



Municipal Development Plan / Calgary Transportation Plan 2013 Monitoring Progress Report



December 2013

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Onward! Make Calgary a livable, attractive, memorable and functional city by recognizing its unique and dynamic urban character today and for future generations.



Table of contents

Summary	3-5
Introduction	6-7
Alignment with the Corporate Plans: Connecting the Dots	8-9
Land Use and Mobility Indicators	10-11
<i>Core Indicators for Land Use and Mobility</i>	11
<i>City-wide Supplementary Indicators for Land Use and Mobility</i>	11
<i>Local Area Plan Indicators</i>	11
Measuring and Interpretation	12
Core Indicator Measurements	13
Core Indicator 1 – Urban Expansion	14-15
Core Indicator 2 – Density	16-17
Core Indicator 3 – Population/Jobs Balance	18-19
Core Indicator 4 – Land Use Mix	20-21
Core Indicator 5 – Residential Mix	22-23
Core Indicator 6 – Road and Street Infrastructure	24-25
Core Indicator 7 – Accessibility to Primary Transit Network	26-27
Core Indicator 8 – Transit Service	28-29
Core Indicator 9 – Goods Access	30-31
Core Indicator 10 – Transportation Mode Split	32-33
Core Indicator 11 – Accessibility to Daily Needs	34-35
Core Indicator 12– Watershed Health	36-37
Core Indicator 13– Urban Forest	38-39
Core Indicator 14 – District Energy	40-41
The Big Picture: Core Indicators Assessment	42-45
Conclusions	46-48
<i>Key Findings</i>	46
Next Steps	50-52
<i>Working towards the 10-year MDP/CTP review</i>	50-52
<i>CTP Implementation</i>	50-51
<i>MDP Implementation</i>	51-52
How will this report be used?	53

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Summary

Adopted by Council in 2009, the Calgary Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP) contain policies that will shape the urban form of Calgary over the next 30 to 60 years. Together, the MDP and CTP aim to build a city in which people have more choices in where to live and how to travel. Calgarians will be able to choose from a variety of housing types and communities in which to live. Those without a car will be able to easily reach their destinations or connect with other travel modes, because the city will have a variety of convenient mobility options. People of varying ages, incomes, interests and lifestyles will be able to meet their daily needs more easily. The City will be able to maintain a sustainable municipal financial system and provide a good quality of services for current and future Calgarians, while protecting the natural environment and supporting a prosperous and competitive economy.

The two plans aim to develop the kind of city that Calgarians have asked for – a great city that attracts investment, jobs and business opportunities, grows in an environmentally sound and affordable manner, and provides more choices in how to travel and where to live.

Transportation and Planning, Development and Assessment (PDA) work together to ensure the plans are implemented successfully. This includes joint monitoring and reporting on the performance of the plans. This MDP/CTP 2013 Progress Report is the first in a series of progress reports that will be delivered to Council prior to each business planning and budget cycle. These reports will provide information on the progress being made towards the goals and objectives of the MDP/CTP. Fourteen Core Indicators for Land Use and Mobility were defined during the Plan It Calgary process in order to provide a comprehensive understanding of city-wide progress towards the MDP and CTP 60-year targets. A visual representation of this assessment is shown in Figure 1.

In the first three years of MDP/CTP implementation, positive progress has been made in many areas. However, the city's growth is not yet as sustainable as intended by the goals and objectives of the MDP and CTP. This is, in part, due to the long lead time between planning decisions and implementation. New developments and major infrastructure projects are typically approved years before they are fully built. Therefore, the results shown in this report reflect decisions that were made prior to the approval of the MDP and CTP in 2009, as well as the decisions made since then. The impact of the MDP and CTP policies and actions will become increasingly evident in future MDP/CTP monitoring reports.

Summary (cont.)

Several key findings have been identified through the assessment:

1. Calgary is designing better communities but is not growing fast enough in strategic areas.
2. The car is still the most common travel choice city-wide.
3. The current increase in impervious surfaces has negative impacts to watershed health.

This report provides a valuable context for the 2015 - 2018 Business Plan and Budget process and the Framework for Growth Management. It is our hope that this information highlights the progress made to date and provides guidance for determining the future direction of Calgary.



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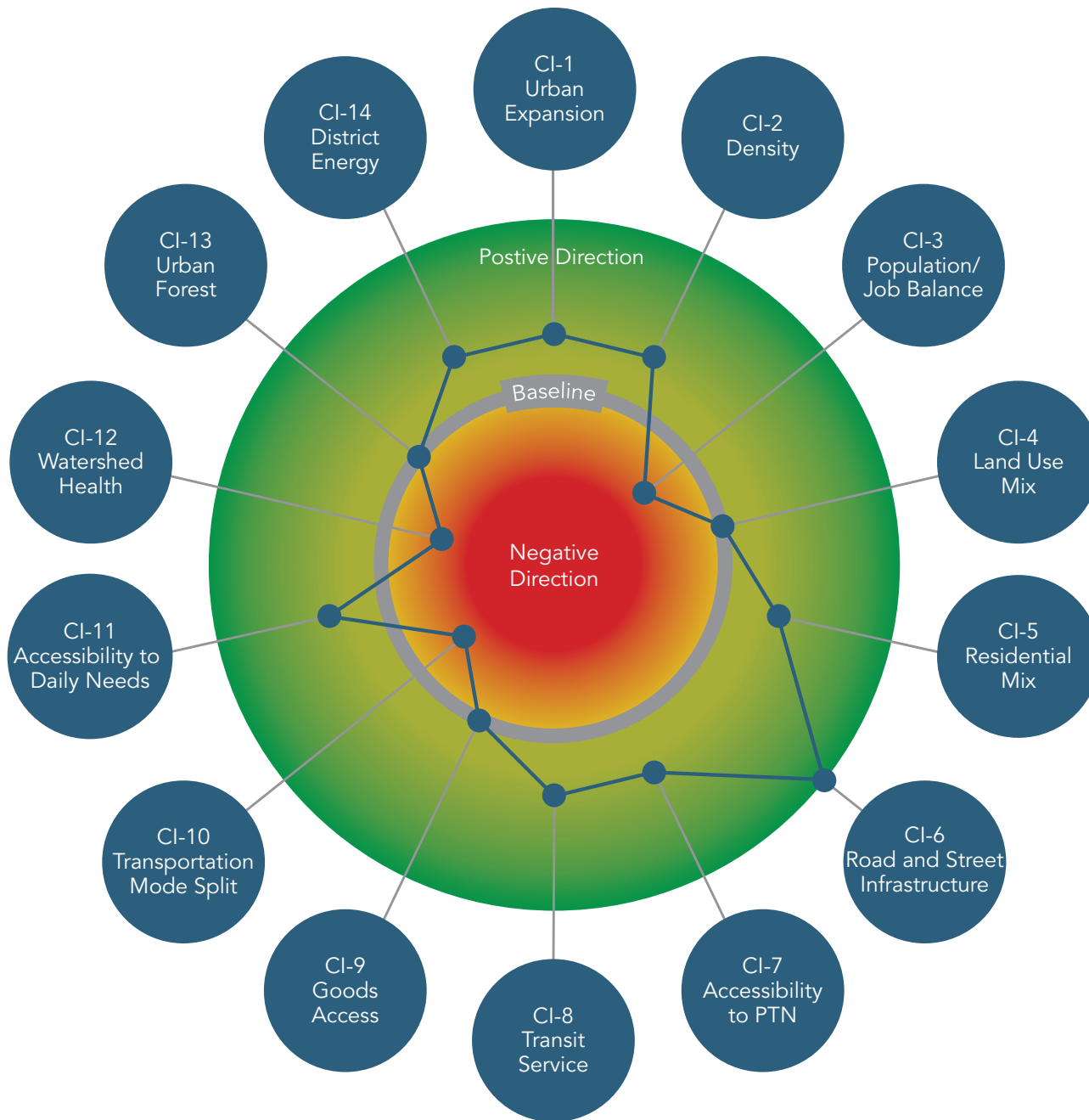
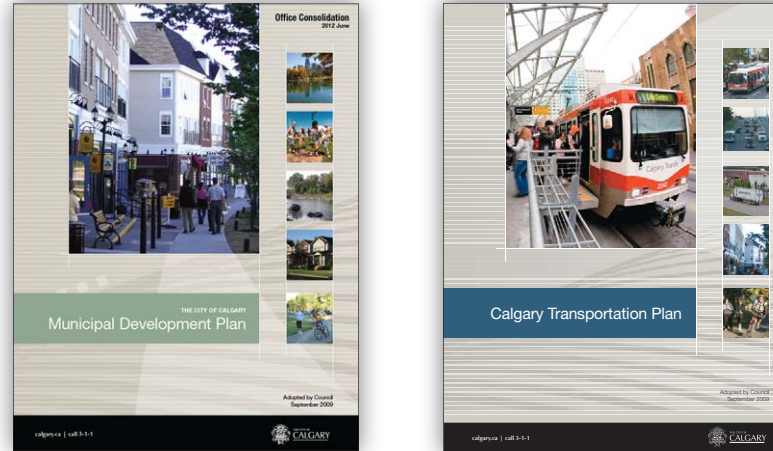


Figure 1 – Core Indicators for Land Use and Mobility – 2013 Assessment

Introduction



The Calgary Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP) are The City's key strategic policy documents to guide smart growth and mobility. The plans are used by all areas of The City to manage Calgary's long-term development, service provision, programs and initiatives.

In 2007, City Council directed the creation of an integrated land use and transportation plan which would align with a 100-year vision and goals of imagineCALGARY. The process that led to the development of the MDP and CTP (approved by City Council on September 28, 2009), and engaged another 6,000 Calgarians was called Plan It Calgary. Plan It Calgary took a different approach to long-term planning by having the MDP and CTP reflect the desired future rather than assuming current trends will persist. Instead, the plans include policies that will achieve the vision of imagineCALGARY and citizens.

Plan It's goal was to set out direction for sustainable growth to accommodate another 1.3 million people over the next 60 years and to follow Council approved principles that aim to achieve a compact city form which cultivates walking, cycling and transit, and preserves open space, parks and other environmental amenities. The policies provided by both plans will support shaping that form of city and will guide decisions that will continue to integrate social, economic and environmental objectives. The 60-year vision for a long-term pattern of growth and development in Calgary described by the MDP and CTP reaches significantly further than the typical 30-year horizon usually used for this type of strategic long-term planning. This provides the opportunity to plan infrastructure requirements to

Introduction (cont.)

both accommodate and encourage land use development that focuses on intensifying and diversifying urban activities around transit stations and premium transit routes. These urban activity centres and corridors will provide a variety of housing choices, mixed land-uses, strong local employment bases, and comfortable, safe, walkable streets, public spaces and amenities.

To ensure the MDP and CTP are implemented and effective in achieving The City's long term vision, a joint MDP/CTP monitoring and reporting program has been established by Administration in line with the requirements set out in Part 5 of the MDP, and Part 4 of the CTP.

"The City will measure the Core Indicators for Land Use and Mobility on a continuous basis, and report to Council, Administration and the public regarding the progress towards the targets prior to each business planning cycle."

This monitoring and reporting program reflects the on-going collaborative and coordinated process already taken by the Planning, Development and Assessment (PDA) and Transportation Departments which was established through the Plan It process. Over the last three years, work has been done on identifying the indicators and their methodologies, developing new methods for data collection using new technologies, developing new guidelines and aligning with corporate plans.

Alignment with the Corporate Plans: Connecting the Dots

Since 2006, The City of Calgary has developed several strategic plans to reflect Calgary at different time horizons. A common denominator for all these plans lies in identifying indicators with incremental targets at different time horizons. The actions and strategies needed to achieve these targets can then be identified and implemented. Over the last three years, the MDP/CTP monitoring team has linked the strategic documents shown in Figure 2 in order to align The City's activities and investments with the goals of the MDP and CTP.



Figure 2 – MDP/CTP Alignment with the Corporate Plans (line of sight)

Alignment with the Corporate Plans: Connecting the Dots (cont.)

imagineCALGARY, a 100-year vision for Calgary, was approved by Council in 2006. It was a starting point for the development of the MDP and CTP. More than 18,000 Calgarians were engaged in the development of imagineCALGARY.

The MDP and CTP provide 30-60 year goals, policies and targets, based on the input of over 6,000 Calgarians.

The City of Calgary also developed the **2020 Sustainability Direction** for the whole corporation in 2011, describing the goals and objectives and setting up the targets for 2020. This strategic guide identifies the integrated and innovative approach needed to achieve a more sustainable city over the first 10 years (until 2020).

To help inform Council, Administration, industry and communities, the **Framework for Growth and Change** provides transparent and consistent information for decision making on where and when to grow, within the City's financial constraints. The principles of the Growth and Change project have been developed in alignment with the MDP/CTP indicators, 2020 Sustainability Direction targets, and Triple Bottom Line and significant public input.

The **2012-2014 Business Plan and Budget** identifies the short-term steps The City needs to take to achieve these strategic, longer-term plans. These business plans and budgets act as reference point in moving towards the 10-year horizon and provide logical stepping stones to meet community needs and expectations, and establish the capacity to deliver on longer-term objectives. The 2012-2014 Business Plan and Budget contains Outcomes, Strategies and Actions, as well as performance measures and targets set for 2012, 2013 and 2014.

The Business Plan and Budget is implemented through the annual workplan. Annual actions and performance measures are evaluated against the targets are reported to Council semi-annually.

The MDP/CTP monitoring and reporting program aligns with broader goals for The City of Calgary, through imagineCALGARY, the 2020 Sustainability Direction and The City's 2012-2014 Business Plan and Budgets. Figure 2 visually describes the "line of sight" from imagineCALGARY, a 100-year vision for Calgary, to a current annual work program.

Land Use and Mobility Indicators

A hierarchical system of MDP/CTP indicators has been developed, consisting of

- City-wide Core Indicators for Land Use and Mobility (Core Indicators);
- City-wide Supplementary Indicators for Land Use and Mobility (Supplementary Indicators); and
- Local Area Plan (LAP) Indicators that are applied at the community level.

The classes of indicators at different scales (shown in Figure 3 - Integration of Indicators) are necessary as they provide a comprehensive picture of achievements in the implementation of the plans as well as an evaluation of the policies at the community level and at the city-wide level.

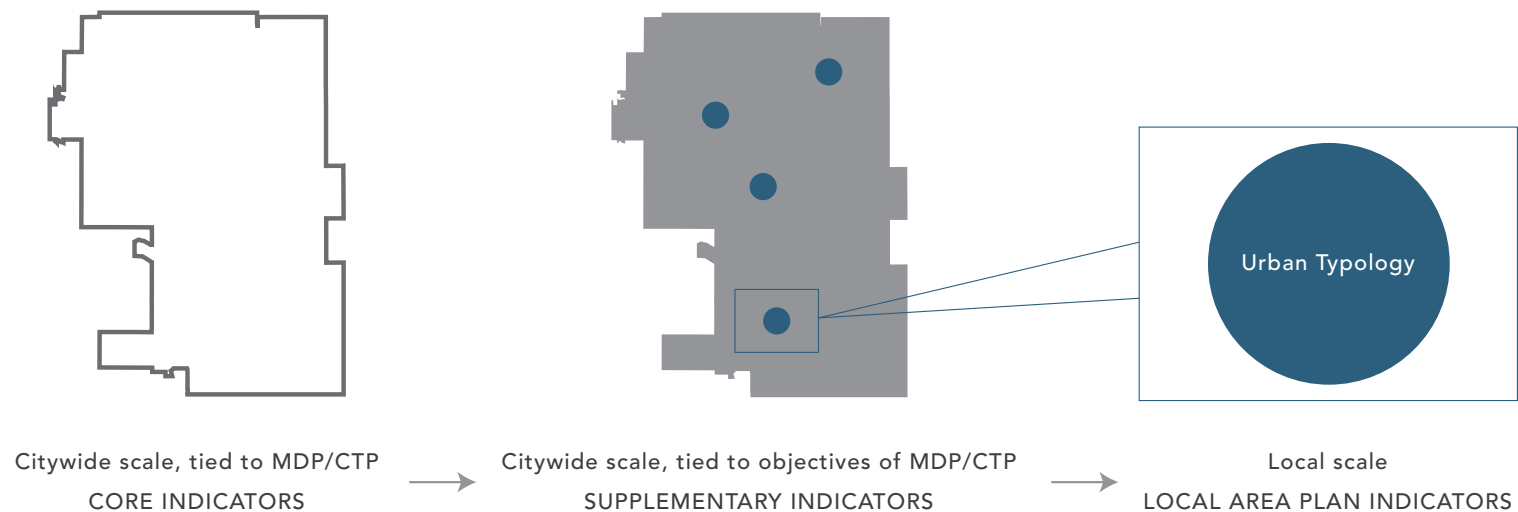


Figure 3 – Integration of Indicators

Land Use and Mobility Indicators (cont.)

Core Indicators for Land Use and Mobility

The Core Indicators for Land Use and Mobility (Core Indicators) are proxy measures for the social, environmental and economic performance of the MDP and CTP. Although they do not address all aspects of the MDP and CTP policies, the 14 Core Indicators represent the key levers for change: density, land use mix, multi-modal transportation and environmental sustainability. These indicators, more than any others, emphasise the critical link between land use and transportation that must be managed carefully in order to achieve the Plan It Calgary vision. Movement towards the 60-year targets of the Core Indicators will enable implementation of the full suite of MDP and CTP policies. This report focuses on the interpretation of the Core Indicators.

City-wide Supplementary Indicators for Land Use and Mobility

While the Core Indicators link to the general themes of the MDP and CTP, a set of Supplementary Indicators for Land Use and Mobility (Supplementary Indicators) links to the objectives and policies of the MDP and CTP. Further, the Supplementary Indicators measure impacts that will often occur within a shorter time period than the Core Indicators, allowing for more timely analysis of trends and changes within the city. These indicators expand the data collection and analysis to supplement the Core Indicators. Supplementary Indicators will be used to support and enhance understanding of the trends of the Core Indicators. Some Supplementary Indicators are included in this report, and others will be used in future reports.

Local Area Plan Indicators

The third level in the hierarchy of indicators is at the local area plan, or community level. This set of indicators is in the early stage of development; when complete, they will help to measure both the degree of alignment between the local area plan and the MDP and CTP and the success in implementing local area plan policies that support the achievement of the MDP and CTP vision. These indicators are not included in this report.

Measuring and Interpretation

This section provides an overview of all Core Indicators for Land Use and Mobility, and it contains the latest available data for the Core Indicators as well as related analysis and general performance.

To provide a comprehensive understanding of progress, the full set of indicators need to be taken into consideration. No one or two indicators in isolation can accurately reflect progress. In addition, there is a need for several reports over time before fully assessing the plans and considering any revisions to the indicators. Ongoing monitoring and reporting of the Core Indicators over a 10-year period will be required in order to assess the effectiveness of MDP/CTP policies, indicators and targets.

During the Plan It process in 2007 and 2008, the baselines and the 60-year targets for the Core Indicators for Land Use and Mobility were developed based on stakeholder consultation, researched benchmarks in other cities and available data. All demographic baselines reference years 2005 and 2006 as population and jobs data were available from that time. Several new indicators, such as CI-4 Land Use Mix and CI-12 Watershed Health, have baselines in different years based on data availability, as discussed in the indicator summary sheets.

In some cases, more than one metric has been identified for each indicator. The targets accompanying each indicator provide the desired performance outcome over a specified period of time. If a 2020 target is mentioned for a given indicator this means that the particular indicator is included in the 2020 Sustainability Direction under the Smart Growth and Mobility goal. If a 2039 target is given for a certain indicator it is either a reference to the 30-year target as stated in the MDP/CTP or it was estimated based on the MDP/CTP baseline and 60-year target. The targets represent a direction that The City wishes to achieve through its planning and investment processes and through collaboration with other orders of government, the public and stakeholders.

Core Indicator Measurements

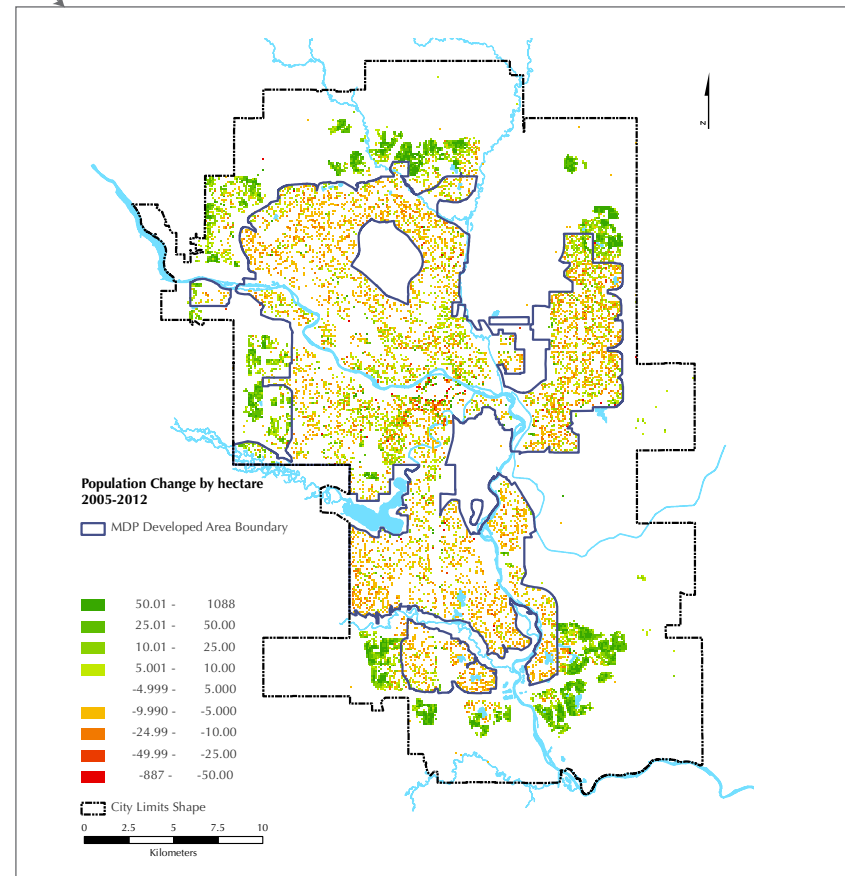
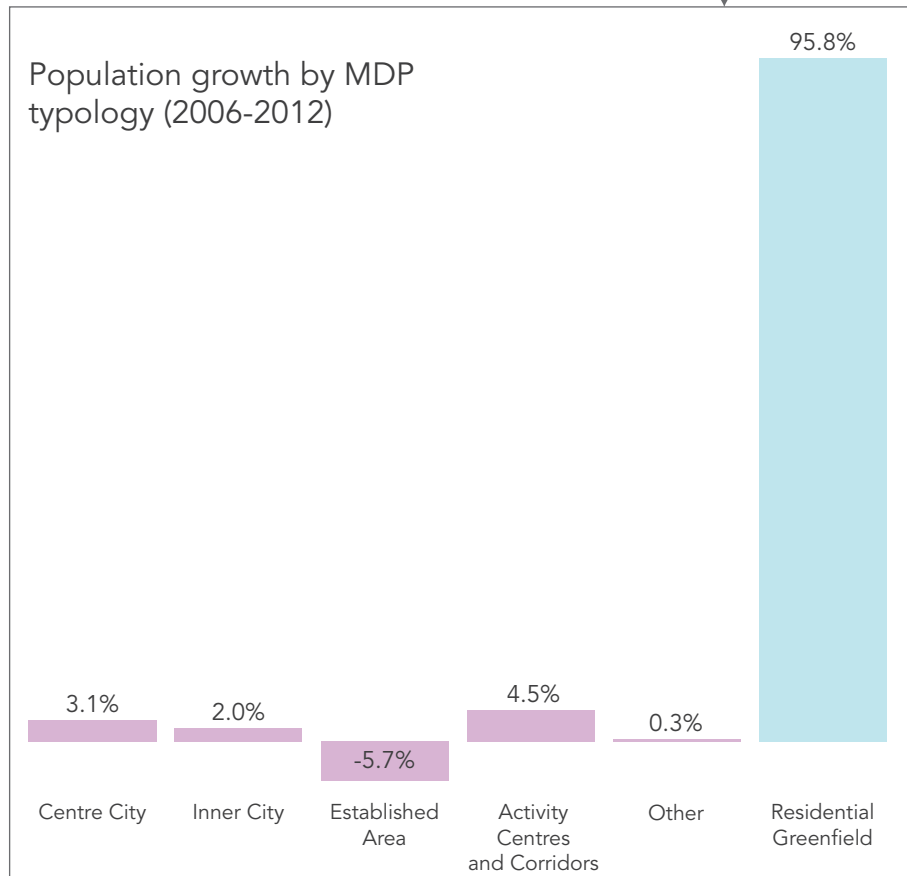
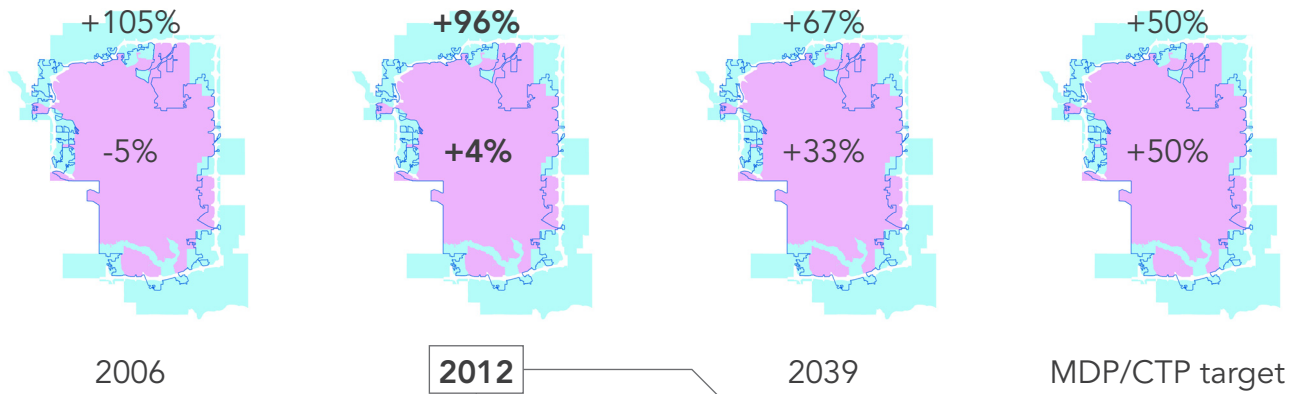
Core Indicator 1 – Urban Expansion

MDP/CTP objective:	Achieve a balance of growth between established and greenfield communities.
What does this mean?	This indicator shows the outward expansion of the city by comparing population growth within the developed area with total city-wide population growth
How do we measure this?	Per cent of cumulative population growth accommodated within developed area since 2006 (baseline boundary)

What you should know

- The MDP encourages development within the developed area of the city to make the best use of our existing land, reduce the cost of City services, to locate residents closer to where they work, shop and play, and to make walking, cycling and transit more attractive to reduce the need to drive to meet daily needs.
- Creating a 50-50 per cent balance of cumulative growth between established and greenfield communities is the long-term 60-year MDP goal that requires continued progress over the coming decades to be achieved. This means an incremental, continuous shift of where the city grows. Years during which the city achieved less of this shift will have to be counterbalanced by years of a higher degree of shift.
- The indicator shows early indication that The City is moving in the right direction, but the results of this indicator should be interpreted with caution. The performance of this indicator provides a cumulative value since 2006 and it varies from year to year depending on market and economic forces.
- The majority of growth, however, is still occurring in new greenfield areas. Between 2006 and 2012 95.3 per cent of growth happened in planned (ASP) and an additional 0.5 per cent in future greenfield areas. During the same time the developed areas captured only 4.2 per cent of population growth.
- 4.5 per cent of growth occurred in the strategic areas (Activity Centres and Corridors) identified in the MDP. This was offset by a population loss in the Established Area typology of 5.7 per cent.
- Falling vacancy rates in 2012, a result of improving market and economic conditions, also supported population growth within the developed area. This source of growth can vary widely from one year to the other.
- To continue progress it will be important to add population in the Activity Centres and Corridors identified in the MDP.
- The Developed Area includes Centre City, Inner City, Established, Standard Industrial and Industrial – Employee Intensive Typologies, and all Activity Centres and Corridors within these areas as defined by MDP Map 1 – Urban Structure.

Per cent of population growth accommodated within 2006 developed area (baseline boundary)



Core Indicator 2 – Density

MDP/CTP objective:

Direct future urban growth of the city in a way that fosters a more compact and efficient use of land, in combination with a healthy mix of land uses, creates complete communities, allows for greater mobility choices, and enhances vitality and character in local neighbourhoods.

What does this mean?

Increase in population density and /or employment density on city-wide scale help the city's evolution towards a more compact urban form, a key objective of the MDP. A compact city form is more efficient to service. Higher population and job intensities help to achieve communities that can support a broad range of businesses and services.

How do we measure this?

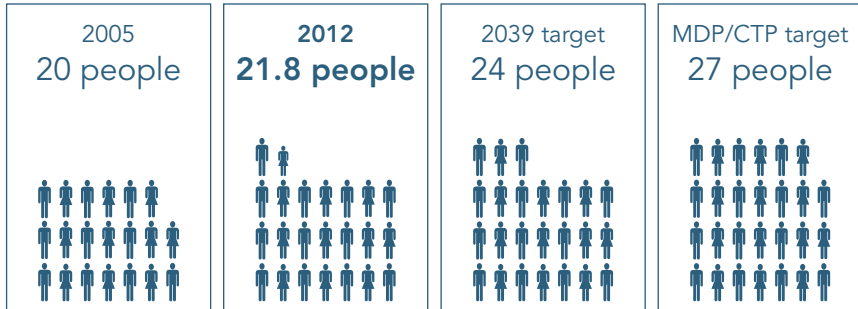
Dividing total population of Calgary and jobs of Calgary respectively by total Built Up Urban Area for a given year.

What you should know

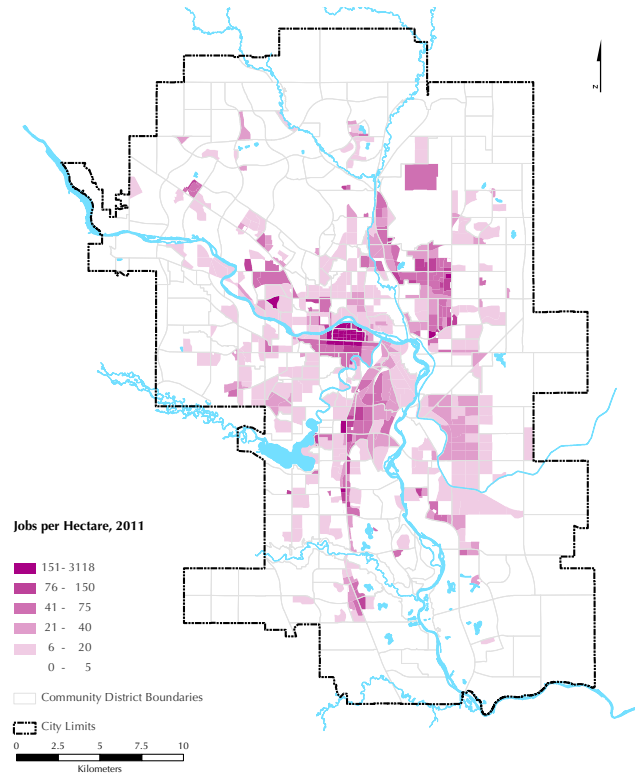
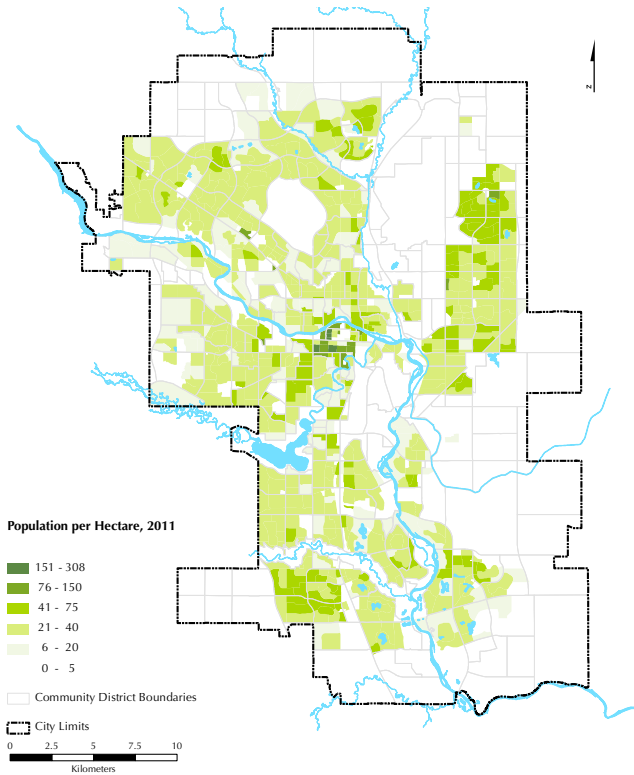
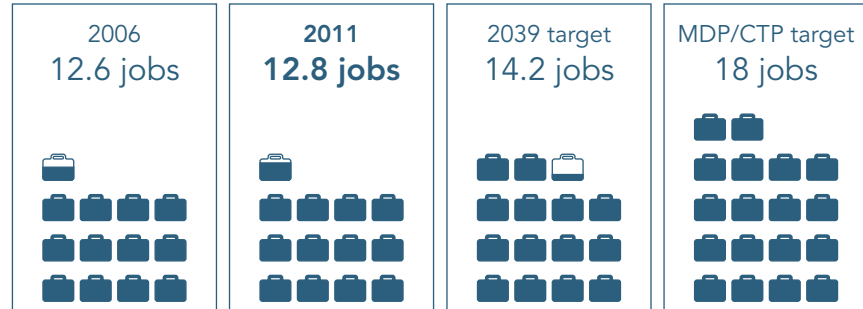
- This indicator shows better than expected performance. Since the 2005 baseline of 20 people per hectare the city's density has increased to 21.8 people per hectare, which equals about a 10 per cent increase.
- Higher suburban residential densities have contributed to a general density increase in population across the city.
- In 1995, new communities achieved an average of 13.5 units per hectare. More recent local area plans include policies supporting higher densities. As a result, the average density achieved in 2011 increased by 39 per cent to 18.8 units per hectare.
- Specifically in the Centre City, population has increased by 4,000 people since 2006.
- Changes in developed areas show a more mixed picture. Depending on the economy and market conditions more people move out of this area than move in which results in an overall population loss. Infill development, at best, replaces lost population and the impact of secondary suites to this date is small. Between 2000 and 2012, the developed areas added 36,000 units but only 13,000 people.
- Similar to population density the indicator "jobs per hectare" also shows better than expected performance.
- Compared to the 2006 baseline, the intensity of jobs per hectare has increased from 12.6 to 12.8.
- This development can be seen as the result of higher industrial densities and infilling of vacant or underutilized commercial properties.
- The Employee Intensive Industrial Areas defined in the MDP gained over 3,500 jobs, and the Centre City gained 14,500 jobs since 2006.

Core Indicator 2 – Density

People per hectare



Jobs per hectare



Core Indicator 3 – Population/Jobs Balance

MDP/CTP objective:	Create a globally competitive city that provides a good quality of life for its citizens; protects and enhances the key drivers of the local economy, attracts a growing creative and diversified workforce; and has the financial capacity to support existing and future generations.
What does this mean?	How jobs are distributed throughout the city and where people live directly influences the choice of travel mode. The strategy of balancing housing and job growth can reduce the need for long commutes and keep residential and employment communities easily accessible to each other.
How do we measure this?	The population and jobs ratio measures the balance between population and jobs within each quadrant of the city.

What you should know

- Population and job growth in Calgary in absolute numbers follow a cyclic pattern. Each monitoring phase will only capture a snapshot of these cycles and thus only a small window in time. It is therefore important to put the performance of these indicators by quadrant in perspective with Calgary's city-wide development.
- The 60-year target takes into consideration that Calgary will have a significantly higher population and number of jobs than today. It also assumes the full and integrated implementation of the MDP and CTP policies. The target is therefore not simply a straight projection from today's situation.
- Looking at quadrants of the city allows us to see which areas can have the best opportunities for people to live close to their place of work, and therefore to reduce the length of their commute to work and to choose travel modes other than a private vehicle.
- The city-wide population to jobs ratio in 2011 was 1.7.

Core Indicator 3 – Population/Jobs Balance

Northwest quadrant population and jobs ratio

2006 Baseline	Population / jobs ratio in the northwest was 3.0
2011 Value	3.3 people for each job located in the quadrant
MDP/CTP 60 Year Target	3.0

Northeast quadrant population and jobs ratio

2006 Baseline	Population / jobs ratio in the northeast was 1.7
2011 Value	1.6 people for each job located in the quadrant
MDP/CTP 60 Year Target	1.4

Southwest quadrant population and jobs ratio

2006 Baseline	Population / jobs ratio in the southwest was 1.3
2011 Value	1.4 people for each job located in the quadrant
MDP/CTP 60 Year Target	1.5

Southeast quadrant population and jobs ratio

2006 Baseline	Population / jobs ratio in the southeast was 1.2
2011 Value	1.2 people for each job located in the quadrant
MDP/CTP 60 Year Target	1.5

- Population in the northwest grew only marginally while jobs actually fell. This results in a higher population/jobs ratio meaning that there are fewer jobs available for the population in the northwest. Currently, there is on average one job for every 3.3 people in this city quadrant.
- An increasingly unbalanced population/jobs ratio combined with mobility issues, such as restricted roadway capacity, can lead to an increase in congestion of roads and transit. A decreasing number of jobs in the Northwest results in a higher number of people that need to leave the northwest to commute to work in other quadrants.
- For the northwest in particular, the key factor to achieving the target is to develop the Activity Centres and Corridors. In any case, this quadrant is expected to continue to have a much higher residential population than number of jobs.
- Population and jobs in the northeast have grown at roughly the same rate, leading to little change in the ratio.
- The ratio has improved slightly from 1.7 in 2006 to currently 1.6, which means that there is on average one job for every 1.6 people in this quadrant.
- Population grew faster than the creation of jobs in the southwest, which leads to an increase in the ratio, and thus a slightly less balanced overall situation compared to the baseline in 2006, providing on average one job for every 1.4 people.
- Keeping a sustainable balance of population and jobs in the southwest will largely depend on building complete communities that provide both housing and employment choices for people in this quadrant.
- This quadrant captures a significant number of jobs in the Centre City.
- Very little change in both population and job growth happened in the southeast since 2006. This results in a flat performance of this indicator.

Core Indicator 4 – Land Use Mix

MDP/CTP objective:

Foster distinctive, complete communities with a strong sense of place.

What does this mean?

A greater diversity of land use districts makes it possible to achieve complete communities. This means supporting “completeness” in planning for communities, as well as timely “completion” or built-out of those communities. Complete communities provide a broad range of housing types, commercial, institutional, recreational and employment uses. This leads to more choices for residents to remain in their own neighbourhood as they go through different life cycles.

How do we measure this?

This indicator describes the land use districts within the city’s urban area and the share of land within each district. This indicator does not include the Centre City area in the calculation. The Land Use Diversity Index is measured based on designated land use districts, not actual uses of land. The index is calculated at a community scale using community boundaries. The city-wide index is the average of all community indices. This ensures that the distribution of land uses across the city is taken into consideration.

What you should know

- Fulfilling multiple purposes on one trip (for example picking up groceries on the way from work to home) depends on the proximity of different land uses. A wider variety of land uses facilitate short trips for daily needs that can be done by transit, biking or walking.
- This indicator will change very slowly over time. A movement of 0.01 indicates that five per cent of the city’s land (or about 42 square kilometres) has changed land uses.
- A number closer to 1.0 indicates that there are more different types of land uses allowed, which leads to a better balance among those land uses and avoids the dominance of a particular type of land use.
- The Land Use Diversity Index shows in line performance. There was marginal improvement, although this is not shown at a two decimal places level of precision.
- To better understand the Land Use Diversity Index, here are some examples of Calgary communities in 2012: Chinook Park or Castleridge had a low Land Use Diversity Index of 0.15-0.25, Dalhousie and Canyon Meadows show a medium range of 0.48-0.52 and Mission or McKenzie Towne are examples for a high Land Use Diversity Index of 0.68-0.72, which is equivalent to the MDP/CTP 60-year target.
- Generally, the biggest change in land use diversity can be witnessed in actively developing communities where large areas of land are redesignated from a future urban development district to different other districts as the community builds out. In the established communities, land uses do not change as much and when they do, they change on much smaller areas.

Core Indicator 4 – Land Use Mix

Land Use Diversity Index



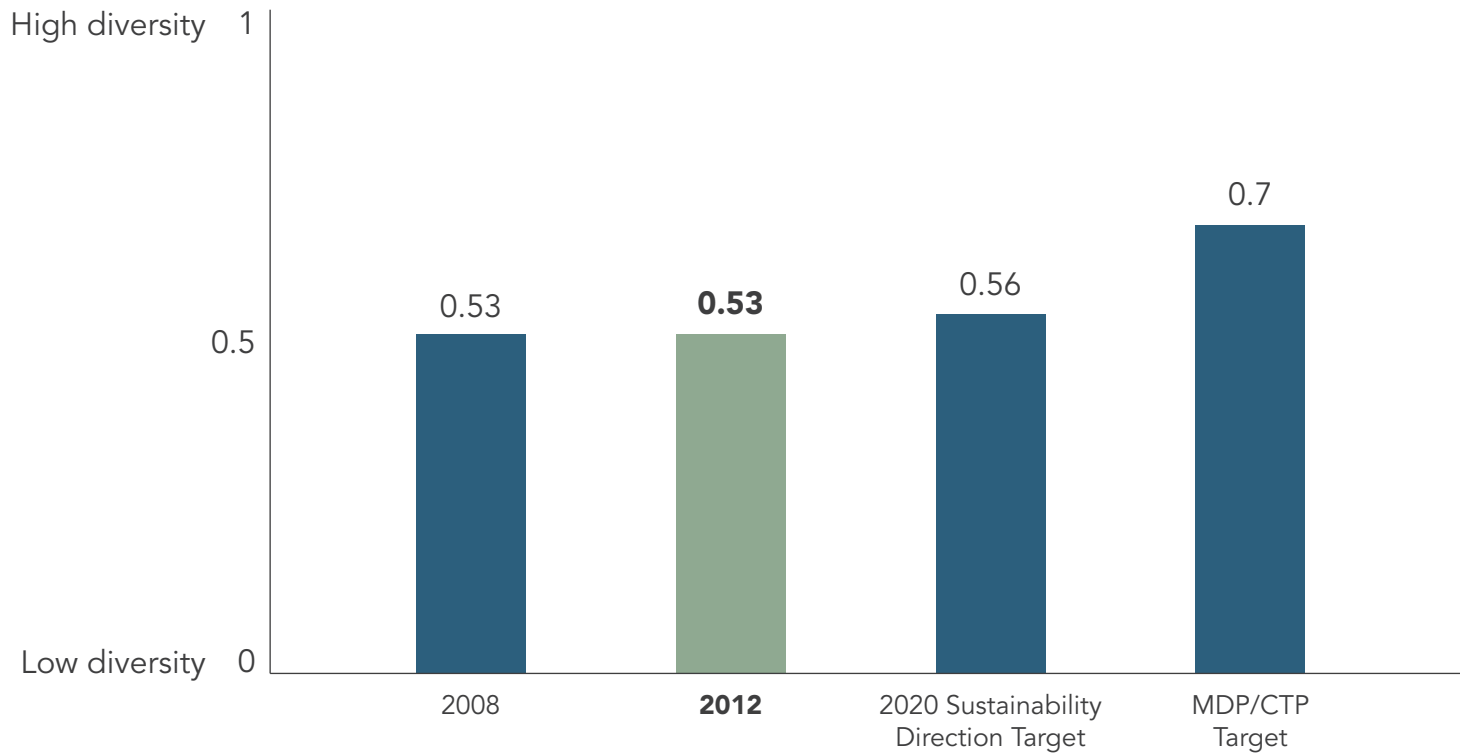
A high land use mix community



A low land use mix community

Complete communities with a high land use diversity result in shorter trips for daily needs that can be done by transit, biking or walking. Overall accessibility to local amenities is increased.

A lower land use diversity results in longer trips for daily needs and dominance of a single land use. Overall accessibility to local amenities is decreased.



Core Indicator 5 – Residential Mix

MDP/CTP objective:	Create a city that provides a good quality of life for its citizens, including better housing choices in locations close to job markets and in areas well served by the Primary Transit Network.
What does this mean?	Housing diversity within a community relates directly to housing affordability and choice, as it provides housing options to meet the needs of residents of different economic situations and household types. Providing a range of housing opportunities and choices is an important aspect of building complete communities.
How do we measure this?	This indicator describes the housing mix expressed in terms of residential land use districts. It provides a measure of potential residential mix, based on residential land use groupings available in Calgary. This indicator does not include the Centre City area in the calculation. The Residential Diversity Index is measured based on <u>designated</u> land use districts, not actual uses of land. The index is calculated at a community scale using community boundaries. The citywide index is the average of all community indices. This way, the distribution of the residential land uses across the city is taken into consideration.

What you should know

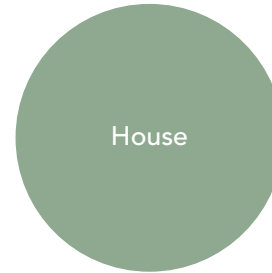
- Similar to the Land Use Diversity Index, this indicator will change slowly city-wide. A movement of 0.01 indicates that five per cent of the city's land (or about 42 square kilometres) has changed land uses.
- A number closer to 1.0 indicates that there are more different types of residential land uses allowed and a better balance among those residential land uses, so that one type does not dominate.
- The Residential Diversity Index shows an in line performance with a slight increase that likely is triggered by development in new communities, where large tracts of land are designated for the range of residential uses called for in an Area Structure Plan.
- To better understand the Residential Diversity Index here are some examples of Calgary communities in 2012: Lake Bonavista and Parkhill had a low diversity index of 0.05-0.10 and Rutland Park and Crescent Heights had a medium index between 0.48 and 0.52. These communities provide the mix index equivalent to the MDP/CTP 60-year target. Currently, no community in Calgary shows a high Residential Diversity Index of 0.68-0.72. Skyview Ranch has the highest value of 0.55.
- Generally, the biggest change in residential diversity comes from actively developing communities where large areas of land are redesignated from a future urban development district to different residential districts as the community builds out. In the established communities, residential uses do not change as much and when they do, they change on much smaller areas.

Residential Diversity Index



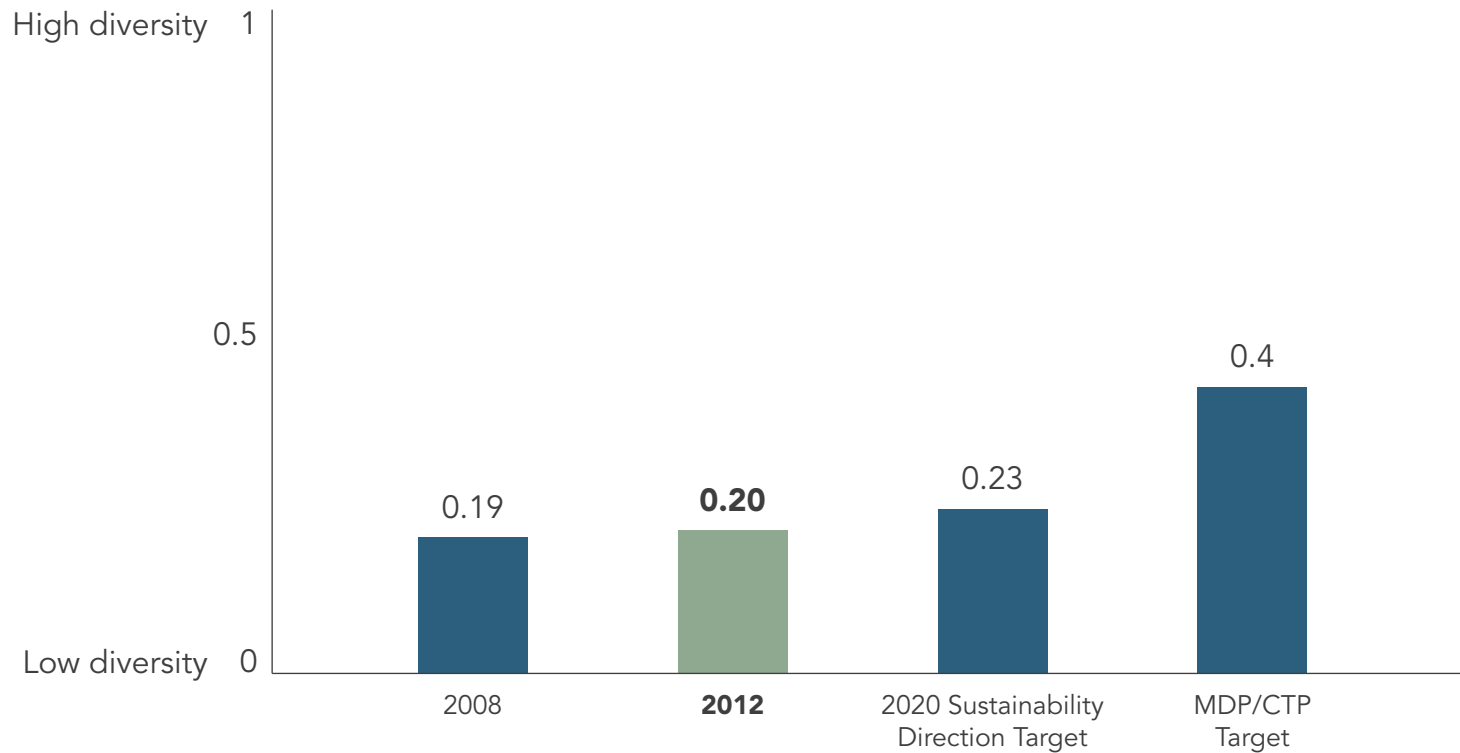
A high residential mix community

Communities with high residential diversity result in more housing options available in a given area.



A low residential mix community

Communities with low residential diversity offer fewer housing options in a given area.



Core Indicator 6 – Road and Street Infrastructure

MDP/CTP objective:	Develop an integrated, multi-modal transportation system that supports land use, provides increased mobility choices for citizens, promotes vibrant, connected communities, protects the natural environment and supports a prosperous and competitive economy.
What does this mean?	The ratio indicates the alignment between the MDP/CTP policies and the Transportation Bylaw map. For a city to be a liveable and attractive place, it is important to have a higher percentage of streets than roads.
How do we measure this?	A Road to Streets Ratio shows the proportion of Skeletal Roads to Streets as per the CTP's roadway classification.

What you should know

- The MDP/CTP objective is to create complete streets that emphasize different modes of transportation, incorporate elements of green infrastructure and function in the context of surrounding land uses.
- The MDP/CTP 60-year target of 0.57 supports creating the types of places and communities Calgarians have said they desire, while also continuing to enable the efficient movement of people and goods across the city.
 - ◇ Streets usually provide a high-quality environment for all users. Streets have lower speeds than Skeletal Roads and provide more frequent access to surrounding land uses, increasing connectivity and improving transit routing and efficiency. Streets have a major role in place making – creating places where people can meet, live, shop, work and play – and are strongly linked to the adjacent land uses/typologies as described in the MDP/CTP.
 - ◇ Skeletal Roads (freeways and expressways) have an emphasis on moving vehicular traffic (including goods movement) over great distances. They typically operate at high speeds and have little direct access and interaction with adjacent land uses.
- The 2012 roads to street ratio exceeded the MDP/CTP 60-year target. This was achieved through roadway reclassifications. The MDP/CTP target therefore needs to be updated to reflect new roadway classification decisions contained within recently approved Area Structure Plans that are currently not included in the target.
- Many streets and roads still require investments to achieve the functionality defined in the MDP/CTP and the 2012 Interim Complete Streets Guide.
- In the future, this indicator may be replaced with a Complete Streets Implementation indicator to measure investment decisions and confirm alignment with the Road and Street Network map.

Why is maintaining a good balance between streets and roads important?

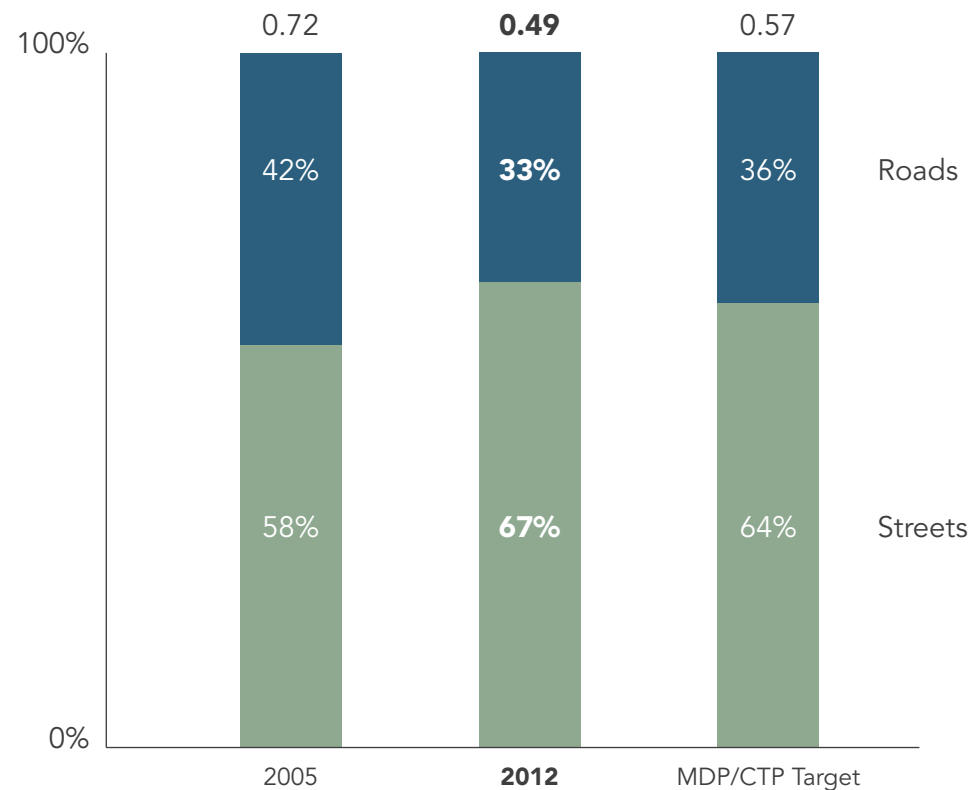
Streets have lower speeds than Skeletal Roads and provide more frequent access to surrounding land uses, increasing connectivity and transit efficiency.



Skeletal Roads (freeways and expressways) have an emphasis on moving vehicular traffic (including goods movement) over great distances.

While there is no universal “best” value for this metric, in general terms, the the smaller the ratio of Skeletal Roads to Streets, the better accessibility and potential for multi-modal transportation infrastructure.

Roads to Street Ratio



Core Indicator 7 – Accessibility to Primary Transit Network

MDP/CTP objective:	Provide a safe, accessible, customer focused public transit service that is capable of becoming the preferred mobility choice of Calgarians. The proximity of homes and jobs to the Primary Transit Network (PTN) is important to successfully integrate land use and transportation.
What does this mean?	In conjunction with providing Primary Transit service levels (10 minutes or better frequency, 15 hours a day, seven days a week), creating new, compact mixed use developments within walking distance of the PTN will make transit more accessible to more people. This in turn will result in increased ridership and reduce greenhouse gas emissions and congestion on our streets. The indicator is a test of progress toward both implementing the PTN through capital and operating expenditures and attracting residents and businesses to locations near the PTN.
How do we measure this?	This indicator measures the percentage of the population and jobs respectively within 400 metres of the PTN

What you should know

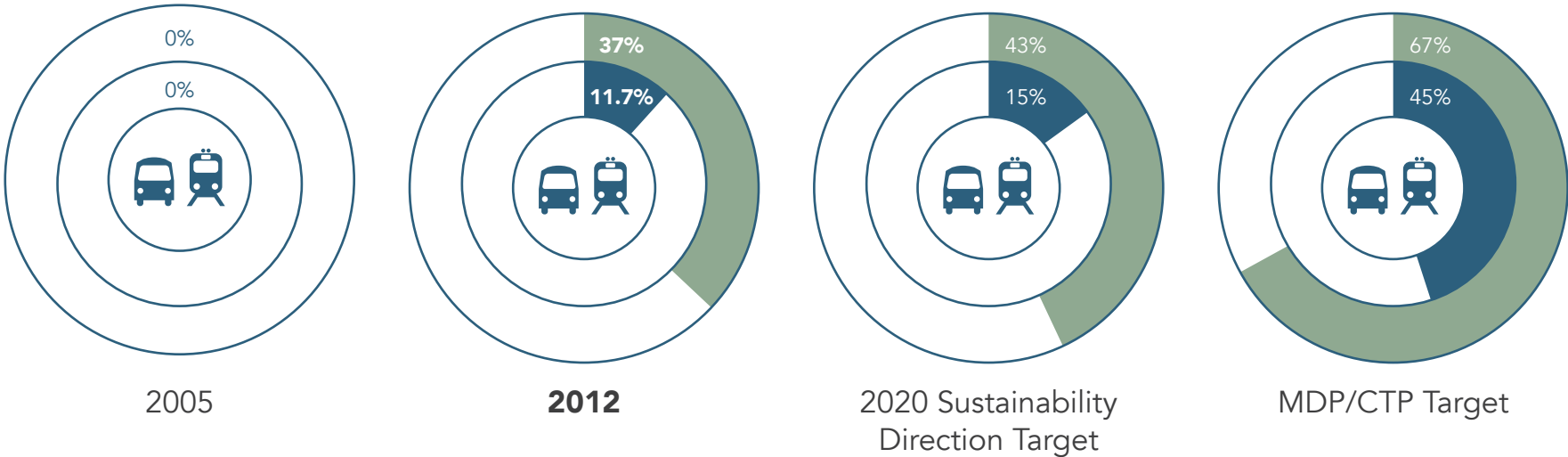
- The PTN will form the foundation of the transit system and incorporate the highest level of service (frequency and span of service), operating speed and directness, service reliability, and customer comfort.
- The recommended minimum density threshold to support Primary Transit service is 100 residents or jobs per hectare within a five minute walking distance of a Primary Transit stop or station.
- Prior to 2011, no transit route reached the Primary Transit level of service (10 minutes better frequency, 15 hours a day, seven days a week). In 2011, Transportation implemented a portion of the PTN; both LRT lines and the Centre Street Corridor are now operating at the PTN frequency. These corridors represent 17.5 per cent of the PTN implemented as per CTP 2009.
- This indicator shows better than expected performance. In 2012, about 12 per cent of Calgarians lived, and 37 per cent of Calgarians worked within 400m of the PTN. The 2012 value does not include the West LRT, which opened in December 2012.
- The 37 per cent of jobs within 400 meters of the PTN are mainly jobs within the Centre City area. Since 2006, the number of jobs in this area increased by 14,500.
- Since 2005, population near the PTN rose by 56,000 of which 4,000 were from intensification and 52,000 from service extensions. The West LRT will add another 24,000 people, increasing the percentage of population within 400m of the PTN.
- Service hours need to grow faster than population in order to provide PTN levels of service and encourage people to move near major transit stations and achieve the set 60-year target. Primary Transit service must be supported by sufficient and predictable service hours.
- Investment in transit service hours to reach the Primary Transit level of service on LRT and key bus corridors is crucial to reach the overall goals of the MDP and CTP.

Core Indicator 7 – Accessibility to Primary Transit Network

Percentage of population and jobs within 400 metres of the Primary Transit Network

Primary Transit Network (PTN): Frequent, fast, reliable, connected, 10 minutes or better frequency, 15 hours a day, 7 days a week.

■ Percentage of population
■ Percentage of jobs



Core Indicator 8 – Transit Service

MDP/CTP objective:	Provide a safe, accessible, customer focused public transit service that is capable of becoming the preferred mobility choice of Calgarians.
What does this mean?	To achieve the goal of making transit the preferred mobility choices, the quantity of transit service hours per person must be increased over time as they affect the overall convenience for transit customers. Service hours can take the form of new service in new communities or additions to existing service, such as increased frequency or longer span of service.
How do we measure this?	Dividing annual transit service hours by total population for a given year.

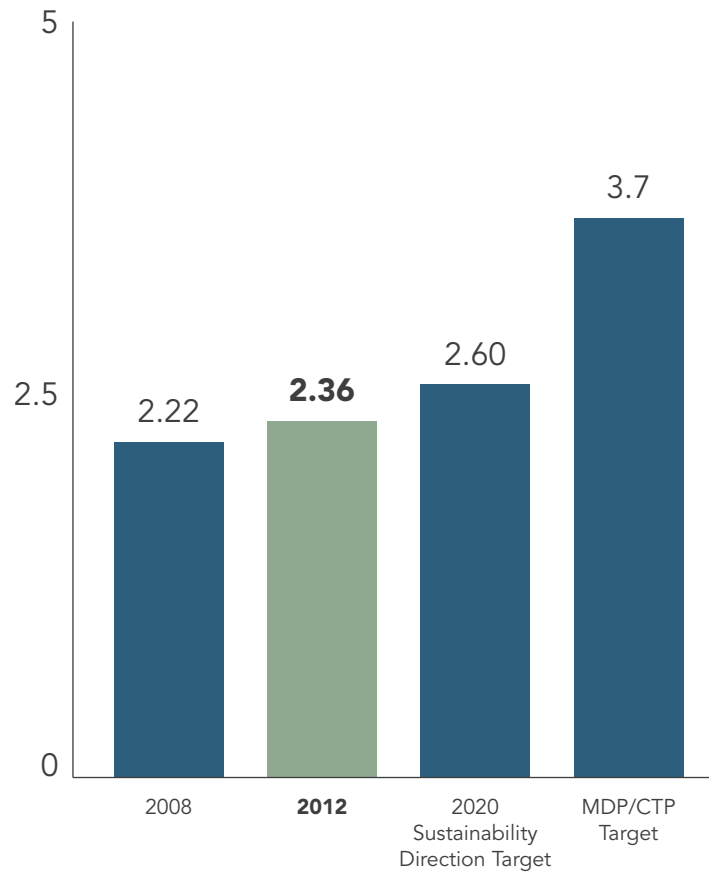
What you should know

- Service hour increases are necessary to help accommodate the expected significantly higher population and number of jobs in the next two generations.
- Primary Transit service will not be achieved without the sufficient and predictable increase in service hours. Residents and jobs need to be located along key corridors to support bus and CTrain high frequency service.
- This indicator shows in line performance.
- In 2012, 2.36 hours of transit service by all transit modes (LRT and bus) were provided for each resident of Calgary, which means a favourable performance of this indicator. In the same year, Calgary Transit reached a milestone by carrying over 100 million customers.
- Transit service also fulfills a social commitment which is to provide an affordable travel choice for those who cannot or prefer not to drive, walk or cycle to meet their daily needs.
- Consistent and reliable transit service hours need to increase at a faster rate than the population (about 125,000 service hours per year) in order to achieve the long-term goal of 3.7 transit service hours per capita. This is crucial to making transit an attractive and convenient alternative to using the car. In turn this will lead to higher transit ridership.

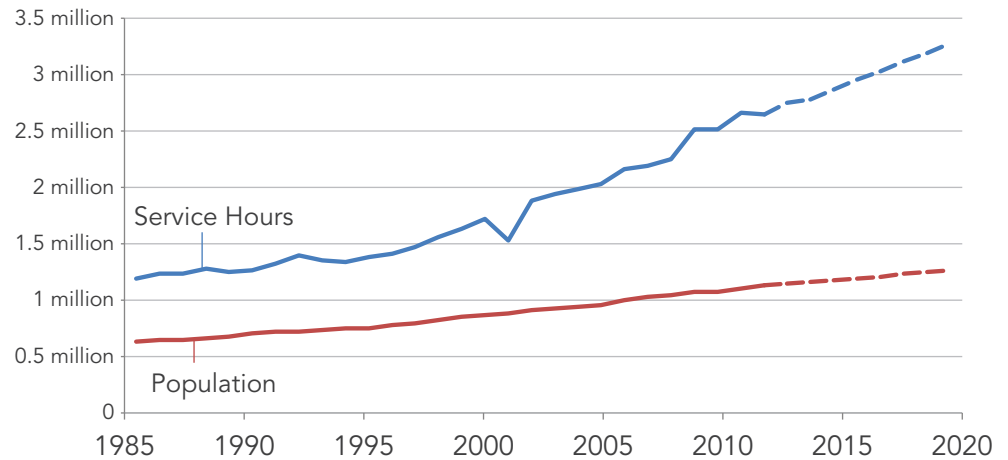
Core Indicator 8 – Transit Service

Comparison of Transit Service Hours and Population

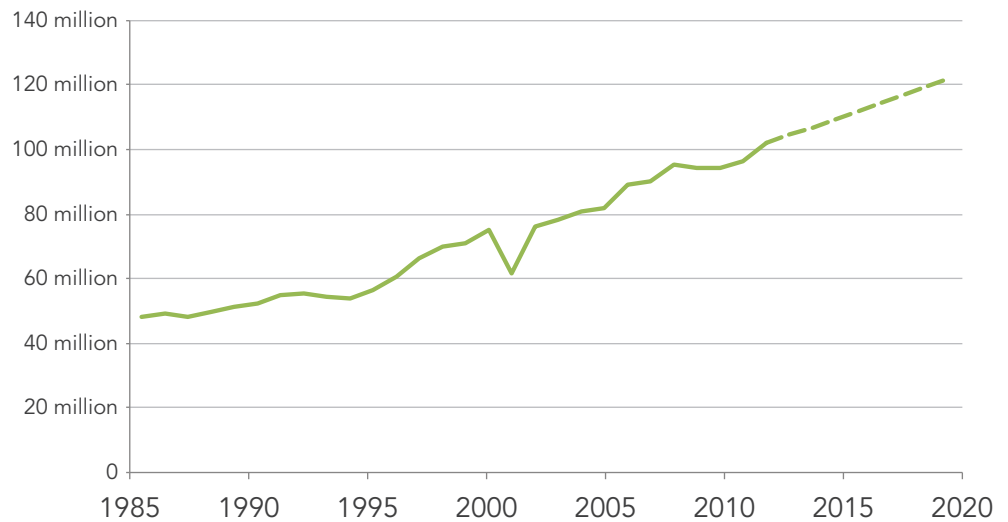
Transit Service Hours Per Capita



Comparison of Transit Service Hours and Population



Transit Ridership



Core Indicator 9 – Goods Access

MDP/CTP objective:

Provide a safe, efficient and connective goods movement network that supports intermodal rail facilities, transportation and distribution districts and goods movement routes, while minimizing impacts on surrounding communities.

What does this mean?

A measure of intermodal facilities located close to the Primary Goods Movement Network (PGMN) provides a good indication of accessibility, which contributes to goods movement efficiency and supports the city and regional economy. Smaller distances between these facilities and the PGMN decrease trip length and reduce greenhouse gas emissions.

How do we measure this?

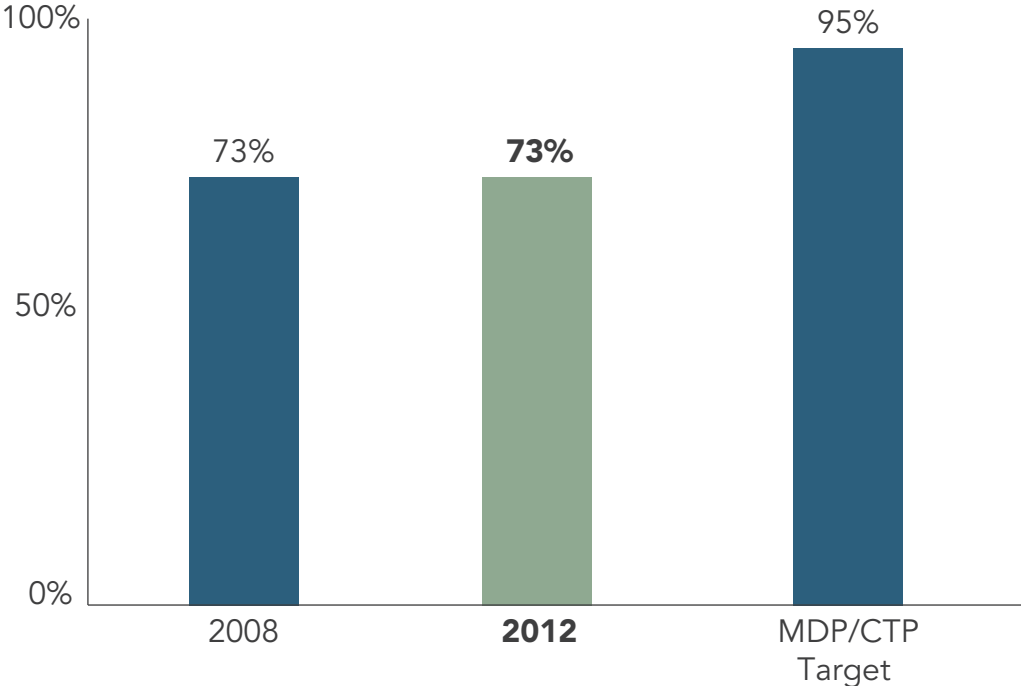
This indicator measures the percentage of intermodal and warehousing facilities in close proximity (1600 metres) to the Primary Goods Movement Network.

What you should know

- Providing appropriate locations for intermodal and warehousing facilities close to the PGMN, and advising business owners about the importance of these locations will support the needs of the transportation and logistics industry to create a globally competitive city.
- This indicator shows no change since the baseline in 2008.
- An additional 18 distribution facilities were added to the list of intermodal and warehousing facilities since 2008. Of these distribution facilities, only 72 per cent were located within 1600 meters of the Primary Goods Movement Network. Therefore the 2012 value did not change from the baseline.
- To achieve the 60-year target, all future intermodal and warehousing facilities should ideally be located with either direct access or within shorter driving distance to the Primary Goods Movement Network.
- Currently, the speed and travel time reliability monitoring has begun on selected goods movement corridors (i.e., Barlow Trail S.E, Glenmore Trail S.E., Peigan Trail S.E., 52 Street S.E. and Deerfoot Trail) and the speed and travel time reliability baseline is being determined. This will be reported on in the future.

Core Indicator 9 – Goods Access

Percentage of intermodal and warehousing facilities within 1.6 kilometres of Primary Goods Movement Network



Core Indicator 10 – Transportation Mode Split

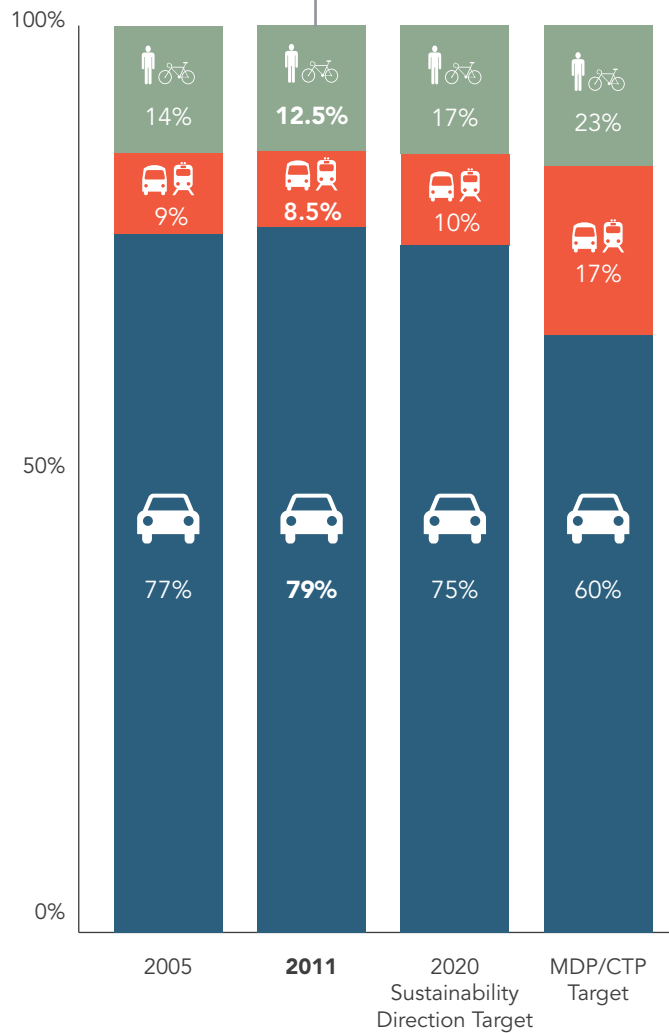
MDP/CTP objective:	Provide affordable mobility and universal access to all Calgarians by making public transit, walking and cycling the preferred mobility choices for more people.
What does this mean?	This indicator shows how many all-purpose trips (e.g., all trips to work, grocery store, theatre, day care, school, park, etc.) are made by different transportation modes in a day.
How do we measure this?	Per cent of all-purpose, citywide trips that are made by walking, cycling, transit and car within a 24-hour period.

What you should know

- Land uses (e.g., home, employment, schools, retail, etc.) that are further away from each other result in longer trip lengths, leading to more traffic on roadways, more vehicle kilometres travelled and hence more greenhouse gas (GHG) emissions. A denser, more compact urban form with a greater diversity of land uses will result in shorter trips, which can be done by walking, cycling and transit. Shorter trips by car will also reduce overall GHG emissions.
- This indicator is currently underperforming.
- The car is still the most common travel choice city-wide. This is illustrated by an increased auto mode split (+2 per cent) while the percentages of sustainable modes (walk, cycle and transit) decreased over the same period. These results are contrary to the 2020 Sustainability Direction target and the MDP/CTP target.
- The mode split results are a reflection of suburban land use approvals and infrastructure investments made prior to the MDP/CTP 2009. Over the long term, changes in how Calgary grows will help to reverse this direction.
- In strategic areas (Centre City, Activity Centres and Corridors), there is a higher proportion of walking, cycling and transit usage (63 per cent) compared to the auto (37 per cent). The mode split changes in proportion to distance from the Centre City and the Primary Transit Network as shown on the Travel Choice by the MDP/CTP Typology map. Further growth and investment in strategic areas will make walking, cycling and transit even more attractive.
- Continued investment in transit, cycling and walking infrastructure and transit service is necessary, along with providing the mix and locations of land use that link people with jobs and other daily needs.

Core Indicator 10 – Transportation Mode Split

Transportation Mode Split
(all purpose trips, city wide, all day)

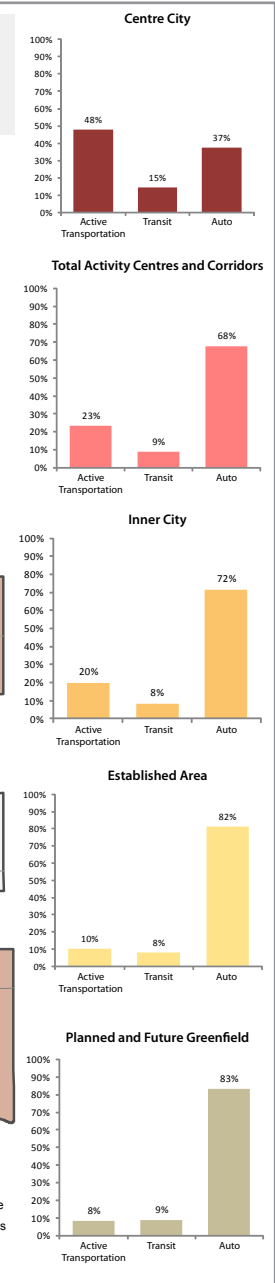
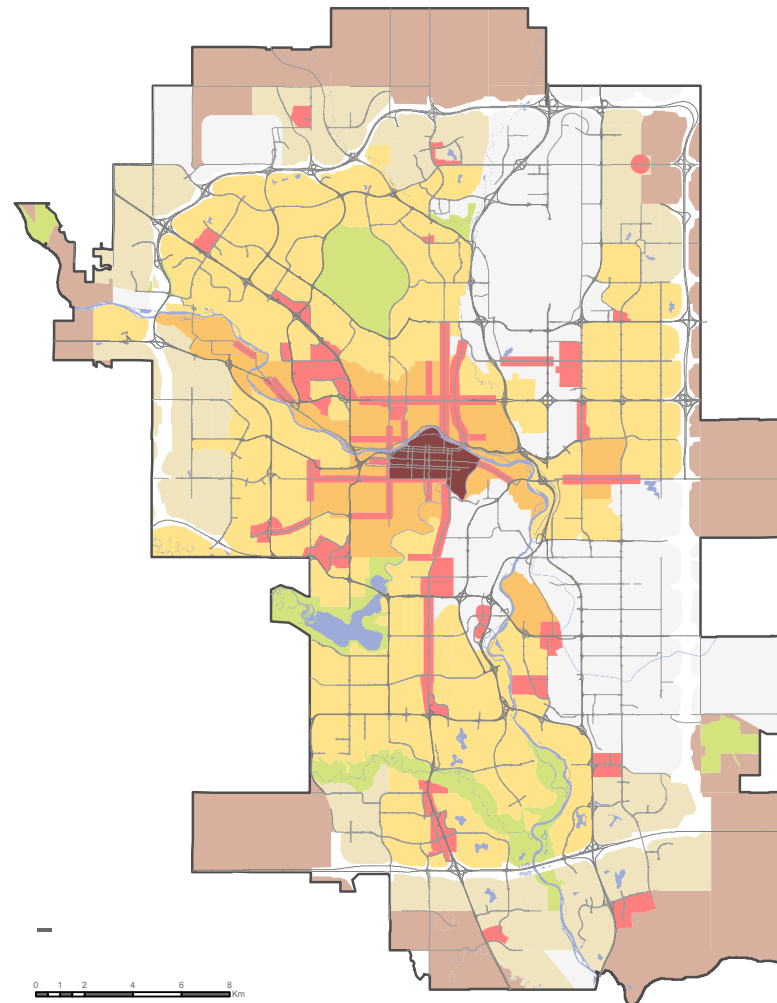


Note: The 2011 values are from the 2011 Household Activity Survey and are preliminary. They will be adjusted with the updated demographic factors when new Federal Census data are available later in 2013.

Travel Choice by MDP / CTP Typology

All Purpose Trips, All Day, Weekday

Source: 2011 Household Activity Survey



Core Indicator 11 – Accessibility to Daily Needs

MDP/CTP objective:

Accommodating future urban growth within mixed use Activity Centres and Corridors to support increasing access to daily needs and services.

What does this mean?

This indicator provides a good indication of whether people are living in locations that benefit from the services within Activity Centres and Corridors, including retail, personal services and the Primary Transit Network. This indicator thus measures the success of the MDP/CTP and other City policies in encouraging people to live near strategic growth areas.

How do we measure this?

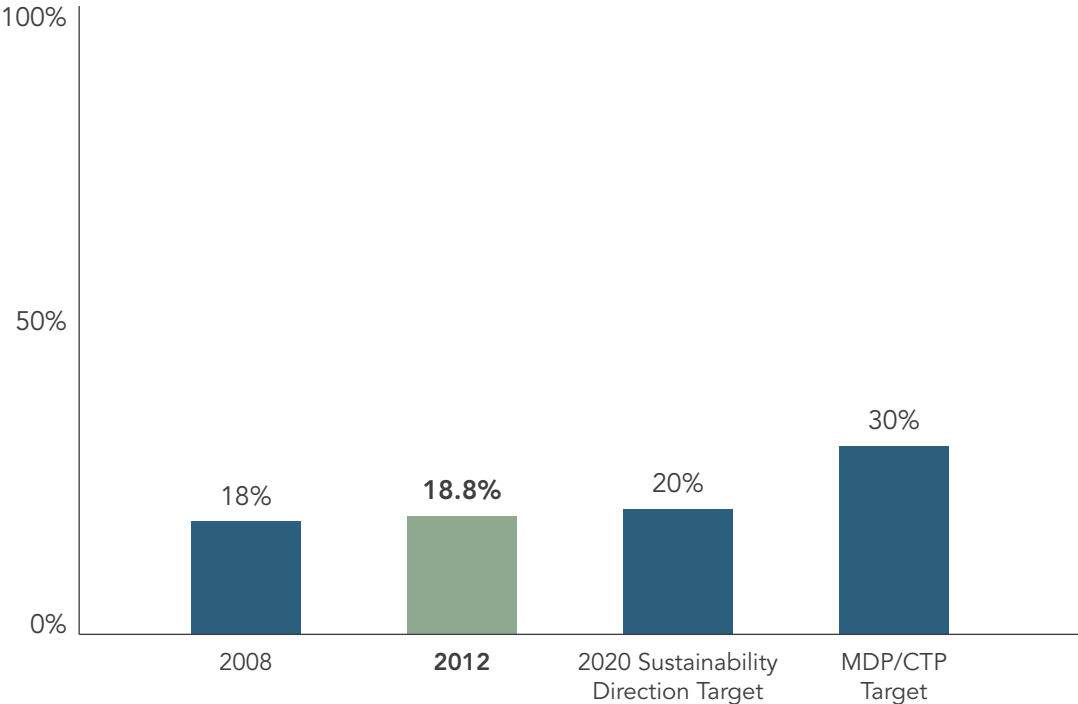
The percentage of population within Major and Community Activity Centres and within 600m of Urban and Neighbourhood Corridors.

What you should know

- The MDP proposes a more compact urban form by locating a portion of new housing and jobs within higher intensity, mixed-use areas that are well connected to the Primary Transit Network. Amongst other functions, these Activity Centres and Corridors will act as priority locations for a greater variety of housing choices, higher density residential and employment concentrations outside of the Centre City, and local opportunities for employment and daily retail and service needs.
- In 2012, 18.8 per cent of Calgary's population was located within Activity Centres and Corridors, which is consistent with the 2020 target for this indicator.
- The population growth rate in Activity Centers and Corridors, however, has only increased about half as fast compared to the city as a whole. These strategically important typologies have added 12,000 people since 2006.
- Progress towards the targets is expected to be modest in the short term, as identified Activity Centres and Corridors have only started to redevelop. Growth in these strategic areas is expected to increase in the future.
- Better connectivity to mixed use Activity Centres and Corridors is also supported by the implementation of the Calgary Cycling Strategy, which has improved the accessibility for some Calgarians to daily needs and services by bike.
- In order to increase the percentage of all population located within Activity Centres and Corridors, growth in these strategic areas must occur at a higher rate than the total, city-wide population.

Core Indicator 11 – Accessibility to Daily Needs

Percent of population within Major and Community Activity Centres and 600m of Urban and Neighbourhood Corridors



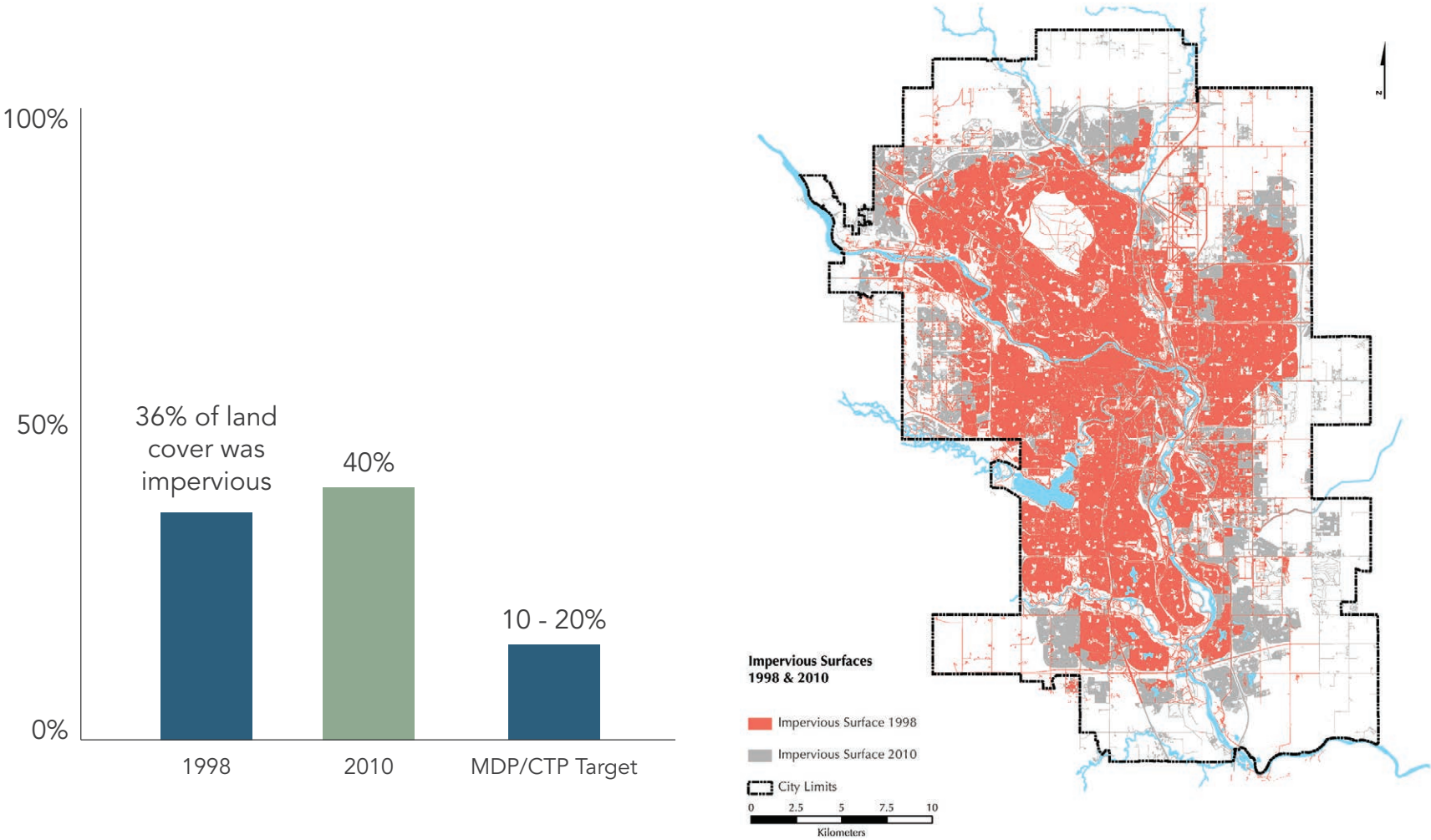
Core Indicator 12– Watershed Health

MDP/CTP objective:	Conserve and protect the natural environment, including the watershed by enhancing water quality and quantity.
What does this mean?	As land is developed, impervious surfaces can have a significant impact on the quantity and quality of rainfall run-off that flows to the river.
How do we measure this?	Watershed Health is measured by the amount of impervious surface area (e.g., land area covered by buildings, roadways, parking lots) within the urban area.

What you should know

- The amount of imperviousness rises in the city as more area is developed with buildings, roads, and parking lots. There is direct correlation between the increase in impervious surfaces and an increase in stormwater runoff to the rivers which affects water quality and quantity.
- The 10-20 per cent impervious target aligns to guiding watershed protection plan goals, notably the Bow Basin Watershed Management Plan and the Stormwater Management Strategy. As imperviousness approaches 10 per cent there is rapid degradation in river and creek channel stability, water quality, and aquatic biodiversity.
- Compared to the baseline data, imperviousness has increased by 4 per cent.
- Mitigating impervious effects requires significant financial investment by The City. For example, since 2007 \$42 million has been spent on stormwater retrofit projects to reduce the level of sediment carried into the Bow River by stormwater runoff from streets and other impervious surfaces. Another \$24 million has been spent on related stormwater upgrades and the Shepard Stormwater Diversion project totalled \$75 million. There is also an ongoing operational cost to removing sediment from stormwater ponds.
- The City is and will continue to address watershed health through incorporation of watershed planning into land use planning, continued significant investment into stormwater treatment infrastructure, implementation of erosion and sediment control practices, protection of riparian and streambank areas, ongoing monitoring of river water quality, and regional work to protect watershed health within and beyond Calgary's boundaries.
- The MDP/CTP baseline and methodology has been modified to allow for more timely reporting of this indicator. The MDP/CTP original baseline value for this indicator was defined from the Calgary Urban Forest Study (1998) done by United States Department of Agriculture. The study used a sampling technique that has limited accuracy in determining the impervious ratio and is usually done every ten years. This frequency does not meet the MDP/CTP reporting requirements. Therefore, in 2011, a corporate team was established to develop a methodology to measure impervious surfaces that would meet the needs of all City stakeholders.

Percentage of impervious land cover



Core Indicator 13– Urban Forest

MDP/CTP objective:

Conserve and protect natural environment. Maintain biodiversity and landscape diversity, integrating and connecting ecological networks throughout the city.

What does this mean?

Trees provide a large number of ecological services, including cleaning the air, reducing erosion and creating wildlife habitats. In general, trees contribute to the quality of life, providing privacy to residents, helping to reduce noise and glare, and adding a sense of serenity and character to the neighbourhoods.

How do we measure this?

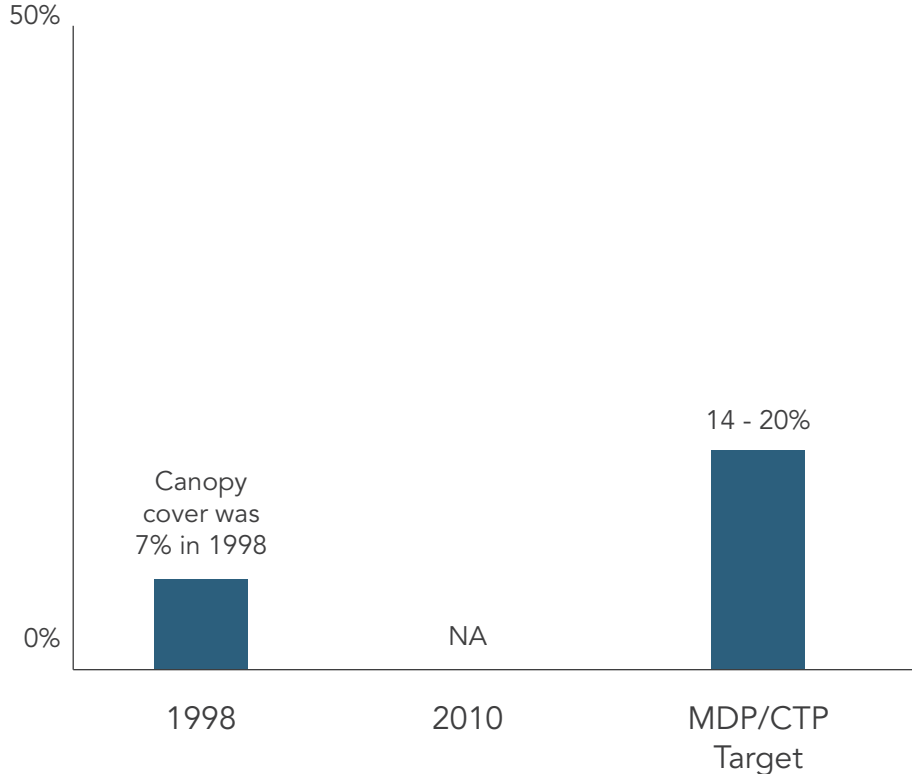
Urban Forest is measured as a percentage of the city's area covered by tree canopy in Calgary's developed urban area.

What you should know

- The baseline value for this indicator was defined from the Calgary Urban Forest Study (1998) done by United States Department of Agriculture. The study used a sampling technique and is usually done every ten years. This frequency does not meet the MDP/CTP reporting requirements. Therefore, Administration needs to develop a different method to monitor this indicator.
- A new method for collecting the data is currently being developed, using remote sensing and light detection and ranging data. This method will be more accurate than the sampling technique and will allow for more frequent collection in the future.
- A new baseline and MDP/CTP target will be established based on the new methodology results.
- The City of Calgary has been working on improving urban canopy through initiatives such as the NeighbourWoods program.

Core Indicator 13– Urban Forest

Percentage of canopy cover



Core Indicator 14 – District Energy

MDP/CTP objective:

Reduce the demand for non-renewable energy resources and promote energy-efficient building design and practices for all building types.

What does this mean?

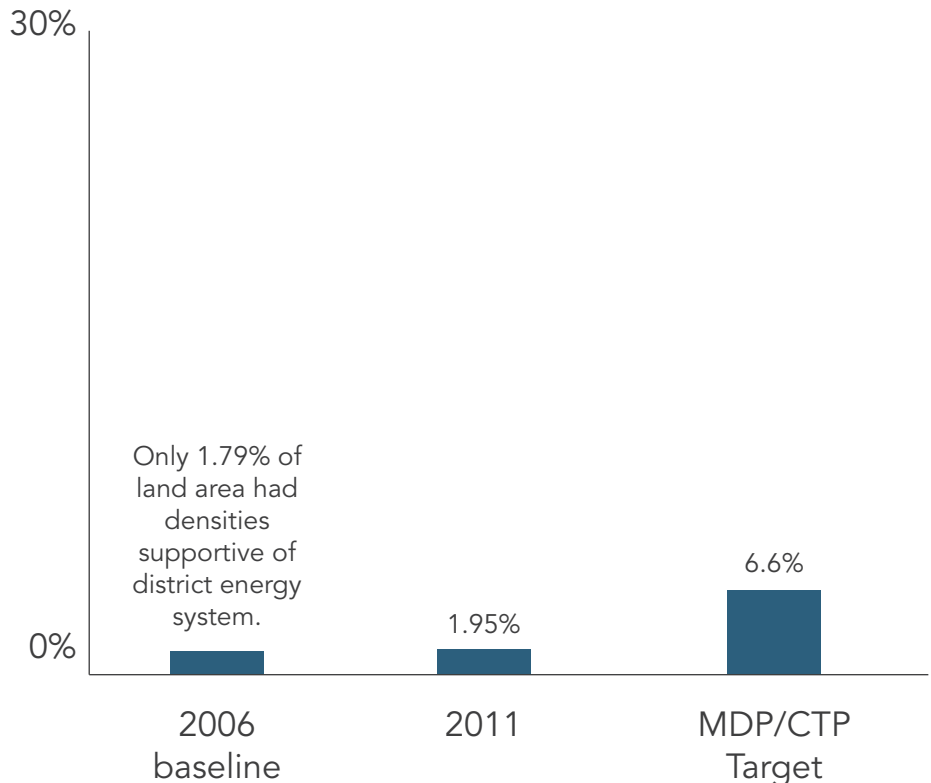
District energy systems are communal heating, cooling and power networks. Only urban areas that achieve a minimum density have the capacity to support the cost of a district energy system. The increased efficiency of supplying energy at this density reduces overall energy consumption.

How do we measure this?

The portion of land within a city that has enough development to support a district energy system.

What you should know

- For district energy systems to be viable, a minimum density of 30 dwelling units (or 100 people and jobs) per hectare is required. The MDP and CTP call for a minimum of 100 people and jobs per hectare only in identified strategic areas of the city. Opportunities for district energy will therefore most likely occur within Activity Centres and Corridors as well as Industrial-Employee Intensive Areas.
- This indicator applies to residential, commercial and industrial land uses and shows a slow increase since 2006.
- If this trend continues the defined MDP/CTP 60-year target will be difficult to achieve (assuming a linear projection of increase over the years).
- The model used for calculating this indicator has been revised. The baseline, 2011 value and the MDP/CTP 60-year target all reflect the results of using this new model.
- In 2010, the district energy facility opened in East Village.



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The Big Picture: Core Indicators Assessment

This section provides an overall assessment of the Core Indicators for Land Use and Mobility. The MDP and CTP are not static documents. As mentioned earlier, the full set of indicators needs to be taken into consideration in order to provide a comprehensive understanding of the progress made so far towards the goals and objectives of the MDP and CTP. No one or two indicators in isolation indicate progress.

Figure 4 provides a visual representation of the progress towards the MDP/CTP targets. Points in the green zone indicate a favourable direction which is moving towards the MDP/CTP target. Points in the red zone indicate an unfavourable direction for that particular indicator relative to the MDP/CTP target.

Indicators have been rated by Administration using the following rating scheme:

3	Potential strong positive direction toward the MDP/CTP target
2	Positive direction toward the MDP/CTP target
1	Somewhat positive direction toward the MDP/CTP target
0	Baseline
-1	Somewhat negative direction from the MDP/CTP target
-2	Negative direction from the MDP/CTP target
-3	Potential strong negative direction from the MDP/CTP target

Overall, the majority of Core Indicators show favourable directions towards the 60-year MDP/CTP target. However, this is a first snapshot in time and a first report in a long-term series of progress reports. The City needs to continue to measure and report on the Core Indicators for Land Use and Mobility to establish progress towards the MDP/CTP targets.

CI-1 Urban Expansion, CI-2 Density, CI-5 Residential Mix, CI-6 Roads and Street Infrastructure, CI-7 Accessibility to Primary Transit Network, CI-8 Transit Service, CI-11 Accessibility to Daily Needs and CI-14 District Energy all show a positive direction. This is a reflection of decisions that have had a positive impact on city development, which in turn is reflected by the indicators. These

The Big Picture: Core Indicators Assessment (cont.)

decisions, among others, include roadway reclassification, which made CI-6 Roads and Street Infrastructure already exceed the 60-year MDP/CTP target. It is important for Administration to review the 60-year targets for the Core Indicators over the upcoming monitoring cycles. In the case of CI-6 Roads and Street Infrastructure indicator, Administration will update the MDP/CTP target to reflect new roadway classification decisions contained within recently approved Area Structure Plans that are currently not included in the target.

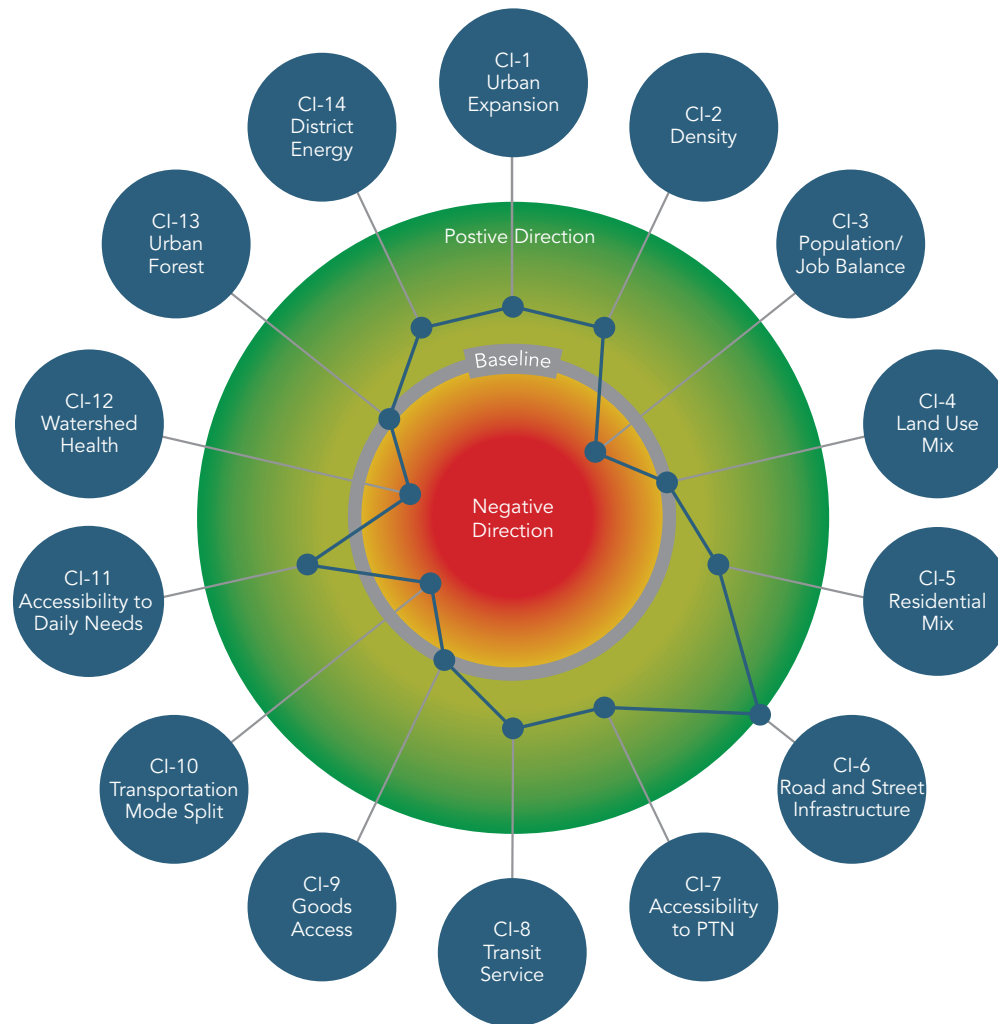


Figure 4 – Core Indicators for Land Use and Mobility – 2013 Assessment

The Big Picture: Core Indicators Assessment (cont.)

CI-1 Urban Expansion indicates a favourable direction with regards to population growth in Developed Areas. At this point in time, however, the 2012 value seems to be largely supported by natural increase and an uptake of market activities, which result in falling vacancy rates (dwelling units that have been built in previous years got occupied) instead of true intensification. This indicator will have to be watched closely over the next monitoring period. To continue progress, it will be important to achieve population growth in the Activity Centres and Corridors identified in the MDP and CTP.

The biggest change to CI-5 Residential Mix comes from actively developing communities. In established communities, residential uses do not change as much and on much smaller areas. It will therefore be important for Administration to pursue different possibilities to measure this indicator taking actual residential uses into consideration.

Some of the indicators remained at the baseline level, which is in a way positive, as the values did not shift to an unfavourable direction that would have been expected prior to approval of the MDP and CTP in 2009. At the same time, different factors can be detected that are affecting the performance of these indicators. CI-4 Land Use Mix, for example, will change only slowly over time. The first three year monitoring period is not long enough to show solid changes for this indicator. Slight progress can be witnessed however, resulting from a broader range of land uses that are required due to new policies, particularly for greenfield development. CI-9 Goods Access also remained at the same baseline level.

As a new methodology for collecting data is currently being developed for CI-13 Urban Forest, Administration could not assess this indicator at this point in time. Therefore, progress on this indicator is shown as neutral from the 1998 baseline in Figure 4. A new baseline and the target will be established based on the new methodology and the results will be reported on when the data becomes available.

After the first three-year monitoring cycle, three indicators show an unfavourable direction relative to the baseline: CI-3 Population / Jobs Balance, CI-10 Transportation Mode Split and CI-12 Watershed Health.

CI-10 Transportation Mode Split is the only performance based Core Indicator for Land Use and Mobility. This indicator measures the result after planning and design decisions have been made and implemented in the past. The car is still the most common travel

The Big Picture: Core Indicators Assessment (cont.)

choice city-wide. This is directly linked to more traffic on roadways resulting in congestion, greater greenhouse gas emissions and reduced air quality. In 2012, there is a higher proportion of walking, cycling and transit usage in strategic areas (Centre City 63 per cent, Activity Centre and Corridors 32 per cent) compared to 17 per cent in Planned and Future Greenfield areas. In the last couple of years, The City actively promoted and invested in sustainable transportation modes, therefore, increasing choices for Calgarians to travel, including walking, cycling and transit. The capital investment split shifted from approximately 2/3 roads and 1/3 transit in the past to 2/3 sustainable modes (walk, cycle, transit) and 1/3 roads (2011 Council's Fiscal Plan CFP-M2). The new 10-year Transportation capital infrastructure plan, 2013-2022 Investing in Mobility, identified four infrastructure investment categories, which support the investment in strategic areas. To achieve the MDP/CTP targets for this indicator, sustainable transportation modes need to be further fostered by Administration and future planning and infrastructure investment decisions must be aligned with MDP/CTP policies and targets.

The indicator CI-12 Watershed Health also shows a negative direction as the percentage of impervious surface has increased by 4 per cent, from 36 per cent in 1998 to 40 per cent in 2010. The increase in impervious surfaces is a result of development in greenfield and established areas which increases stormwater runoff to the rivers. As the city continues to grow, continued investment needs to be made to address watershed health including stormwater infrastructure investment, watershed planning integrated with land use planning and protection of river and streambanks. This indicator is carefully watched as watershed health is closely linked to long term water quality and quantity and the costs associated with this.

Given the comprehensive picture that all 14 Core Indicators provide, it is fair to state that city's growth is not yet as sustainable as intended by the goals and objectives of the MDP and CTP. The increase in the use of the car for daily trips, and the resulting economic and environmental impacts, is directly linked to past land use and infrastructure decisions. The percentage of impervious surfaces has increased since 1998 which results in significant financial investment by The City to mitigate the impact of this development. District energy and other forms of alternative energy supply have not yet been used up to their potential.

In order to fulfill the requirements of the triple bottom line economic, social and environmental aspects of development have to be taken into account and balanced. While the Core Indicators that are measuring economic and social aspects of the city's growth are moving generally in a favourable direction towards the 60-year MDP/CTP target, the indicators that are reflecting environmental aspects are currently lagging behind.

Conclusions

The following key findings highlight the most important issues that describe where and how Calgary is developing and where future investments need to be focussed. These key findings will also aid Council, Administration and the public in informed decision-making.

Key Findings

1. **Calgary is designing better communities but is not growing fast enough in strategic areas**

Suburban development still provides the majority of housing to Calgarians. Compared to years prior to MDP/CTP adoption, new policies have started to make greenfield development more sustainable. The mix of housing types has increased due to related requirements in new Area Structure Plans. Suburban densities (based on outline plan applications) have increased from 13.5 units per hectare in 1995 to 18.8 units per hectare in 2011 – an increase in residential housing density by 39 percent. This leads to a more efficient use of space and also helps to build critical mass needed to support city services such as public transit. Additionally, more emphasis is paid to bike and pedestrian connectivity in new communities, providing alternative transportation choices to the car.

Although the indicators for urban expansion and density show generally a favourable direction, the city has not been growing significantly in strategic areas. Related indicators show that strategic areas grew only half as fast as the city as a whole.

To achieve the 60-year outcomes of the MDP and CTP, a 50-50 balance of cumulative growth between established and greenfield communities is needed. This means an incremental, continuous shift of where the city grows. Facilitating development in the Centre City, Activity Centres and Corridors will help achieve this goal. By creating more choice in housing, make daily needs more accessible to more people, walking, cycling and transit can become convenient choices for more Calgarians.

The need for the city to grow more in strategic areas can also be linked to achieving a better balance between population and jobs. Unbalanced job and population growth will create more mobility challenges in the future, as people need to leave their neighbourhoods and commute to their work places.

Conclusions (cont.)

2. The car is still the most common travel choice city-wide

Auto travel makes up 79 per cent of all trips in Calgary, which is an increase of two per cent since 2005. This may be reflective of the long lead time between making planning and infrastructure decisions and implementing them and measuring their impact. Building complete communities with access to daily needs and employment opportunities enhances the attractiveness of using transit, biking and walking. In 2012, in strategic areas such as Centre City, there is a higher proportion of walking, cycling and transit usage (63 per cent) compared to auto usage (37 per cent). Growth in strategic areas increases the demand for walking, cycling and transit infrastructure and services and provides the critical mass that makes Primary Transit viable.

Sufficient, ongoing investment in the Primary Transit Network is needed to meet this demand. Prior to 2011, no transit route reached the Primary Transit level of service (10 minutes or less frequency, 15 hours a day, seven days a week). With investment thus far, The City has made progress towards achieving the 30-year target for accessibility to the Primary Transit Network. Transportation implemented a portion of the PTN in 2011; both LRT lines and the Centre Street Corridor are now operating at the PTN frequency. The West LRT will further improve the percentage towards the 2020 Sustainability target in the short term. For transit to be convenient for Calgarians, consistent and reliable transit service hours need to be provided, and must grow faster than the population.



Conclusions (cont.)

3. The current increase in impervious surfaces has negative impacts to watershed health

Impervious surfaces have increased by 4 per cent since 1998. Imperviousness rises in the city as more area is developed with buildings, roads, and parking lots. As land is developed, it can have a significant impact on the quantity and quality of rainfall runoff that flows to the river. These impacts include increased pollutants reaching our rivers impacting water quality.

Mitigating related effects requires significant financial investment by The City. For example, since 2007 \$42 million has been spent on stormwater retrofit projects to reduce the level of sediment carried into the Bow River by stormwater runoff from streets and other impervious surfaces. Another \$24 million has been spent on related stormwater upgrades and the Shepard Stormwater Diversion project totalled \$75 million. There is also an ongoing operational cost to removing sediments from stormwater ponds.

The City is and will continue to address watershed health through several approaches including incorporation of watershed planning into land use planning, continued investment into stormwater treatment infrastructure, implementation of erosion and sediment control practices, protection of riparian and streambank areas to maintain water quality and natural river and creek flows, ongoing monitoring and trending of river water quality, and working with regional partners to protect watershed health within and beyond Calgary's boundaries. Flood mitigation strategies should also keep impacts to watershed health in mind.

Imperviousness is one aspect of watershed health. Other ongoing indicators show that we are on track to meet corporate watershed targets. These other indicators include measurement of the city's impact on the rivers through The City's approval to operate from Alberta Environment and Sustainable Resource Development, the Stormwater Management Strategy and 2020 Sustainability Direction target to keep total suspended solids that flow to the river at 2005 levels; the water efficiency goal to maintain river water withdrawals at 2003 levels; and, assessment of cumulative impacts on the Bow River water quality downstream of Calgary.

Next Steps

As mentioned earlier, this is the very first monitoring report of the MDP/CTP Core Indicators for Land Use and Mobility. Future monitoring reports are required to monitor changing trends, collect further data, enhance the Core Indicators with Supplementary and Local Area Plan Indicators and assess their development over time. However, as experience with these indicators increases and technology improves, The City may consider it appropriate to revise some of the methodologies used and refine some of the indicators in the meantime.

Working towards the 10-year MDP/CTP review

The monitoring and reporting program anchors the MDP and CTP together. Administration has developed different implementation strategies that are tailored to the specificities of each individual plan.

CTP Implementation

Substantial work has been done to link long-term strategic transportation plans and current implementation actions to the specific objectives and policies of the CTP. Performance measures and actions in Transportation's 2012-2014 Business Plan and Budget are directly tied to strategic goals and targets in the MDP/CTP and the 2020 Sustainability Direction. Transportation has also undertaken several major policy and implementation actions to fulfill CTP policies. As per the CTP sections, key implementation measures include, but are not limited to:

- a new 10-year capital infrastructure plan, Investing in Mobility, that aligns with investment policies in Part 2 of the CTP and the Framework for Growth and Change;
- a new Cycling Strategy ongoing implementation in accordance with active modes policies in Part 3.2 of the CTP;
- creation of the RouteAhead 30-year plan for transit infrastructure and customer service, as well as operating investments to achieve Primary Transit levels of service for the CTrain and along Centre Street North, consistent with Part 3.3 of the CTP;
- ongoing development of the Complete Streets Guide for all roadway types, including new standards for residential street designs, to align with the Road and Street Palette in Part 3.7 of the CTP;

Working towards the 10-year MDP/CTP review (cont.)

- development and ongoing implementation of a Parking Policy Framework to achieve the policy goals of Part 3.9 of the CTP; and
- development of Supplementary Indicators and targets which expand on the MDP/CTP Core Indicators, and are monitored on a regular basis for reporting to senior management, building on Part 4 of the CTP.

Transportation will continue to evaluate the effectiveness of implementation actions in achieving the policy, infrastructure and service delivery goals of the CTP. New and revised implementation actions will be identified during the development of Transportation 2015 – 2018 Business Plan and Budget. Key focus areas going forward will be:

1. Pursue new sources of revenue (2M3);
2. Use effective and efficient transportation management tools and techniques to encourage walking, cycling and transit (3M1);
3. Continue to deliver effective and efficient transportation services (2M5, 2M6); and
4. Continue to improve the reliability of public transit service (3M3).

MDP Implementation

The “MDP Implementation and Effectiveness Monitoring Strategy” has been developed to link the vision and general objectives of the MDP to specific actions and The City’s work programs. Currently, the MDP is lacking this link which makes it difficult to determine whether The City’s projects are effectively implementing MDP objectives and policies. Overlaps between projects and gaps (policies that have insufficient actions to allow them to be fully implemented) are difficult to identify. The Core Indicators are broad, long-term measurements of overall plan success, not indicators of the effectiveness of specific MDP provisions or their implementation through the Corporation’s work program. They do not indicate which sections of The Corporation’s actions may not be working optimally (when specific indicators trend in the wrong direction). Given their city-wide character the Core Indicators do not provide detailed enough information to determine if work programs and policy actions are aligned to the MDP and are achieving the changes on the ground required to meet the objectives.

The “MDP Implementation and Effectiveness Monitoring Strategy” will consist of three major pieces of work:

Working towards the 10-year MDP/CTP review (cont.)

1. Identifying the actions needed to implement each MDP policy;
2. Identifying Supplementary and Local Area Plan Indicators that are appropriate to support the Core Indicators and measure if the specific objectives of the MDP are being achieved; and
3. Tracking and analysing the inputs and outputs to determine the effectiveness of the MDP.

Reporting on the Core Indicators and achieving MDP objectives through the “MDP Implementation and Effectiveness Monitoring Strategy” are two closely linked City initiatives. Using this strategy will allow The City to determine whether the MDP is achieving what it has set out to achieve and if its provisions remain relevant in a changing environment. It will also help to course correct The City’s policies where necessary to achieve the desired changes on the ground. The “MDP Implementation and Effectiveness Monitoring Strategy” will assist Departments in identifying actions that are essential to fully implement MDP policies. It will provide important input to help align actions and programs across the City Departments and thus influence the Corporation’s business plans and budgets for 2015-2018.

The MDP contains 36 objectives and 412 policies that span all aspects of sustainable urban development – economic, social and environmental, Administration has launched a policy prioritization process to answer the following questions:

1. Which sections of the MDP have the most impact on how the city grows?
2. Which of these sections have the greatest challenges to be implemented?

Both internal and external stakeholders have been engaged in a related survey and Administration is currently assessing the results. The outcome will form the foundation of the policy implementation work, as policies that need to be addressed with priority by the “MDP Implementation and Effectiveness Monitoring Strategy” will be identified. Following this approach will enable The City to align specific actions and work programs in a manner that reflects the implementation needs of the most impacting MDP policies with regards to how and where the city grows.

Every 10 years a report on the effectiveness of implementation of the MDP and CTP will be brought forward by Administration. In order to inform this major 10-year policy review the different implementation strategies and the monitoring and reporting program will be tied together. The report will capitalize on the results of the different reporting and implementing strategies equally, and will assess whether the policy direction of the plans remains appropriate or requires adjusting.

How will this report be used?

This MDP/CTP 2013 Progress Report is meant to inform all levels of decision makers and the public of the progress being made towards achieving the goals and objectives of the MDP/CTP.

This and all future progress reports will guide:

- **The business planning process**

Some of the implementation actions have been already embedded in the 2012 – 2014 Business Plans and Budgets. However, the results of this report will be an input to the next business planning cycle and will influence the 2015-2018 Business Plans and Budgets. This will also be an opportunity for decision makers to adjust course, if needed.

- **Framework for Growth and Change**

The “Integrated Growth and Changes Strategy – Where and When to Grow” as per Figure 5-1: A Strategic Framework for Growth and Change in Part 5.2 of the MDP. The Framework will ensure that policy, strategy and resources for growth are better aligned to facilitate Calgary’s supply of planned and serviced lands and achieve the objectives of the MDP and CTP.

- **The 2020 Sustainability Direction**

Some of the Core Indicators are already embedded in the 2020 Sustainability Direction goals and objectives.

- **The 10-year MDP/CTP policy review**

The progress reports enable ongoing alignment between actions and goals, and keep the MDP and CTP living documents. They provide an important source of information to guide the 10-year major policy review of both the MDP and CTP, which is due in 2020. Together with the other mentioned strategies and programs they will provide essential input to soundly assess whether the objectives and policy direction of the MDP/CTP remain relevant in times of changing framework conditions.

