consistency of Use: No consistency across business partners. Estimate Population Counts: Estimates done mid-year and at year end based on occupied dwellings and building permits. Other Data Sets: Dependent of requirements Internal Practices: Ad hoc practices when data is required from specific geography. No specific information by age or community.

Municipality	Responses
Peel Region	 Conducts Census: No Official Population Count: Statistics Canada with undercount rate (3.26%) Consistency of Use: N/A Estimate Population Counts: Quarterly estimates using Stats Can and undercount rate. Forecast is prepared by a consultant. Other Data Sets: N/A Internal Practices: For long range, Planning works with consultants to draft growth forecasts to 2041. For long range, Planning works with consultants to draft growth forecasts to 2041.
Toronto	 Conducts Census: No Official Population Count: Statistics Canada and undercount; population estimates from the Ontario Ministry of Finance. Consistency of Use: Estimate Population Counts: Provincial Growth Plan for the greater golden horseshoe. Other Data Sets: Development approvals Internal Practices: N/A
Vancouver	 Conducts Census: No Official Population Count: Statistics Canada Consistency of Use: Not used consistently due to differing needs of departments. Estimate Population Counts: Estimates are done during inter-census years using development data. Consultants are used to produce demographic projections. Other Data Sets: Development data and BC Infrastructure data Internal Practices: No formal structure for sharing data. Information and knowledge shared informally.
Winnipeg	 Conducts Census: No Official Population Count: Latest annual estimate from Statistics Canada Consistency of Use: The estimate is published, and staff is encouraged to use it. Estimate Population Counts: Population estimating is sometimes used for forecasting. Other Data Sets: None Internal Practices: Annual figure is shared by the Economic Research office.

Municipality	Responses
York Region	 Conducts Census: No Official Population Count: Statistics Canada adjusted for undercount; monthly estimates based on CMHC completions Consistency of Use: Monthly estimates are distributed widely. Estimate Population Counts: Monthly estimates Other Data Sets: None Internal Practices: Research, policy, and forecasting unit provides regular updates.

Appendix A - Detailed Survey Results

Question	Results	
Question: How often do you useCivic Census data?Base size: All respondents	One to three times a year	26%
(n=174)	Four to ten times a year	17%
	More than ten times a year	14%
	l do not use Civic Census data	280/
	Don't know	13%
	Other (please specify)	2%
Question: How do you use Civic Census data?		
Base size: All respondents (n=166)	For long term planning (more than 12 months)	45%
Multiple responses allowed.	-	
Base size: Those who chose "other" (n=26)	For short term planning (12 months or less)	39%
	- Other (please specify)	16%
	Other: Assisting researchers Academic research	

 Historical analysis; specific analysis not necessarily tied to planning; responding to requests for information; detailed demographic analysis; supporting business cases - whethe financial or as part of ROI analysis Forecasting growth, housing units, potential areas for future investment Curiosity
 Other municipality queries regarding pet licensing and for benchmarking on how well we are doing with our pet licensing To build tools that look at today and focus outwards, used mainly for long term planning Currently don't use but looking to, would use it for more short term but also look at some long term trends Family number census curiosity demographic info for background/rationale for funding/grant applications Program reporting Use regularly for community engagement Analysis for other BU's For academic and personal research. research don't use it for both short term and long term forecasting information regarding city population, framing research Continuous improvement to compare the corporation energy usage with the City population Don't use it at this time. To inform my reports to committees and council Occasionally for reporting, or to confirm (or challenge) my "thought bubbles" Creating a baseline for resilience I won't know for now, hopefully i will begin to apply it in some way sooner than later

Question	Results	
Question: Which types of Civic Census data do you use?	Population	24%
Base size: All respondents (n=166)	Age/Gender	16%
Multiple recording allowed	Home Ownership	12%
Multiple responses allowed.	Structure Type	11%
Base size: Those who chose "other" (n=15)	- Vacancies	10%
	Dwelling Address	9%
	Children by Year of Birth	9%
	School Support	4%
	Other (please specify)	4%
	 dog Add on survey data (F population Transportation, Dwell Any data that would id 	useholds and which type, ie cat and/or POW, commute to work); institutional ing Units, Household Size, etc. dentify trends with social issues and t 211 and crisis data sets ohics n n to work, pets and modes e - if available is time



Question	Results
Question: What data format(s)	
do you use?	Community Tables 21%
Base size: All respondents (n=166)	Downloadable data file
Multiple responses allowed	City Wide Tables 17%
Base size: Those who chose "other" (n=10)	Civic Census Maps 16%
	Census Results Book 14%
	Ward Tables
	Other (please specify) 3%
	 Other: Feature classes on Corporate SDE Custom requests to geodemographics - custom geography. Custom TZ tables Not sure yet but could see using a combination of them Statistics GIS Extract into Excel Community map layer file from the City's SDE custom results (from geodem) open data; custom data requests (from ge dem) GIS DATA



Question: Please indicate what type of census results user you are.Employee of The City of Calgary or related agency73%Base size: All respondents (n=95)Not for profit15%Multiple responses allowedStudent2%School board1%Business Association1%
Base size: All respondents (n=95) Teacher 2% Multiple responses allowed Student 2% School board 1% Business Association 1%
School board 1% Business Association 1%
Business Association 1%
Private business 1%
Employee of another municipality
Other (please specify) 5%
Question: Please indicate the primary industry or line of business you work in.Health Care and Social Assistance19%
Educational Services 14% Base size: All respondents
(n=21). Prefer not to answer 5%
Public Administration 5%
Arts, Entertainment and Recreation 5%
Admin and Support, Waste Mgmt and Remediation Services
Professional, Scientific and Technical Services
Real Estate and Rental and Leasing
Retail Trade 5%
Manufacturing 5%
Other (please specify) 29%