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## **Housing Affordability and the Standard of Living in Regina**

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## About the author

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The *Survey* is sponsored in Canada by the Frontier Centre for Public Policy.

He has written and spoken widely on the role of housing affordability in the standard of living and poverty reduction, including national speaking tours of Australia and numerous international presentations.

He is author of *War on the Dream: How Anti-Sprawl Policy Threatens the Quality of Life*, and a co-author with Richard Vedder of *The Wal-Mart Revolution: How Big-Box Stores Benefit Consumers, Workers, and the Economy*. In addition to these books, he has been a frequent book chapter contributor and is also author of a regular column in [newgeography.com](http://newgeography.com).

Wendell Cox is also author of the widely cited *Demographia World Urban Areas*, which is the only compendium of population, land area and population density for all known urban areas (population centres) in the world of 500,000 or more population.

He served nine years as a visiting professor at the Conservatoire National des Arts et Metiers, a Paris university and holds a BA in Government from California State University, Los Angeles and an MBA from Pepperdine University in Los Angeles. Mayor Tom Bradley appointed him to three terms on the Los Angeles County Transportation Commission, which was the top policy body in both highways and transit in the largest county in the United States. He was also appointed by Speaker of the United States House of Representatives Newt Gingrich to fulfill the unexpired term of New Jersey Governor Christine Todd Whitman.

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# Executive Summary

Housing affordability has deteriorated markedly in the Regina metropolitan area since 2006. While Saskatchewan has had the largest increase in household income of any province over the past five years, house prices have escalated at a far greater rate than incomes. As a result the share of Regina households that qualify for a mortgage for the median price existing house has dropped by more than one-fifth. A number of factors have contributed to this increase, such as city of Regina land use policies and an excess of demand for new houses over supply.

Rising house prices pose a challenge for policy makers and households. Housing costs are the largest element of household budgets. If housing costs rise faster than income, there will be a reduction in the standard of living, because households will have less discretionary income (after tax and necessities). Further, there is an association between the price of owned housing and rents. The higher rents can be expected to reduce the standard of living of lower income households, leading to greater poverty.

Over the past two centuries, the world has become increasingly urban, as people have moved to the cities to better their lives. Yet the results of the dominant strain of urban planning urban containment policy, work against the economic aspirations of households. These aspirations are why people moved to the city from rural areas. The dominant urban planning policy, “urban containment” seeks to limit or prohibit development on or beyond the urban fringe, which creates land scarcity and raises house prices.

Where urban containment policy is the strongest, such as in Vancouver, Sydney, Auckland and London (UK), house prices have doubled or tripled relative to incomes. These areas tend to rely on strategies such as urban growth boundaries, greenbelts and high development fees. Moreover, urban containment policy has been associated with generally negative economic impacts, including lower population growth, lowered real incomes and lower levels of employment.

Urban containment policy is now spreading across Canada, which could lead to substantial losses in household discretionary income unless stopped. A number of metropolitan areas, such as Regina have such an opportunity to avoid this fate.

The Bank of Canada and international credit rating agencies have expressed concerns about the rising levels of household debt, which could interfere with economic growth. These levels are principally driven by the large mortgages that are necessitated by higher house prices. The monetary instruments of the Bank of Canada are largely incapable of controlling house price increases that are driven by urban containment policy that is implemented at the provincial or regional level.

Based on his research, Paul Cheshire at the London School of Economics indicates that urban containment policy is irreconcilable with housing affordability. Because of the importance of housing costs in the household budget, urban containment policy is also incompatible with maintaining or improving the standard of living.

**The housing market in Canada:** Since World War II, the median multiple (median house price divided by median household income) has tended to be approximately 3.0 or less in Canada, Australia, New Zealand and the United States. The exception is metropolitan areas that have adopted strong urban containment policies. As late as the early 2000's, four of the six largest metropolitan areas had median multiples of approximately 3.0. However, as urban containment policy has spread, housing affordability has declined markedly.

**Saskatchewan in context:** For most of the last century, Saskatchewan has experienced only modest growth, with little or no growth in recent decades. However, all of that has changed significantly since 2006. Saskatchewan now enjoys strong growth. Saskatchewan had the strongest increase in median household income of any province between 2006 and 2011.

**The Regina Metropolitan Area:** The Regina metropolitan area has tripled in population since 1951. However, like the province, growth was modest over recent decades, but has increased substantially since 2006. Population projections indicate that strong growth will continue.

**The Regina Metropolitan Area housing market:** House prices have escalated strongly in Regina relative to incomes since 2006. This appears to be principally the result of new housing and increases in developer fees and levies. Construction costs have not risen inordinately. Rents have also increased far more than the overall cost of living

**Land use policy in the Regina Metropolitan Area:** The city of Regina, with more than 90 per cent of the population dominates the area. The city is committed to a policy of staged development, which requires new greenfield housing to be built in designated areas. A risk of staged development is that if the staging does not permit development of sufficient land to meet demand, an imbalance arises between sellers and buyers (developers), which can drive prices of land and houses higher. A virtual urban growth boundary can be created by prohibiting new housing outside the staged development areas.

The city of Regina also has expressed a preference for neo-traditional designs, which tend to be more expensive than conventional designs. These policies have been associated with higher house prices elsewhere, which have led to particular burdens for lower middle income and lower income households.

**Housing affordability assessment in the Regina Metropolitan Area:** The regulatory system in the Regina metropolitan area worked well to produce housing affordability until very recently. Yet, as Saskatchewan enjoyed the largest increase in median household income of any province between 2006 and 2011, house prices escalated well beyond incomes. The net effect is that the lower-cost detached house has become a thing of the past. The higher house prices that developed between 2006 and 2012 are estimated to have disqualified nearly one-quarter of Regina metropolitan area households from purchasing the averaged price existing house.

In the more expensive new house market, it is estimated that nearly 15 per cent of households that would have qualified in 2006 would not today because of the higher prices.

***Maintaining and improving the standard of living:*** Housing affordability is crucial to maintaining and improving the standard of living and reducing poverty. The municipalities in the Regina metropolitan area should commit to housing affordability as the first principle of urban planning. It is recommended that each of the municipalities in the metropolitan area (1) implement policies that permit restoration of the less expensive detached house market, (2) establish and monitor housing affordability standards, and (3) implement infrastructure finance options that improve housing affordability.

“***The municipalities in the Regina metropolitan area should commit to housing affordability as the first principle of urban planning.***”

# 1. Housing affordability, the standard of living and poverty

Throughout history, people have flocked to the city to better their lives. Cities offered better opportunities because households could expect to enjoy greater discretionary incomes than in rural areas, and there were greater opportunities for upward economic mobility.

Yet, the emergent and now dominant strain of urban planning, “urban containment” policy, works against this fundamental objective of the city, by increasing house prices relative to incomes. Higher house prices work against the very reason that people have moved to the city – a higher standard of living.

“Urban containment” policy, which has been advocated for at least seven decades,<sup>1</sup> is also referred to by terms such as smart growth, compact city policy, growth management, livability, densification and other terms. These policies seek to limit the expansion of urban areas (pejoratively called urban sprawl), by severely restricting or prohibiting development on or beyond the urban fringe, and by other restrictions.

The resulting land scarcity drives up the price of land for residential development, just as the rationing of demanded goods or services raises prices, other things being equal. This leads to higher house prices. Stringent land use regulation has also been associated with negative impacts on metropolitan economies.<sup>2</sup> For example, Jensen and Mills conclude that:

“Stringent land use controls raised house values, and high house prices depressed population, real incomes and employment.”<sup>3</sup>

Where urban containment policies are most stringent, house prices relative to incomes have doubled and tripled, such as in Vancouver, Sydney, Auckland and London (UK).

The house price increases have occurred across the spectrum of areas with urban containment policies, from the most vibrant to those that have experienced significant industrial decline. In some metropolitan areas, households may pay from \$100,000 to \$200,000 more for the average priced house than they would without urban containment policies.

With the exception of Vancouver (and British Columbia), Canada’s urban containment policies are comparatively recent, making it easier to arrest further house price escalation and retardation of the standard of living.<sup>4</sup> As a result, the house price increases outside Vancouver have been more modest.

In reducing discretionary incomes urban containment policy results in a *lower standard of living and greater real poverty*, because households have less left over after paying for necessities, with housing being the most expensive element.<sup>5</sup> This occurs, because of the association between urban containment policy and higher house prices.

The case for urban containment rests on fragile foundations. Much of the justification for urban containment policy is the reduction of greenhouse gas emissions or sustainability. Yet, urban containment policy is a grossly expensive and ineffective means for achieving this goal (Appendix A).

The economic consequences of urban containment policies have not been genuinely debated as such policies were adopted. Yet, as London School of Economics Professor Paul Cheshire has concluded that urban containment policy is irreconcilable with housing affordability.<sup>6</sup> Given the importance of housing affordability in household budgets, this means that urban containment policy is incompatible with maintaining or improving the standard of living.

As is indicated in *Urban Policy: Time for a Paradigm Shift*,<sup>7</sup> there is a need to focus on the fundamental objectives of maintaining or improving the standard of living and reducing poverty. Urban planning should be evaluated on its contribution to these objectives.

The focus of this report is land use and housing policy and its impact on the standard of living in the Regina metropolitan area.<sup>8</sup>

***Given the importance of housing affordability in household budgets, this means that urban containment policy is incompatible with maintaining or improving the standard of living.***



## 2. The housing market in Canada

Housing costs represent the largest share of household budgets, which makes housing affordability an important economic and public policy issue.

### 2.1. Measuring housing affordability

There are various methods for measuring housing affordability. One of the most frequently used is the median multiple, which is the median existing house price divided by the median household income. This measure has been widely used, including by the World Bank, the United Nations and the Organization for Economic Cooperation and Development (OECD). Median multiple housing affordability categories are now often used (Table 1):<sup>9</sup>

**TABLE 1**

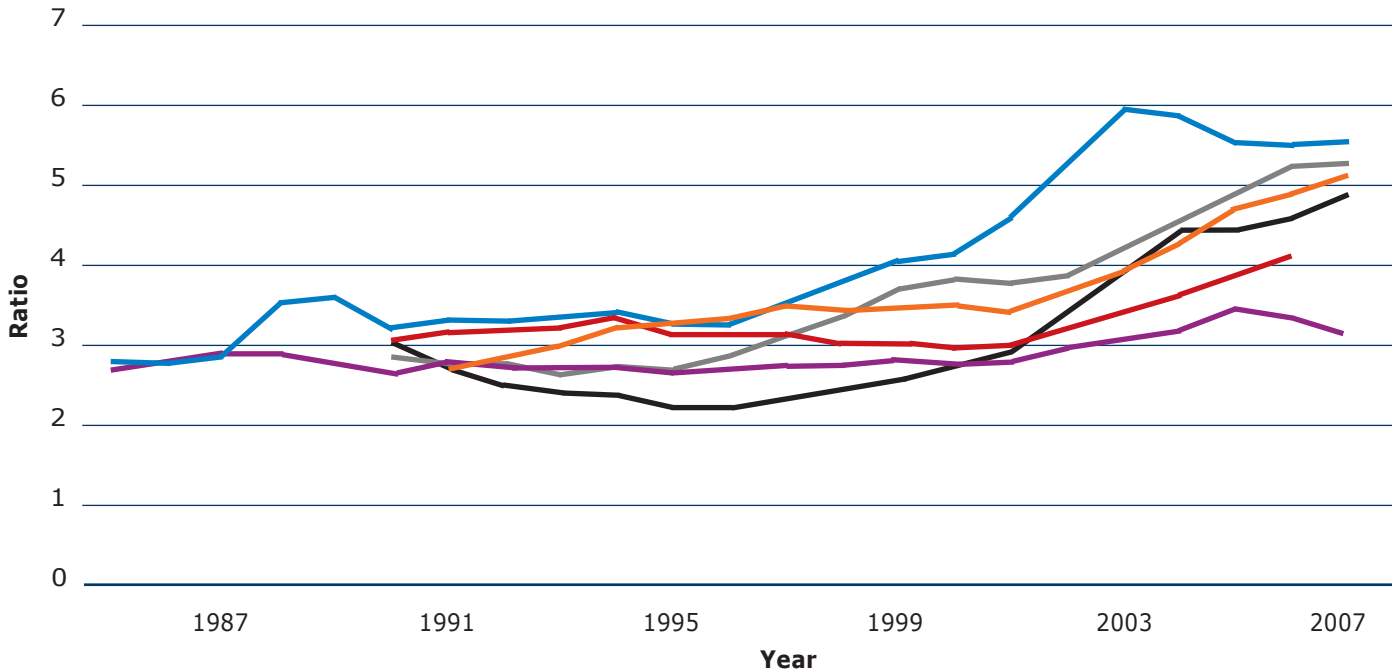
**Housing Affordability Rating Categories**

Rating	Median Multiple
Severely Unaffordable	5.1 and Over
Seriously Unaffordable	4.1 to 5.0
Moderately Unaffordable	3.1 to 4.0
Affordable	3.0 and Under

Generally, a median multiple range of 2.0 to 3.0, which has been typical in the metropolitan areas of Canada, Australia, New Zealand, United States, Ireland and the United Kingdom for most of the period since World War II. This is indicated in Chart 1 (next page), from the Reserve Bank of Australia, that nation’s central bank, which indicates that housing affordability at or below the median multiple of 3.0 into the late 1980s and early 1990s in each nation.

The housing affordability losses have been concentrated in markets where urban containment land use policies have been adopted.

**CHART 1** Price to Income Ratios 1985-2007  
Reserve Bank of Australia Data



Various combinations of median and mean measures of house prices and incomes used depending on availability.

Sources: ABS; BIS; Bureau of Economic Analysis; Central Statistics Office Ireland; Communications and Local Government (UK); National Statistics website; OECD; REIA; Reserve Bank of Australia; Reserve Bank of New Zealand; Statistics Canada; Statistics New Zealand; Thomson Financial.

- Australia
- Canada
- Ireland
- New Zealand
- United Kingdom
- United States

## 2.2. Housing affordability in Canada

Housing affordability was the rule across the nation as late as the middle 2000s. In 2004, Calgary's median multiple was 3.0. Ottawa's median multiple was 2.9 and Montréal had a median multiple of 3.1. In 2005, Edmonton's median multiple was 2.8, while Winnipeg's was 2.4. Since that time, housing affordability has deteriorated substantially in Calgary, Montréal and Toronto. There have also been more modest declines in affordability in Edmonton and Ottawa. Vancouver, which has experienced severe levels of housing unaffordability for decades, experienced a house price to income increase from a median multiple of 5.3 in 2004 to 9.5. In 2012, Vancouver ranked as the most unaffordable metropolitan area, except for Hong Kong, out of 337 metropolitan areas in seven nations covered in the *Demographia International Housing Affordability Survey*.<sup>10</sup>

In the Regina metropolitan area, housing affordability has also been lost as the median multiple has increased from below 3.0 maximum affordability standard in 2006 and 2007. It is estimated, based on the Association of Regina Realtors and the new National Household Survey data from Statistics Canada, that the median multiple in Regina reached 3.8 in 2012,<sup>11</sup> well above the maximum affordability standard.

The decline in housing affordability has not escaped notice. Bank of Canada officials have expressed concern about the rising level of household debt, which is largely attributable to rising house prices. Nearly all of the major banks have experienced credit rating downgrades within the last year, with rising mortgage debt being a principal factor.

The Bank of Canada is tasked with the monetary policy goal of keeping "inflation near 2 per cent."<sup>12</sup> This can be challenging in a market of rapidly rising house prices. Yet house prices are not rising principally because of normal market forces. The increases are principally the result of provincial and metropolitan urban containment policy. Thus, the largest item of consumer spending, and potentially a driver of inflation, is largely under the control of regional and provincial land use authorities and beyond the policy purview of the Bank of Canada.<sup>13</sup> This constraint on the Bank of Canada's power may be a matter for parliamentary concern.

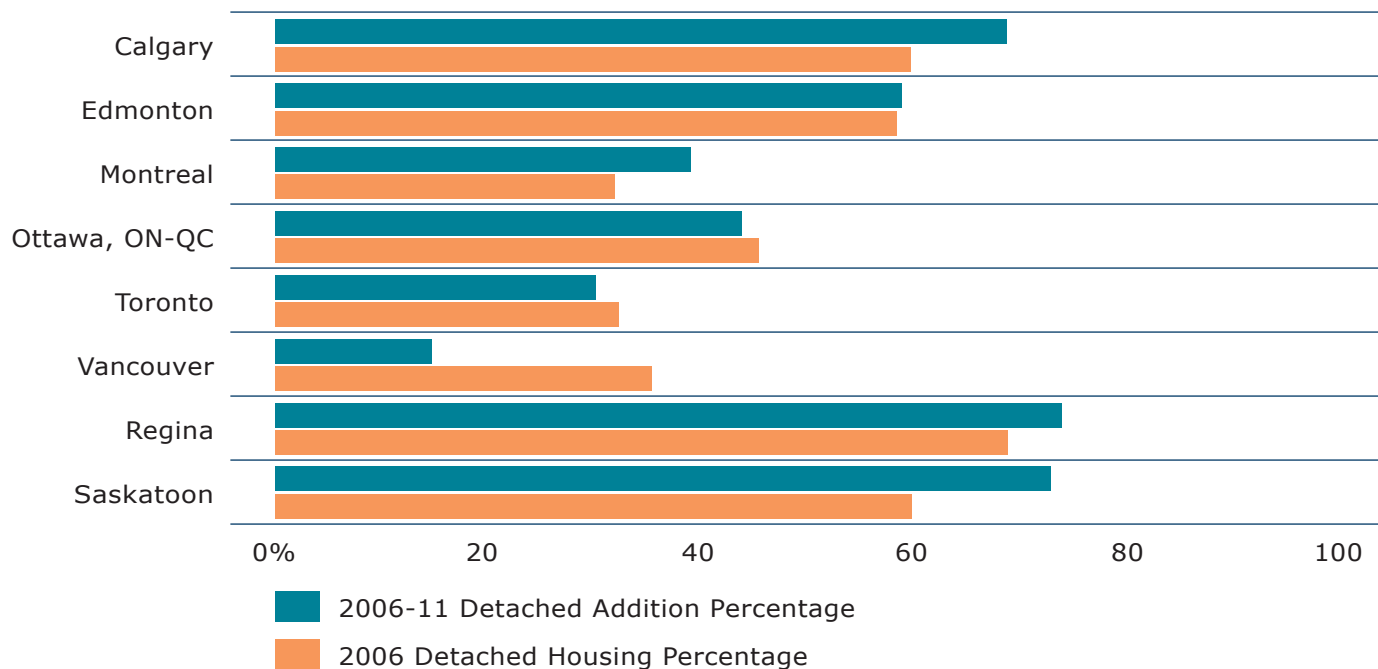
## 2.3. Housing preferences

As in the other New World nations of Australia, New Zealand and the United States, more households live in detached housing in Canada than in the semi-detached or multifamily housing. This trend continues to grow, as is indicated by the 2011 census.

Data from the Statistics Canada National Household Survey indicates that in 15 of the 20 largest metropolitan areas, the detached share of new housing between 2006 and 2011 was greater than the share of such housing in 2006. In three of the six metropolitan areas with more than 1,000,000 population, the share of detached housing also grew between 2006 and 2011. The smallest detached housing build rate was in Vancouver, where urban planning regulations have made such housing difficult to build (Chart 2).<sup>14</sup>

The urban planning literature sometimes implies that higher density, multi-family housing can be readily substituted among households who prefer detached housing.<sup>15</sup> However, housing preferences vary significantly between households. Restricting housing choice, such as by discouraging detached housing, can make a metropolitan area less attractive for people from other parts of the nation or world.

**CHART 2** **Housing Preferences 2006-2011**  
**Selected Metropolitan Areas**



This nationwide trend is counter to assertions that households are losing interest in detached housing. Indeed, the province’s *Housing Strategy*, indicates that in its consultation process: “It was stated over and over again that it is not a sustainable vision to assume that the housing norm is a single family home.” The reality, however, is that detached housing and improving technology has made detached housing and its automobile oriented land-use development form sustainable (See Appendix A.4).

**Housing Preferences in Regina:** The Regina metropolitan area mirrored this trend. Between 2006 and 2011 the Regina metropolitan area experienced a huge increase in the demand for detached housing, with 74 per cent of the new occupied housing being detached.

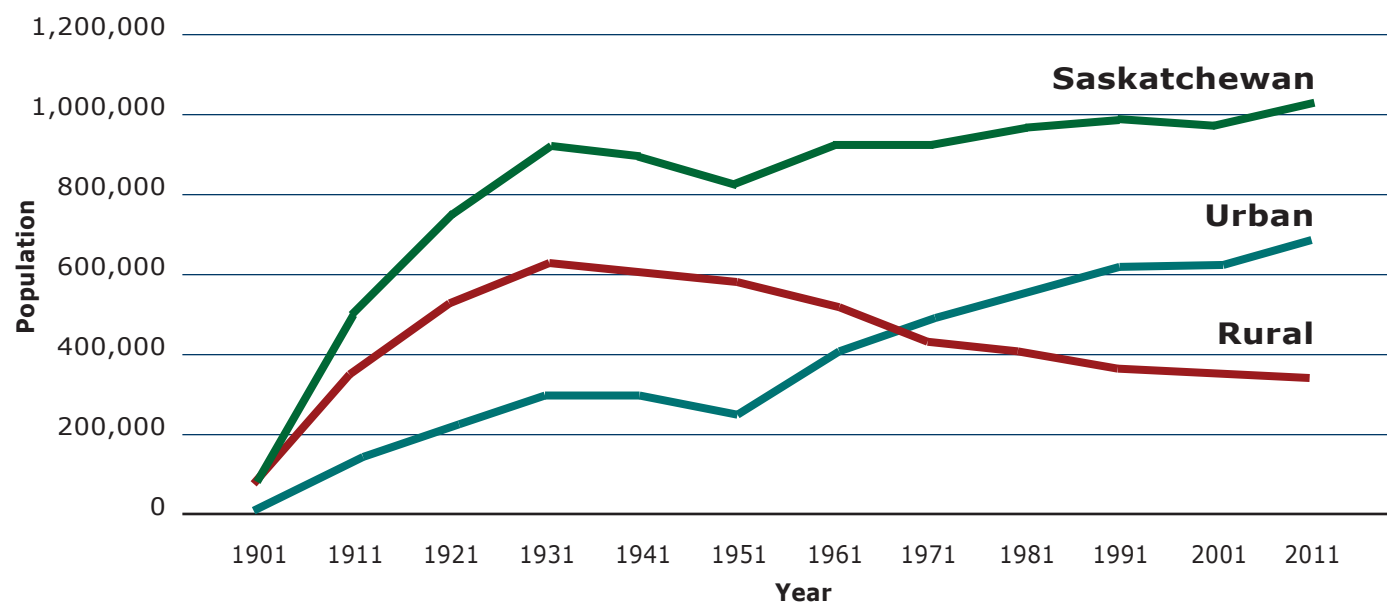
### 3. Saskatchewan in context

Over the past 150 years, Canada has transitioned from a rural to an urban nation. Pre-confederation Canada was only 13 per cent urban. By 1931, 54 per cent of the population was urban, a figure that rose to 81 per cent in the 2011 census.

Similarly, much of the population growth in Saskatchewan has been in the urban areas. In 1901, only 16 per cent of the population in present area of Saskatchewan was urban. As late as 1951, only 30 per cent of Saskatchewan residents lived in urban areas, less than one-half that of Canada at the time (62 per cent). By 2011, 67 per cent of Saskatchewan residents lived in urban areas, more than double the 1951 rate (Chart 3). Saskatchewan remains less urban than the nation as a whole, which is to be expected as a result of its strong role in agriculture.

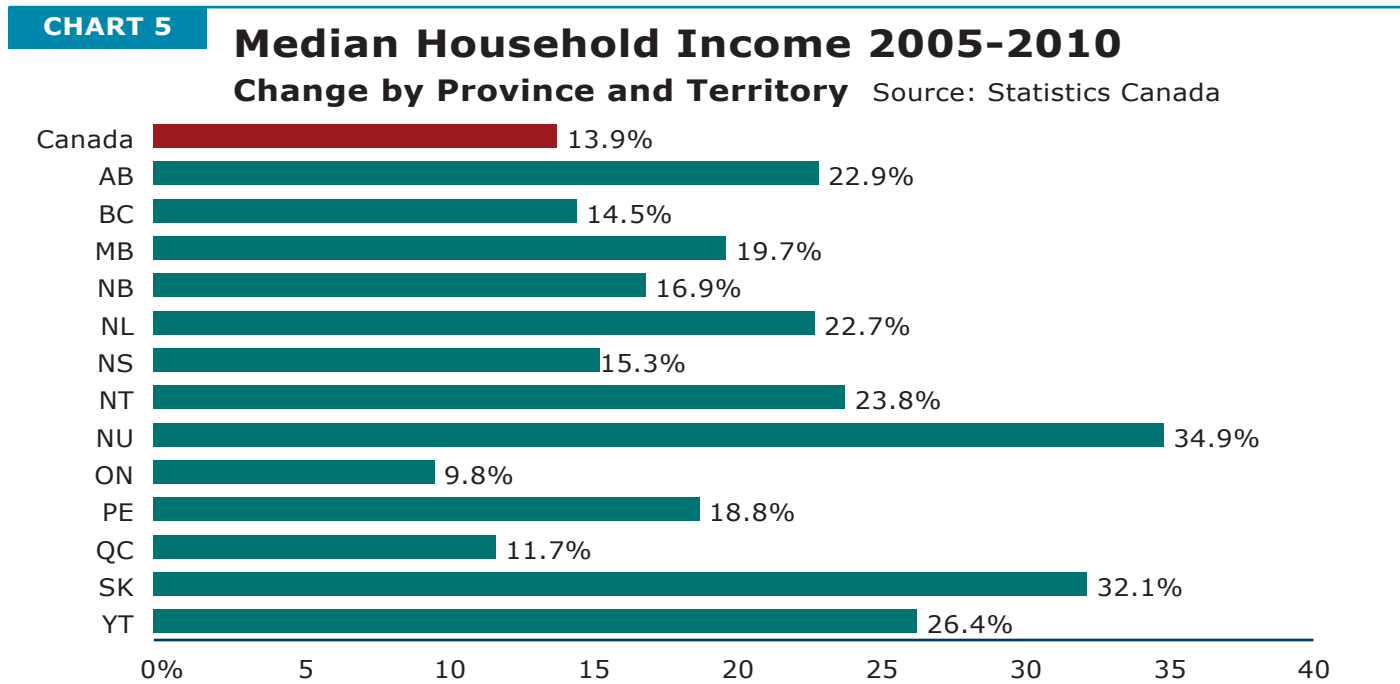
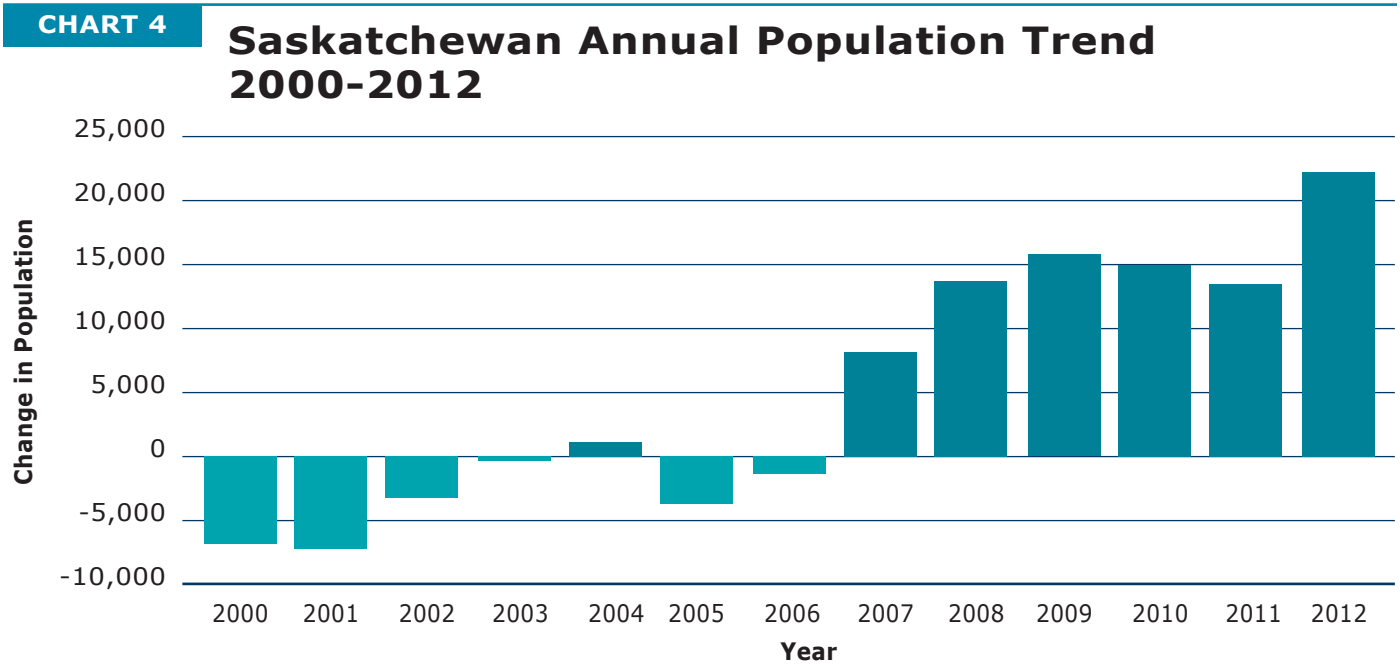
Saskatchewan has experienced very slow population growth throughout most of its history. In the early years, there was fast growth, as the population rose from 490,000 in 1911 to 920,000 in 1931. However, through the years of the Great Depression and World War II, the province lost 90,000 residents. After recovering to slightly above its 1931 population by 1961. The population gradually rose to 1,010,000 by 1986. Over the next 20 years, however, the population declined to 968,000. This trend was reversed, however, between 2006 and 2011, when the population grew to 1,031,000, the highest ever recorded in a census, as the province prospered from energy and potash. The growth accelerated in 2012, with an annual population increase of 22,000 (Chart 4, next page).

**CHART 3** Saskatchewan Population 1901-2011  
Urban and Rural



Over the past five years, Saskatchewan has been the second fastest growing province, trailing only Alberta. The population growth has been concentrated in the two large census metropolitan areas (CMAs) of Saskatoon and Regina, with more than 80 per cent of the growth. It is expected that the substantial population growth will continue. However, it would be a mistake to take Saskatchewan’s growth for granted. For example, in the first quarter of 2013, there was a modest loss in interprovincial migration.<sup>16</sup>

The recently released National Household Survey indicates that median household incomes increased at a greater rate in Saskatchewan than in any other province (Chart 5).<sup>17</sup>



# 4. Growth in the Regina Metropolitan Area

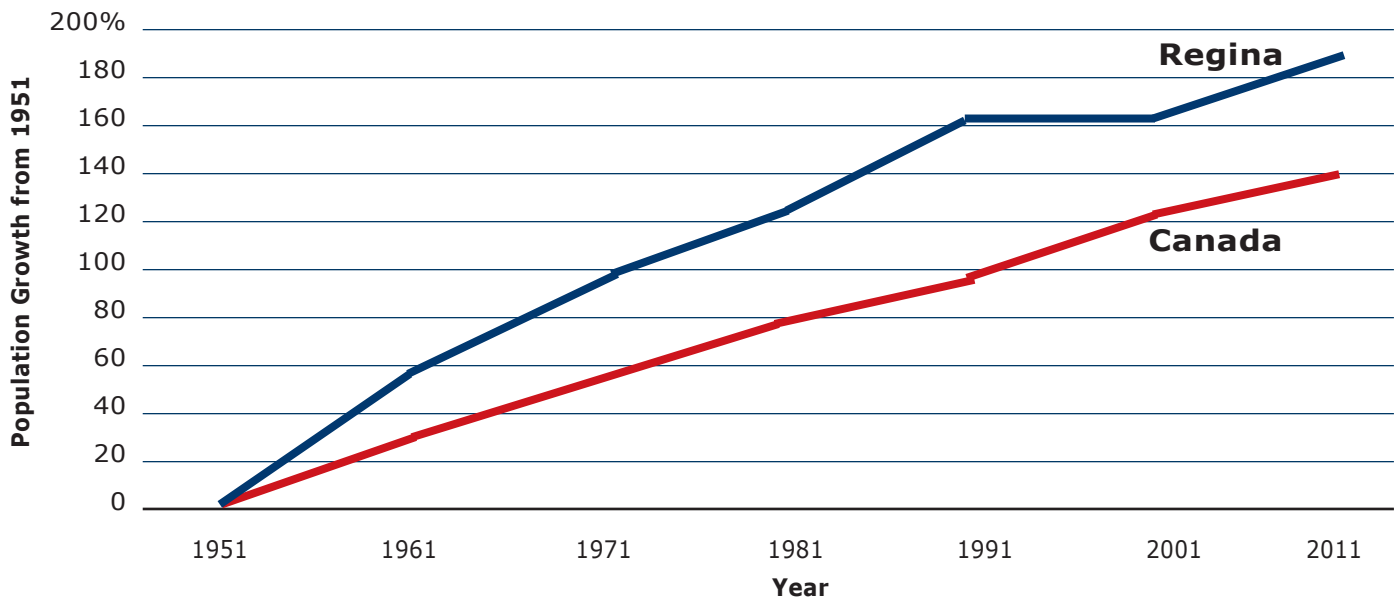
Regina was the third fastest growing metropolitan area from 2011 to 2012.

## 4.1 Regina growth in context

Regina has grown strongly since World War II. The Regina metropolitan area has tripled in population since 1951, and grown by a rate at least one-third more than Canada since 1951 (Chart 6).

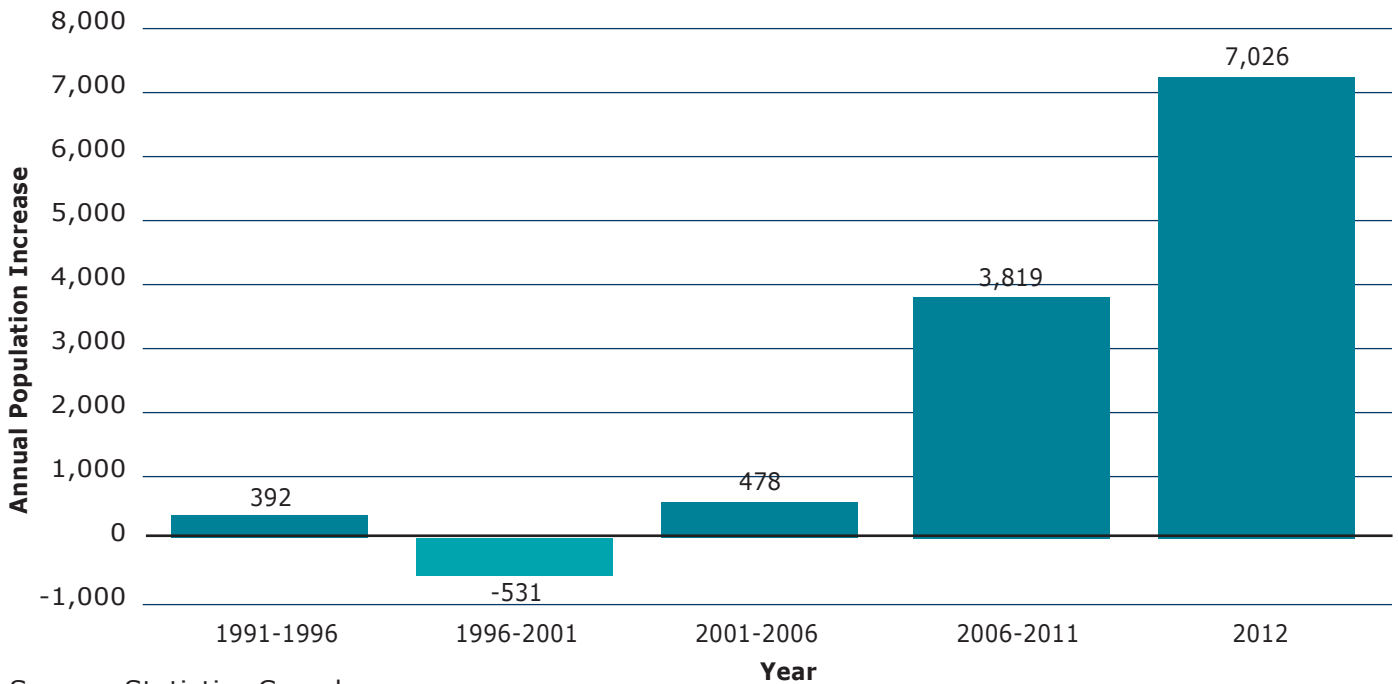
**CHART 6**

**Regina Metropolitan Area Growth 1951-2011  
Compared to Canada 1951-2011**



However population growth in the area stagnated between 1991 and 2006. Since that time, growth has accelerated. Between 2006 and 2011, the annual growth was approximately 3800, which is more than the entire population increase from 1991 to 2006. Growth reached its highest modern peak in 2012, when more than 7000 new residents were estimated in the metropolitan area (Chart 7, next page).<sup>18</sup>

**CHART 7** Annual Growth: Regina CMA  
1991-2012

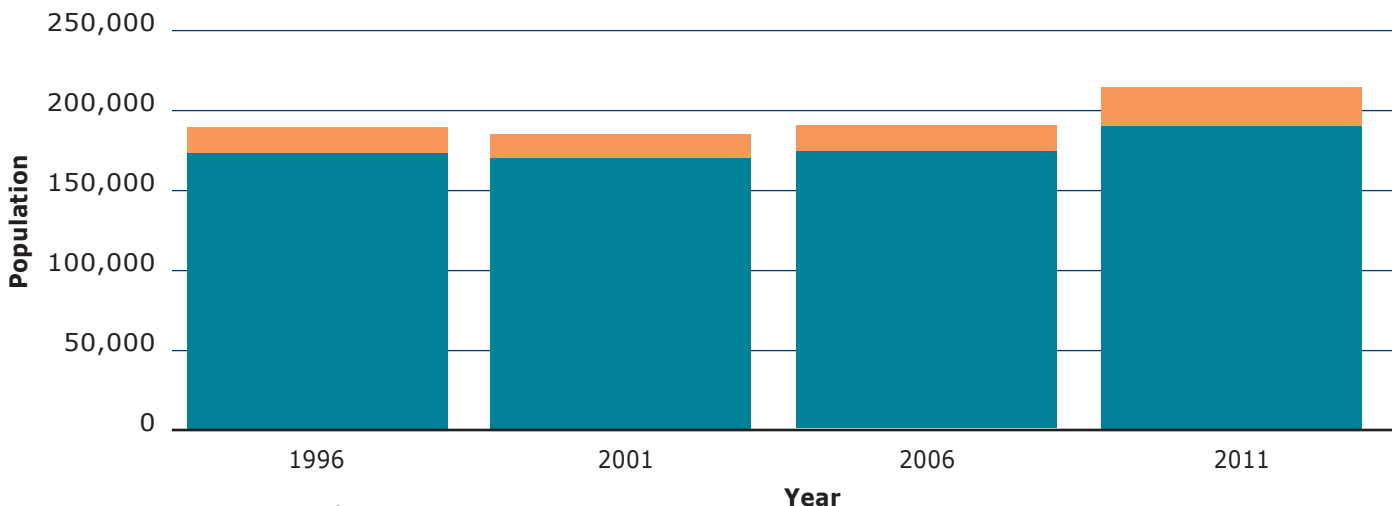


Source: Statistics Canada

## 4.2 Growth within the Regina Metropolitan Area

More than 90 per cent of the metropolitan area population is in the city of Regina (Chart 8). Though its population is much smaller, the area surrounding the city grew 32 per cent between 1991 and 2011, more than four times the 7 per cent rate of Regina.

**CHART 8** Regina Metropolitan Area Population  
1991-2011

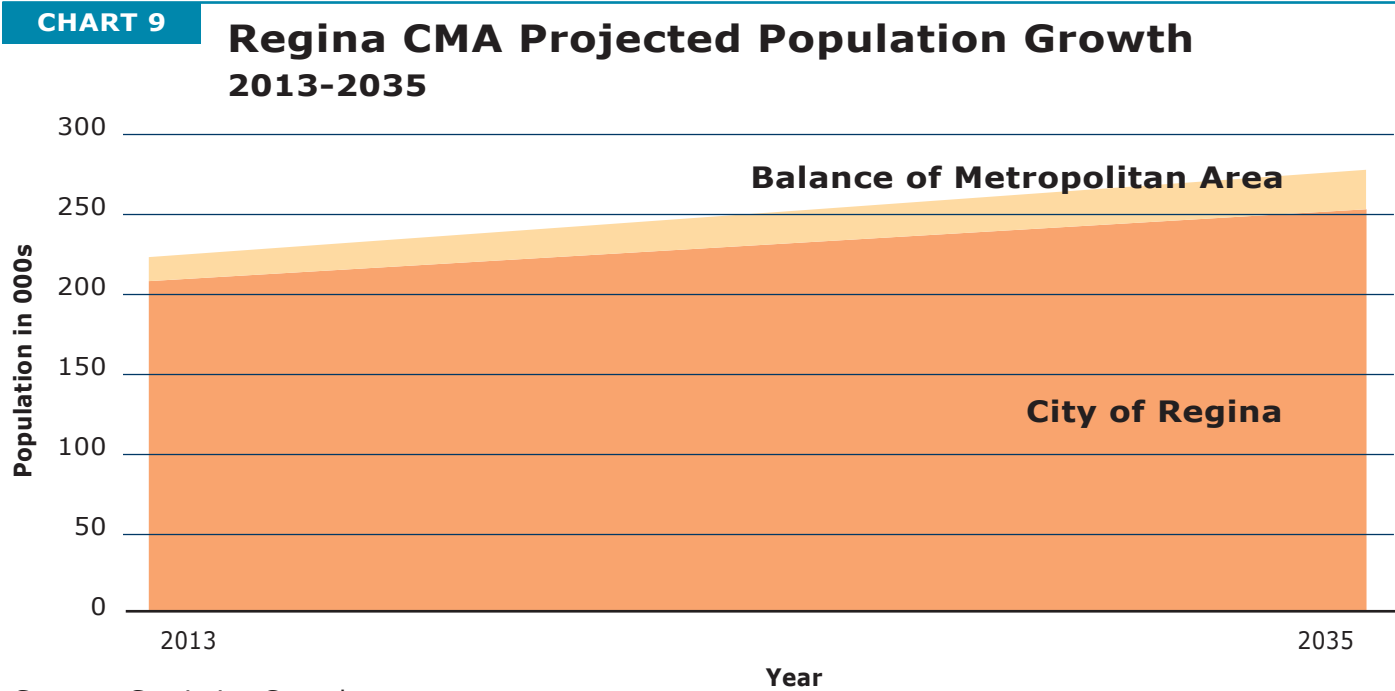


Source: Statistics Canada



### 4.3 Projected population growth

The latest population projections available indicate that the Regina metropolitan area will grow 26 per cent from 2013 to 2035. The city of Regina is projected to add 25 per cent to its population, while the outer municipalities are expected to grow 33 per cent (Chart 9).<sup>19</sup>



# 5. The Regina Metropolitan Area housing market

Historically, Regina has been an affordable market for housing. But that has changed, as house prices have risen strongly since 2006.

## 5.1: Recent house price history

The average house price has tripled since 2000, with much of the increase occurring since 2006 (Chart 10).<sup>20</sup>

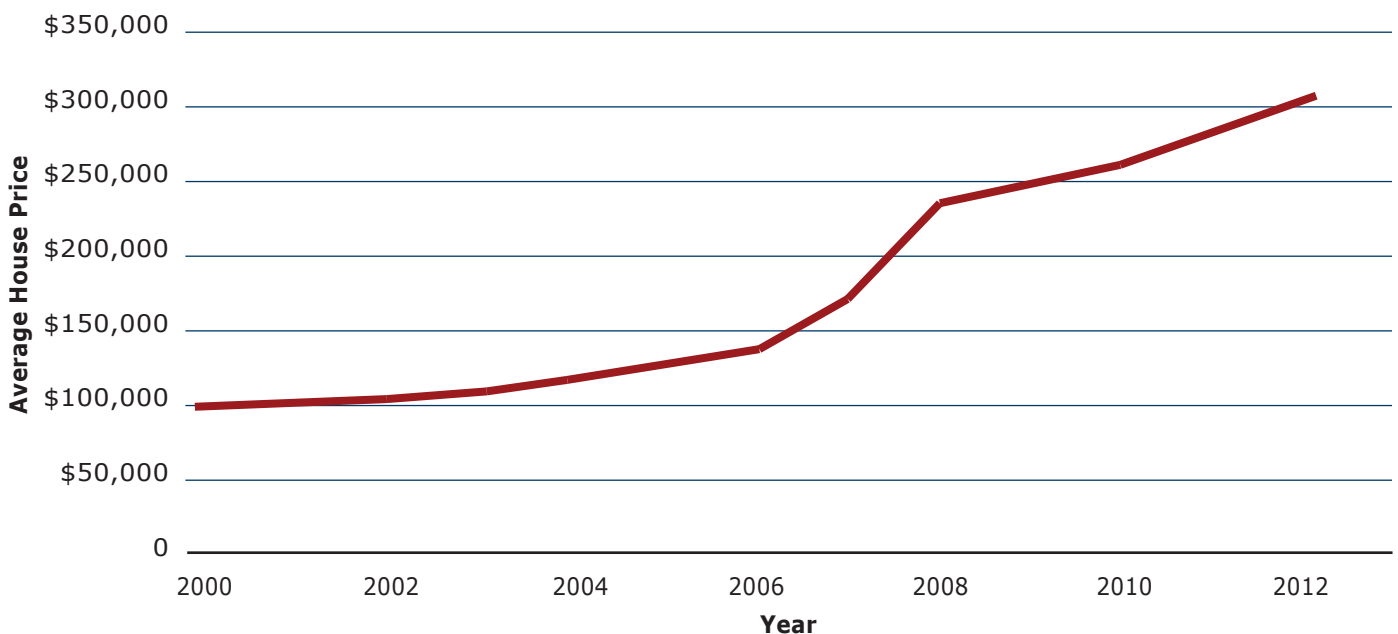
Further, house prices have increased well in excess of household incomes. The average house price rose more than three times the increase in average weekly earnings between 2005 and 2012 (Chart 11).<sup>21</sup> This is despite Saskatchewan’s having the highest median household income increase over the similar 2005 to 2010 period among the provinces.<sup>22</sup>

The extraordinary housing price increases have also occurred as the average building lot size has been substantially reduced (Section 5.4)

As a result, housing affordability has been retarded for middle income households, whose earnings now purchase less and for lower income households, many of whom have seen the opportunity of home ownership slip away.

**CHART 10**

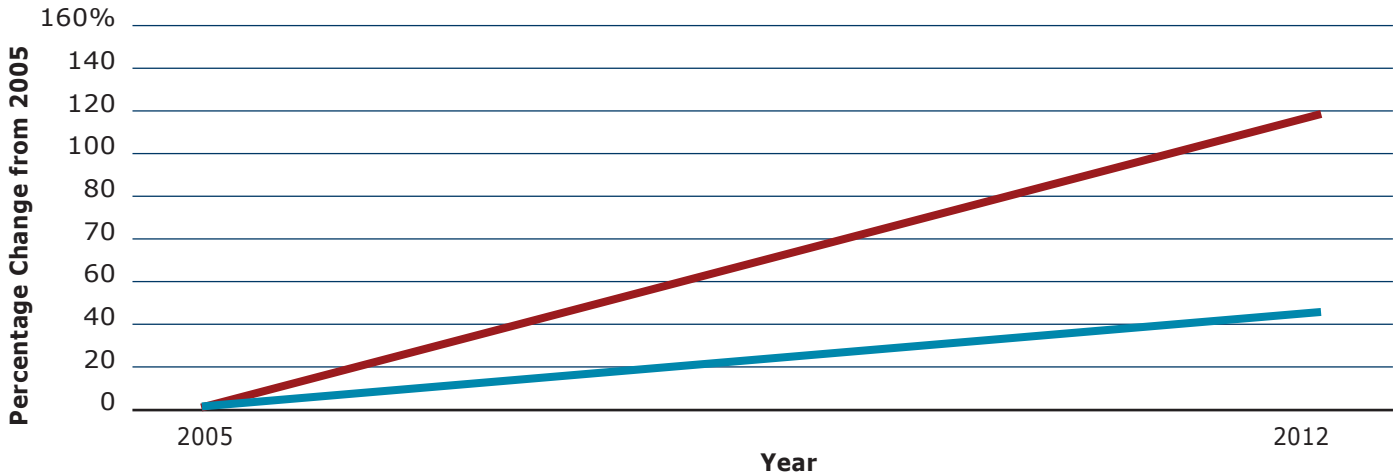
**Regina Average House Prices  
Annual 2000-2012**



Source: Association of Regina Realtors

CHART 11

### Earnings and House Prices 2005-2012 Regina CMA: July



Source: Data from CHMC and Saskatoon Region Association of Realtors

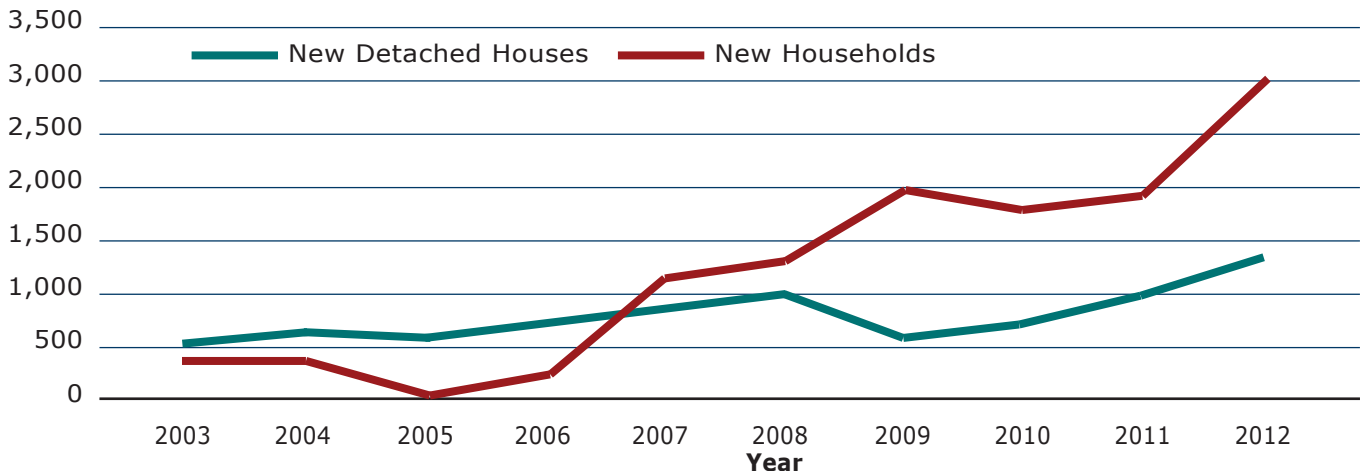
## 5.2. Shortage of new housing

As population growth exploded after 2006, price of land for residential development increased substantially. From 2006 to 2011 the price of raw land doubled.<sup>23</sup>

As Regina has grown more quickly, new detached housing did not keep up with household growth. From 2003 to 2006, nearly 600 new detached homes were added each year, approximately double the rate of household growth. In the early years of the population boom (2007 and 2008), the additional new detached houses were approximately 3/4 of the household growth rate. Since that time (2007 to 2012), however, new detached housing growth has fallen substantially, to less than one half the rate of household growth (Chart 12).<sup>24</sup>

CHART 12

### New Households and New Houses Regina CMA: 2003-2012

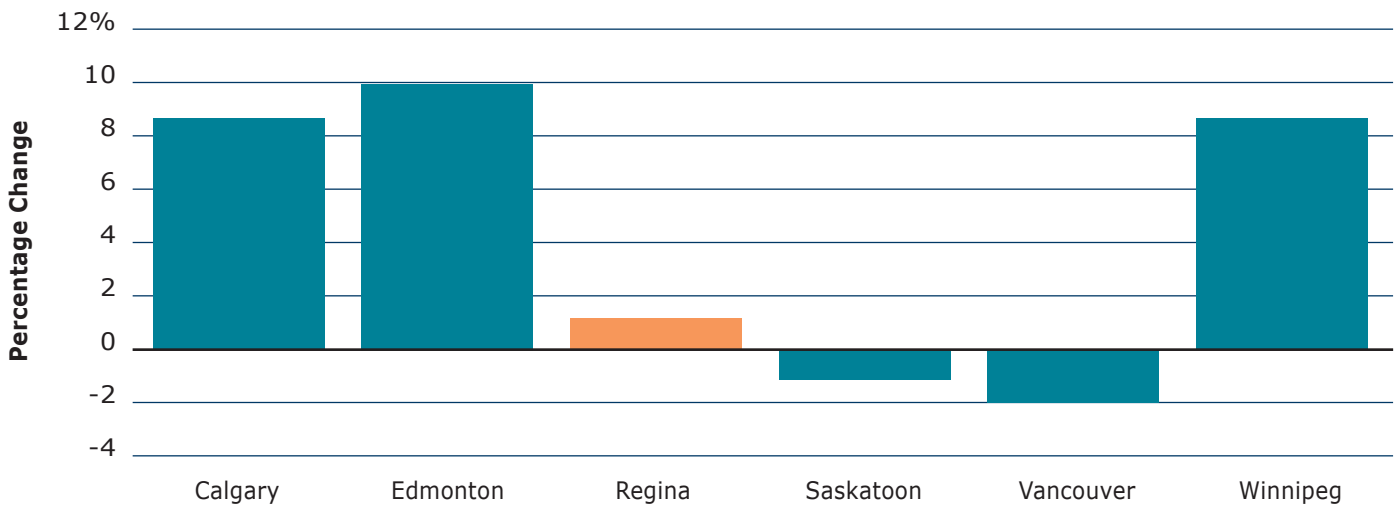


Source: Data from CMHC and Statistics Canada

### 5.3. Construction costs

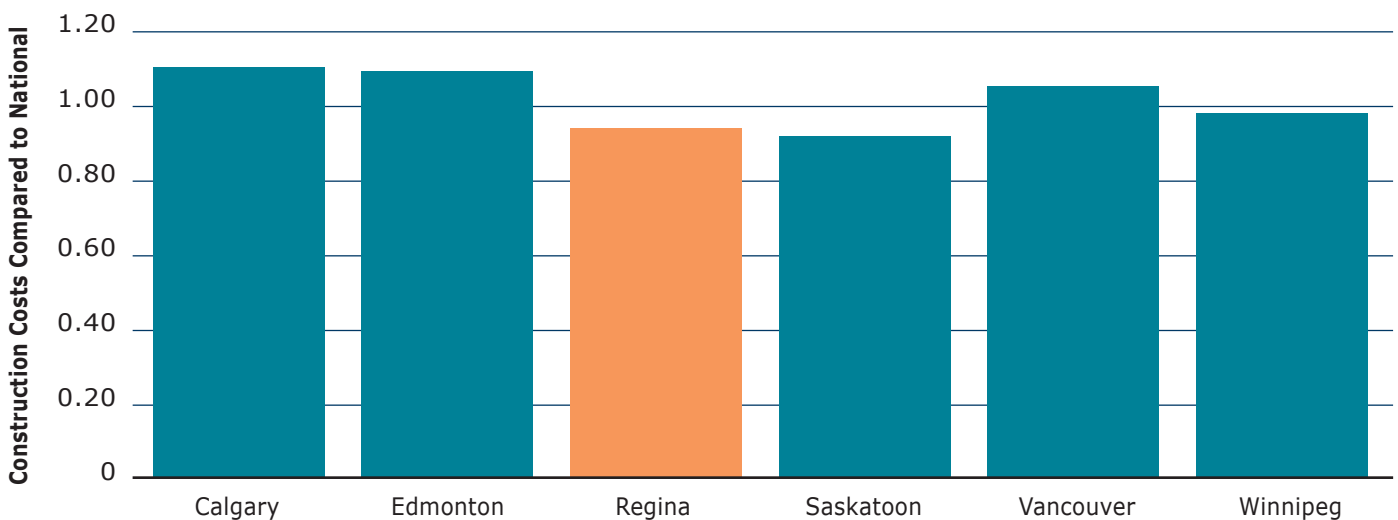
Despite the increases in house prices, unit construction cost increases may not have been significant. According to the R. S. Means construction index, construction costs increased in Regina only modestly relative to the rest of the nation from 2000 to 2010 (Chart 13). Construction costs in Regina are somewhat lower than in other metropolitan areas of Western Canada (Chart 14).

**CHART 13** Change in Construction Cost Index  
Western Canada & Prairies: 2000-2010



Source: Calculated from R.S. Means data.

**CHART 14** Construction Cost Index  
Western Canada & Prairies: 2010



Source: Calculated from R.S. Means data.

## 5.4. Developer levies and fees

Before home builders can commence construction, raw land must be converted into finished lots. This is a principal task of the land developer, who arranges for (and pays for) the local streets and utilities, such as sewage, electricity, and natural gas lines. The finished land is purchased by home builders, the price of which includes the roads and utilities that have been put in place by the developer. These costs are then passed on to the eventual home buyer, while the street and utility improvements are dedicated to the municipality and utility providers.

In addition to the expense of preparing the land for house construction, developers are also responsible for levies and fees (sometimes called impact fees), paid to municipalities to offset the costs of offsite municipal improvements that serve new subdivisions. These levies and fees can be substantial.

The city of Regina has increased its fees and levies substantially. Between 2006 and 2011, the fees and levies per new house lot rose approximate 206 per cent. This is 17 times the approximately 12 per cent increase in the consumer price index for Regina (Chart 15, next page). At the same time, the developer fees and levies per hectare had reached six times the 2006 level by 2011. This reflects the higher density housing that is being developed. This increase in fees and levies per hectare compared to the increase per building lot indicates that the average lot size has been reduced by about one-half.<sup>25</sup>

Planning and design costs have doubled over the same period, at least partially due to city of Regina requirements.<sup>26</sup>

The rise in the city imposed fees and levies are likely to have been a factor in reducing lot sizes, as builders developed smaller lots to keep house prices from rising at an even greater rate.

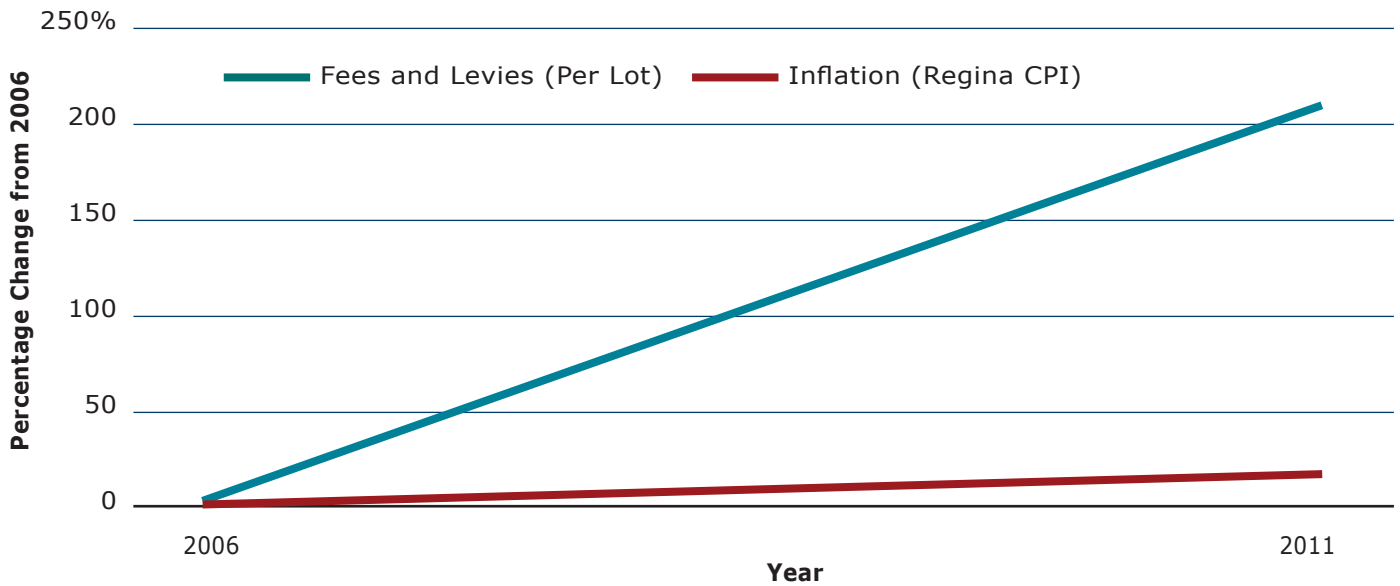
Fees and levies are a contentious issue. Developers and builders often claim that the charges are too high and that they fund functions that should be paid out of property taxes. Municipalities defend the validity of their fees and levies.

Economist Claude Gruen notes a number of difficulties with fees and levies,<sup>27</sup> such as the fact that public service provision tends to be less expensive in newer suburban communities, and that repair and upgrading (required for increasing densities) of infrastructure is more costly in more dense, established areas.

Finally, more expensive building lots and higher impact fees lead to higher cost new housing, to match the preferences of the smaller more affluent buyers market and to maintain competitive returns on investment.

CHART 15

**Fees and Levies v. Inflation 2006-2011**  
**City of Regina**

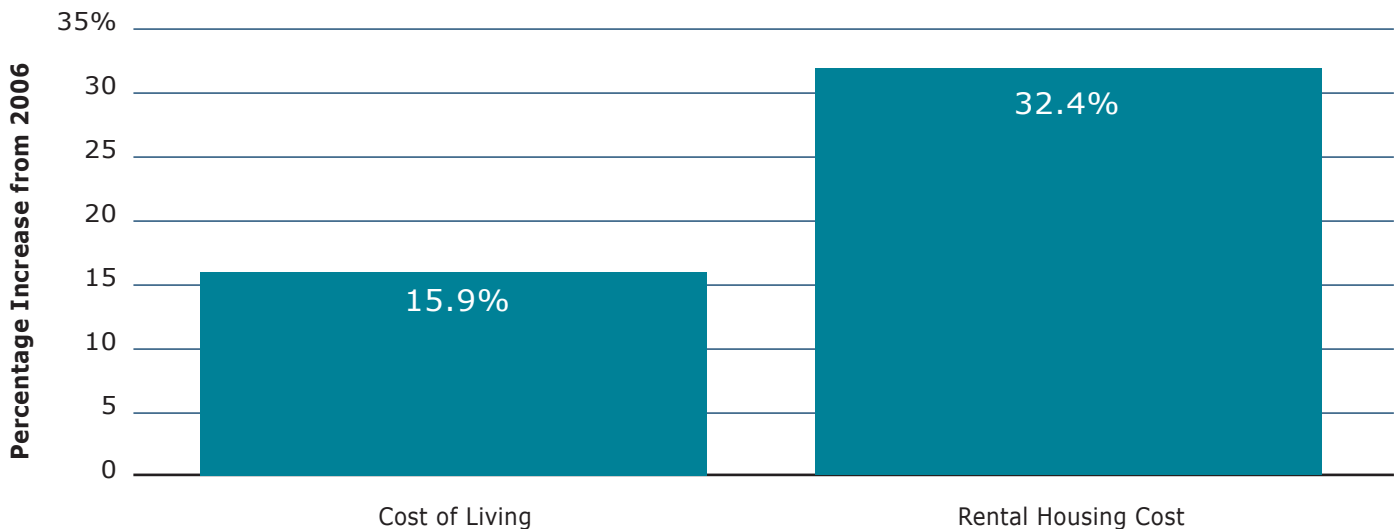


**5.5. Rents**

The cost of rental housing has also increased substantially in the Regina metropolitan area. The cost of rental housing rose 32.4 per cent, between 2006 and 2013 (Chart 16). This is more than double the 15.9 per cent increase in the cost of living. Economic research indicates that rental housing costs tend to rise along with the costs of owned housing.<sup>28</sup>

CHART 16

**Regina: Inflation and Rents 2006-2013**  
**From Consumer Price Index (July)**



Source: From Statistics Canada

## 5.6. The provincial interest in housing

Housing affordability is important to the continued economic and social progress of Saskatchewan and its metropolitan areas. The province has adopted a *Housing Strategy*, a *Housing Action Plan* and a *Plan for Growth*. These documents address important issues of housing affordability, such as construction costs and regulatory barriers. The *Housing Action Plan* indicates the intent of the problems to “support the creation of additional housing supply across the province.” The *Housing Strategy* indicates concern over rapidly rising house prices and rental rates. There is also a commitment to increase the accuracy and availability of housing data.

This provincial expression of interest is appropriate especially given the role that housing affordability plays in encouraging or discouraging migration from other parts of the nation and the world. A competitive Saskatchewan requires housing that is affordable to newcomers and to young households.

## 6. Urban land use policy in the Regina Metropolitan Area

This section summarizes urban policy in the Regina metropolitan area. With 193,000 residents, the city of Regina comprises more than 90 per cent of the metropolitan area population (211,000 in 2011). As a result, the city is the principal driving force in planning.

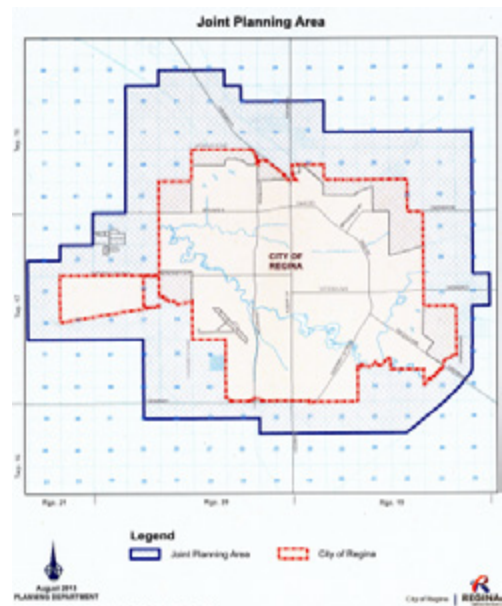
The city of Regina’s land-use planning policies operate within the framework of the Official Community Plan (OCP), which was adopted in 2011. The OCP is supplemented by other documents, such as the *Development Plan* and *Sector Plans*. Together, these documents emphasize important policy directions, such as:

- The important role that greenfield development must play is recognized. This is particularly important in a rapidly growing metropolitan area.
- There is a recognition of the necessity for new and expanded highway development again reflecting the needs of a growing community and the additional traffic likely to be generated by the Global Transportation Hub.
- A high priority is placed on economic growth, by stressing the importance of a competitive business climate.
- A concern is expressed for seeking housing affordability for low and moderate income households.

The city of Regina and the Rural Municipality of Sherwood have established a joint planning area to coordinate development in areas adjacent to the city of Regina but that are currently a part of Sherwood (Chart 17). In addition, other municipalities in the metropolitan area have their own Official Community Plans.

**CHART 17**

### Joint Planning Area City of Regina and R.M. of Sherwood





## 6.2. Residential development in the Regina Metropolitan Area

While most residential development occurs in the city of Regina, other municipalities also have a role.

**Residential Development in the City of Regina:** The city's Development Plan calls for staged development of greenfield<sup>29</sup> growth, with specific land areas designated for growth to 235,000 residents, and then to 300,000 residents.

**Residential Development in Suburban and Exurban Areas:** The city is surrounded by Sherwood, which is a party to the joint planning area with Regina. There have been disagreements with respect to issues such as Regina's intention to annex land from Sherwood. A Sherwood official criticized the recently adopted city of Regina OCP for promoting a "greenbelt" approach to urban planning<sup>30</sup> that is not based on a regional approach to growth and development and is inconsistent with the provincial government's *Plan for Growth*. Greenbelts<sup>31</sup> are a form of urban growth boundary and, as such are likely to lead to more expensive housing (Section 6.3).

Recently a memorandum of understanding (MOU) was drafted between Regina and Sherwood, to establish a process for resolution of disagreements.<sup>32</sup>

Sherwood's OCP largely anticipates residential development on very large lots. However Sherwood's OCP would permit additional residential developments. Sherwood is considering a large new development (Wascana) that could accommodate 17,000 residents, located to the west of Regina. This development would have larger lots than are generally being developed in Regina.<sup>33</sup>

Much of the metropolitan area, even beyond Sherwood, is within a 30 minute commute distance of jobs in the city of Regina. These areas could become more attractive to households should Regina house prices remain so elevated in relation to household incomes, with the additional commuting expense outweighing the lower cost housing that could often be more in line with consumer preferences. The high cost of housing in the city of Regina could induce suburban municipalities to be more active in the development of new housing, especially the detached housing that most households prefer.

## 6.3 Planning initiatives: difficulties

Generally greater regulation is associated with higher costs. The key is to ensure that regulation is no stronger than necessary. This is a particular problem in urban planning. Planner Richard Carson the relationship between regulation and housing affordability 15 years ago.

One of the more interesting development phenomena is the affordable housing paradox: "The more we regulate our physical environment to make it livable, the less we can afford to live in it."<sup>34</sup>

The reality is that higher costs can make an area more livable only for those that

can afford, relegating those who cannot to less attractive housing. Regulations must be skillfully designed, so that housing affordability is not retarded and standards of living can be maintained.

Some urban policy issues could work against housing affordability and the standard of living in the Regina metropolitan area. These are discussed below.

**Preference for Neo-Traditional Design:** The city’s Development Plan singles out neo-traditional (also called “new urbanism”) design principles for city consideration. These principles have generally favored early 20th century practices, such as placing garages behind detached housing, making it necessary to build alleys or “laneways” for access to garages. Proponents of neo-traditional designs note that it is popular in the market. Song and Knapp<sup>35</sup> indicate that:

“Specifically, we find that residents are willing to pay premiums for houses in neighborhoods with more connective street networks; more streets, shorter dead-end streets; more and smaller blocks; better pedestrian accessibility to commercial uses; more evenly distributed mixed land uses in the neighborhood; and proximity to operating light rail stations.”

Research indicates, generally that “new urbanist” housing designs, tend to be more expensive than conventional suburban housing. Such designs can add as much as from 15 to 30 per cent to construction costs. Research by the Planning Design Group indicated that:<sup>36</sup>

... these additional costs result primarily from enhanced architectural design, increased infrastructure associated with the addition of alleys (paving/drainage), and a greater emphasis on including high quality parks and civic spaces in the community’s design. In addition to up-front costs, there are additional operations and maintenance costs associated with some of the amenities.

This is despite the fact that new urban housing tends to be smaller than conventional suburban housing. However, its inherently higher cost necessarily excludes potential households from purchase, because they have insufficient resources. For these households, there is no issue of being willing to pay premiums” for which they do not have the financial resources. Encouragement of more expensive housing choices necessarily reduces the share of households that can purchase homes.

Professor Emily Talen, herself a strong advocate of both urban containment and new urbanism, found that 90 per cent of a sample of more than 150 new urbanist developments in the United States would not be affordable to a person on a teacher’s salary.<sup>37</sup> She notes that:

This is unsurprising, as two decades of New Urbanist developments have demonstrated that providing a quality public realm, a mix of unit types, good “walk ability” and community facilities can quickly result in housing priced out of reach of the very mix of society it was intended to foster.

**Staged Development. Greenbelts and Urban Containment Policy:** Staged development might not occur at a sufficient rate to ensure a supply of competitively priced land for development. This could deteriorate into the equivalent of an urban growth boundary, as development is prohibited in larger areas that are required to

keep land prices competitive. Greenbelts are also a form of urban growth boundary and could lead to higher house prices.

The price increasing effect such urban containment policies is consistent with the economic principle that when supply is less than demand, prices tend to rise. Economists Richard Green and Stephen Malpezzi summarize the issue:

When the supply of any commodity is restricted, the commodity's price rises. To the extent that land – use, building codes, housing finance, or any other type of regulation is binding, it will worsen housing affordability.<sup>38</sup>

Limiting the supply of land to less than consumer demand has been associated with substantial house price increases both in the academic research and actual experience. Additional research associates slower job creation and economic growth with urban containment policy. These issues are described in further detail in *Urban Policy: Time for a Paradigm Shift*.<sup>39</sup> The experiences of similar sized metropolitan areas with more restrictive land use policies are outlined in Appendix B.

For example, research in Portland<sup>40</sup> and Auckland (New Zealand)<sup>41</sup> indicates virtually across the board differences in raw land costs of at least 10 times, with even greater disparities in the London (UK) area.<sup>42</sup> The critical role in land costs is illustrated by comparison house construction costs in Regina with the very expensive Vancouver market. According to R. S. Means, the cost of construction a comparable house in Vancouver is only 11 per cent higher than in Regina. Yet, house prices relative to incomes are more than double that of Regina.

In any policy that seeks to control or direct growth, it is important for jurisdictions to ensure that there is a sufficient supply of competitively priced lands so that its policies do not retard housing affordability. This point was made by in a Brookings Institution policy analysis by a team lead by urban containment advocate Arthur C. Nelson of the University of Utah.

**“... the housing price effects of growth management policies depend heavily on how they are designed and implemented. If the policies serve to restrict land supplies, then housing price increases are expected”** (emphasis in original).

They further point out that growth management policies have been associated with higher house prices in California.

Finally, the higher density spawned by urban containment policy can lead to greater traffic congestion (Section A.4).

***Social Exclusion Effects of Urban Containment Policy:*** One of the principal purposes of urban containment policy, according to many proponents, is to reduce the social exclusion of lower income households by making housing more affordable.

Yet in Portland, which has developed “model” urban containment policies, owned and rental housing costs has escalated more in higher poverty areas relative to average price increases than elsewhere in the metropolitan area. At the same time, there have been extraordinary overall house cost increases relative to incomes across the Portland metropolitan area.<sup>43</sup>

# 7. Housing affordability assessment: Regina Metropolitan Area

Regina’s housing market and regulatory system performed well to facilitate a higher standard of living for residents following World War II and until the growth spurt of the middle 2000s, by maintaining housing affordability. However, the market for new single-family houses did not respond quickly enough as population growth increased substantially. The city of Regina higher fees and levies on housing have also reduced housing affordability. These factors (and perhaps others) are likely to have contributed to the higher priced houses that made much of the existing and new housing unaffordable to the rising population.

With the demand for new housing substantially exceeding the supply and with increasing lot prices, it is to be expected that home builders would build more expensive houses.

## 7.1. Consequences

Despite strongly rising household income growth,<sup>44</sup> housing prices have risen even faster. Owned housing in Regina now caters to a more exclusive market.” The less expensive home has been placed out of reach for most middle income and lower income households in the Regina metropolitan area.

The following analysis estimates the extent to which households are now excluded from purchasing housing due to the higher prices. Between the 2006 and 2012, a substantial number of households who would have qualified for mortgages in 2006 would no longer qualify:<sup>45</sup>

- Comparing the 2012 average resale house price with the 2006 average (adjusted for the increase in household income), the share of households that would be qualified for purchasing the average existing house has dropped from 66 per cent to approximately 42 per cent. This is approximately 22,000 (Figure 18) out of the approximately 90,000 households, or 24 per cent of Regina households.
- Comparing the 2012 average new house price with the 2006 average (adjusted for the increase in household income), the share of qualified households would be reduced from 39 per cent to 25 per cent. This is approximately 13,000 (Figure 19) out of the approximately 90,000 households, or 14 per cent of Regina households. This is a lower percentage than the loss in qualifying households for existing houses, because new houses are more expensive and the market of buyers is thus smaller.

These higher house price are not the result of a consumer market demanding higher quality. Consumers and households seek housing that they can afford, not housing that is beyond their financial capability. The recent housing cost trends in the Regina metropolitan area has produced a smaller, more affluent market that remains after a housing has become too expensive for a large share of middle and lower income

households.

Finally, housing affordability could become even more of a problem in the future, if new housing is subject to the constraints of urban containment policy, through staged development or greenbelt regulations, based on the conclusions of the international economic literature.

## 7.2. Future challenges

There are additional reasons for concern about the future of housing affordability and the standard of living. Mortgage interest rates have been historically low during the recent period of house price escalation. It is likely that in the longer run interest rates will return to more normal levels. This could result in substantial increases in mortgage payments. For example, if interest rates were to rise to 7 per cent, which is less than the average over the last few decades, a household with a 4 per cent mortgage on a house of the average value (approximately \$350,000) would experience a mortgage payment increase of more than \$600 per month.

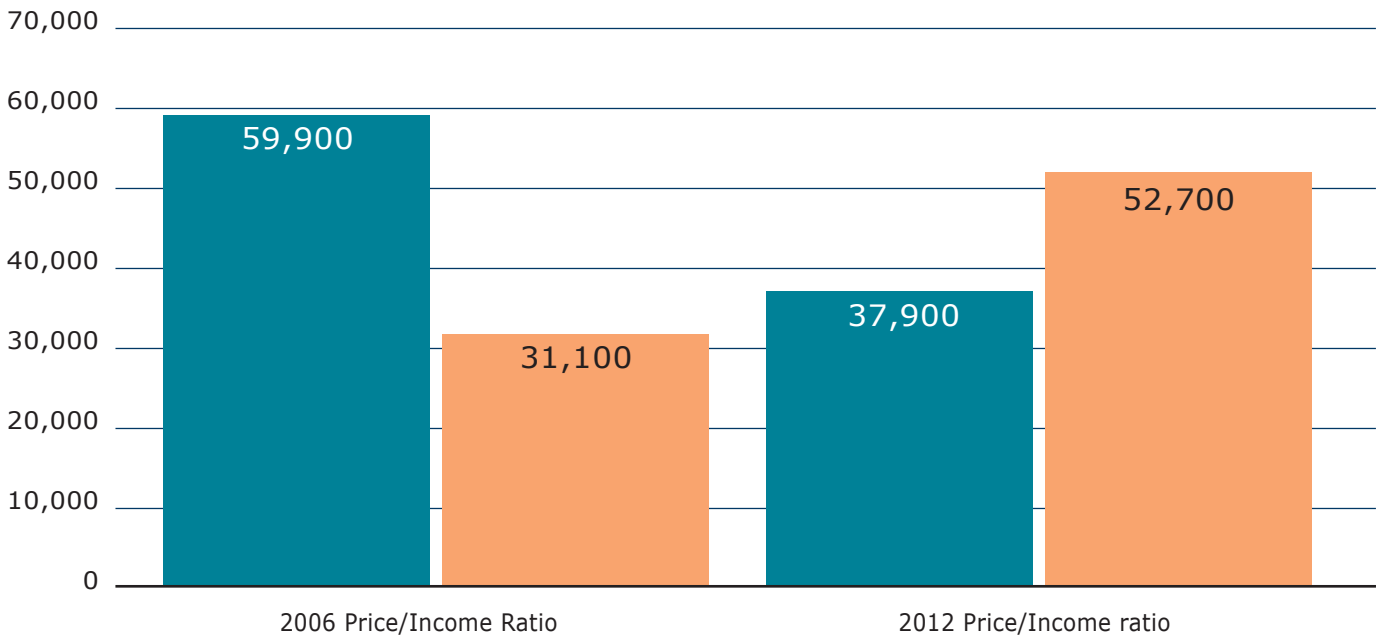
Younger households are likely to have greater financial constraints, with many facing substantial student loan debt. This will make home purchases more difficult and is an imperative for housing affordability.

Much of Regina's growth in recent years has been from immigration. A 2011 city report cites immigrant citizen concerns that: "Affordable housing is difficult to find because the traditional 2-3 bedroom home does not fully meet the needs of a larger family." Housing affordability is becoming a greater problem for newer immigrants, as incomes have been falling relative to those who migrated in previous decades.<sup>46</sup>

The Regina metropolitan area's continued growth is likely to be, at least in part, dependent upon the ability of new residents to obtain their preferred housing at affordable prices. Even more, there is an imperative to prevent further house price increases relative to incomes.

**CHART 18**

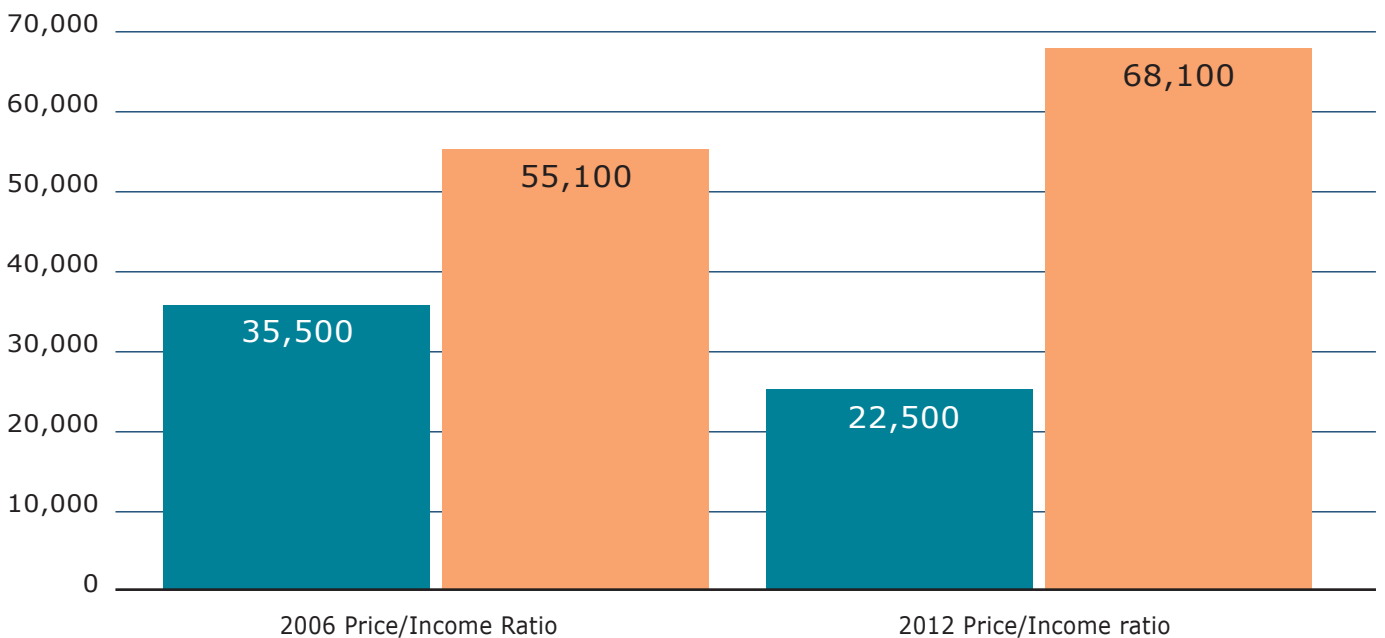
**Households Qualifying for Existing Houses  
Regina Metropolitan Area**



Source: Estimated from 2011 NHS data. At CMHC qualification standards.

**CHART 19**

**Households Qualifying for New Houses  
Regina Metropolitan Area**



Source: Estimated from 2011 NHS data. At CMHC qualification standards.

## 8. Maintaining and improving Regina's standard of living: Recommendations

There is a need for policies that allow building houses and neighborhoods that are affordable to the households that have been driven out of the home ownership market.

If house prices continue to increase greater than incomes in the Regina metropolitan area, the standard of living could decline and real poverty could be increased. As was noted above (Section 7.1), restoring housing affordability, especially for many middle income and lower middle income households will require the development of smaller houses on less expensive lots in more modest neighborhoods than are likely to be permitted by today's city policies.

In the longer run, the city of Regina could become more open to development that could restore and maintain housing affordability. There is also a role for other municipalities. This is already evident in the Wascana proposal being considered by Sherwood. From a public policy perspective, the important issue is to restore and maintain housing affordability and the standard of living, regardless of where new housing is built. The city of Regina and the municipalities located in the commuting belt should open residential development to the smaller houses on less expensive lots that are integral to the restoration and maintenance of housing affordability in the metropolitan area.

The following recommendations are offered:

***Municipal Recommendations:*** Housing affordability should become a principal overall objective in each municipality in the Regina metropolitan area. Specifically, housing affordability should be the *principal objective of planning*, subject to adequate environmental standards.

To accomplish this objective, each municipality should:

- Establish and monitor housing affordability standards. It is recommended that, at a minimum, the standards adopted by the municipalities seek to ensure no further deterioration in housing affordability, using the median multiple (Section 2). Following any year that this standard is exceeded, municipalities should permit development of sufficient additional finished lots to achieve a sufficient balance between demand and supply to restore the housing affordability standard.
- Take immediate steps to allow restoration of the less expensive new detached house market. This would include authorization of developments that do not require the more expensive amenities of neo-traditional planning nor plan driven geographical constraints. This would permit the city of Regina to continue its present neighborhood development strategies, but not as the exclusive development model

for new housing.

- Implement infrastructure finance options that could improve housing affordability. For example:
  - Bonding for Fees and Levies: Municipalities could issue bonds to finance levies and fees, with the principal and interest paid by the residents of new housing.<sup>47</sup> This would improve housing affordability by reducing initial sale prices, which is also likely to lead to more modest existing house price increases.<sup>48</sup>
  - Municipalities could permit establishment of special housing districts or utility districts that could be offer self-contained public services and utilities, following models in Texas, Colorado and California and New Zealand.<sup>49</sup> This would remove the burden of providing services for such new developments, for example, from the city of Regina, while permitting restoration of the lower cost new home market. At the same time, developers and home builders would have an incentive to minimize the costs of such infrastructure to attract buyers.

**Provincial Recommendations:** It is recommended that the province of Saskatchewan amend its housing strategy documents to include the following:

- Citation of the necessity to restore and maintain competitive land prices for all types of housing throughout municipalities.
- A requirement for municipalities to adopt housing affordability standards and monitor housing affordability, with annual public reports. This should include an owned housing standard (median multiple) and a rented housing standard.
- Inclusion of housing affordability data in the “Municipal Information Data Portal” webpages.<sup>50</sup>

**Putting People First:** These policy initiatives could improve the standard of living for Regina metropolitan area residents, by making housing affordability a prerequisite to urban design objectives (emphasizing outcomes over inputs). As noted above (Section 1), people have moved to cities, including the Regina metropolitan area, for a higher standard of living. If housing is insufficiently affordable, fewer migrants, inter-provincial and international, are likely to arrive.

The ultimate test of urban planning is the extent to which it contributes to a higher standard of living and lower poverty levels. There is a need for a new paradigm in urban policy, which appropriately places people and households above urban design. Improved and sustained housing affordability is likely to contribute to the strong growth sought by the area.



# Appendix A: Sustainability

The principal goals of a higher standard of living, with less poverty do not contradict sustainability. This section describes sustainability issues that are often raised in objection to more liberal land use regulations (as opposed to urban containment policy).

## A.1. Greenhouse Gas Emissions

Urban containment policy, which is largely favored in urban planning, generally favors higher densities, opposes detached housing and seeks to transfer travel demand from cars to transit is of long standing, This thrust stretches back at least to the British *Town and Country Planning Act* of 1947 and later initiatives, especially in the 1970s in Vancouver, Sydney and Portland.

In more recent years, these initiatives have been strengthened by the concern for reducing greenhouse gas emissions. It was generally thought that greenhouse gas emissions could be substantially reduced by substituting higher density housing for detached housing, and by discouraging automobile use.

The expectation that urban containment policy would contribute substantially to the objective of reducing greenhouse gas emissions has proven to be disappointing. Comprehensive studies indicate that the potential reduction is not only minimal, but it is also prohibitively expensive. Reviews in the United States have indicated that urban containment policies are generally capable of reducing greenhouse gas emissions no more than 5 per cent from the elevated levels that will occur from increased driving and new housing construction by 2050.<sup>51</sup>

Even worse, these strategies would achieve their modest results only at great cost. The United Nations Intergovernmental Panel on Climate Change (IPCC) has indicated that sufficient greenhouse gas emission reductions can be achieved at a range of from \$20 to \$50 per ton. Yet the cost of reducing greenhouse gas emissions through transit alternatives has been estimated at \$1000 per ton,<sup>52</sup> and the additional housing costs incurred to reduce greenhouse gas emissions have been estimated at nearly \$20,000 per ton.<sup>53</sup> Obviously, such lavish expenditures are not only unnecessary in but could also seriously retard economic growth and increase poverty.

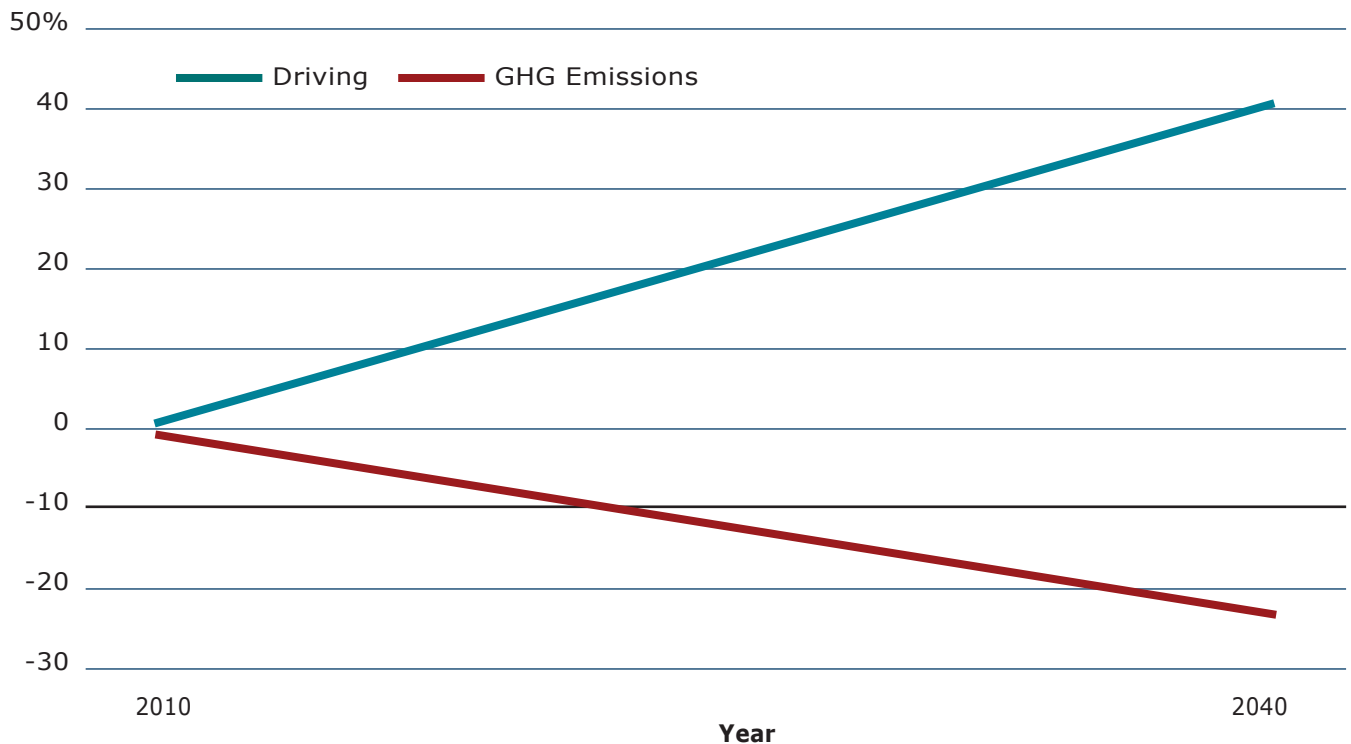
Meanwhile, new regulations are projected to reduce greenhouse gas emissions much more, even as driving continues to increase (Figure 20). Importantly, these gains are projected to be achieved costlessly – the vehicle operating cost savings are projected to exceed the additional cost of the regulations.<sup>54</sup> Other sources project even greater savings, based upon more conservative driving volumes. Moreover, these projections assume no regulatory actions to improve greenhouse gas emissions after 2025. Similar regulations are under consideration in Canada.

Further regulations are likely and there is considerable potential for other technological advances to improve automobile fuel efficiency beyond current projections.

The potential progress is indicated in a New York University research report: “The advent of a new generation of automobiles – cars that do not harm the physical environment – represents a major turning point in urban mobility.”<sup>55</sup> Door-to-door automobile transportation, which plays such a large role in economic growth and job creation (Section 8.4), has emerged as sustainable.

Similarly, substantial improvements have been made in reducing greenhouse gas emissions from lower density housing. According to the Canadian Home Builders Association, the residential sector has experienced a 5 per cent net reduction in GHG emissions since 1990, while overall GHG emissions have risen 18 per cent. This improvement in housing GHG emissions is despite a substantial increase in housing units and an increase in average new house size.<sup>56</sup>

**CHART 20 U.S. Driving and GHG Emissions From Light Duty Vehicles: 2010 to 2040**

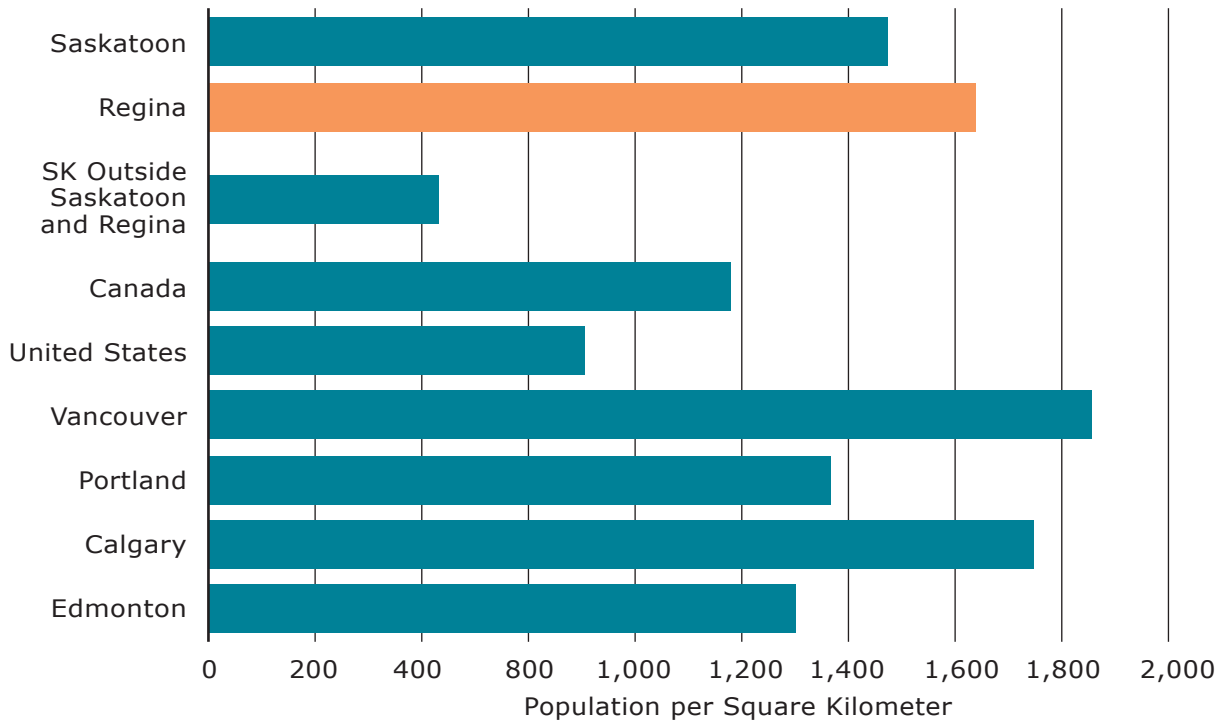


## A.2. Urban area density and infill

The Regina population centre (the area of continuous urban development) is dense.<sup>57</sup> The Regina urban area is more than 35 per cent denser than the average urban area in Canada and nearly 80 per cent denser than the average US urban area. Regina has approximately 20 per cent greater density than Portland Oregon, which is renowned for its urban containment policies. It is approximately 45 per cent more dense than Edmonton and 5 per cent denser than Calgary. Regina’s density is particularly great in comparison with the smaller urban areas of Saskatchewan (those outside Saskatoon and Regina) at more than 3.5 times as dense (Chart 21).

CHART 21

**Regina Urban Density 2010/2011  
Compared to Canada, U.S. Urban Areas**



Source: Calculated from Statistics Canada and U.S. Census Bureau data.

**Urban Density in Context:** It is often claimed that urban areas consume too much land, or that they are insufficiently dense. As is noted in Section 1.1, urban areas around the world have expanded spatially as has been permitted by urban transport technology.

The world’s largest urban areas exhibit a great range of land area and population density. For example, the Dhaka (Bangladesh) urban area is the highest urban density megacity<sup>58</sup> in the world, at 45,000 per square kilometer.<sup>59</sup> This is nearly 25 times the average urban population densities in the six largest metropolitan areas (1,900 per square kilometer).

In contrast, the New York urban area covers more than 11,500 square kilometers and is the world’s least dense mega-city, at fewer than 2,000 persons per square kilometer. The US average for major urban areas has even lower densities, at 1,200 per square kilometer. Some large urban areas have below 1,000 per square kilometer, such as Boston and Atlanta.<sup>60</sup> In these urban areas (and some others in the US), the low population densities have been driven by urban planning regulations requiring large minimum lot sizes. These regulations, which produce below-market population densities, have not generally been adopted in Canada.

There are no standards for minimum urban density, and as Appendix A.5 indicates, there is no shortage of land for urban development. As noted above, the objective of policy should be on maintaining and improving the standard of living and reducing

poverty. Efforts to mandate density levels should be evaluated based on their impact on this objective. As is noted in Section 1, urban containment policy is associated with lower standards of living and greater poverty.

***Infill Policy in Context:*** Similarly, there is no standard with respect to “infill” versus “greenfield” development. As with density mandates, infill mandates can limit the housing developed in greenfield areas, producing scarcity. This leads to higher house prices. Like density mandates, the test of infill mandates is the impact on housing affordability and the standard of living.

### **A.3. Regional planning**

Some level of regional planning is necessary in any metropolitan area. The arterial road system and design of utility systems are examples.

Regional planning can improve or retard the standard of living. Like any other public policy, the success of regional planning depends on the skillfulness of its implementation. With respect to land use and transportation planning, regional planning can be beneficial to the extent that it facilitates a higher standard of living. In other words, the evaluation is based on results, not design or intentions.

Regrettably, a number of regional planning efforts have had negative impacts on both the standard of living and poverty, by their association with rising house prices. Regional (or national) imposition of urban containment policies have driven house prices higher in Vancouver, Toronto, Portland and virtually all of the major metropolitan areas of Australia and New Zealand, in the United Kingdom. Most of the metropolitan areas that have experienced the most significant losses in housing affordability have had strong regional planning.<sup>61</sup> Nonetheless, urban containment policies at the sub-regional level can also result in a significant loss of housing affordability.<sup>62</sup>

Thus, regional planning needs to strike a balance between the sufficient provision of adequate infrastructure and coordination of cross boundary services and a flexibility that allows retention of a competitive supply of land for development. Like urban planning, regional planning should place maintenance and improvement of the standard of living as a principal goal. This requires housing affordability.

### **A.4. Transportation**

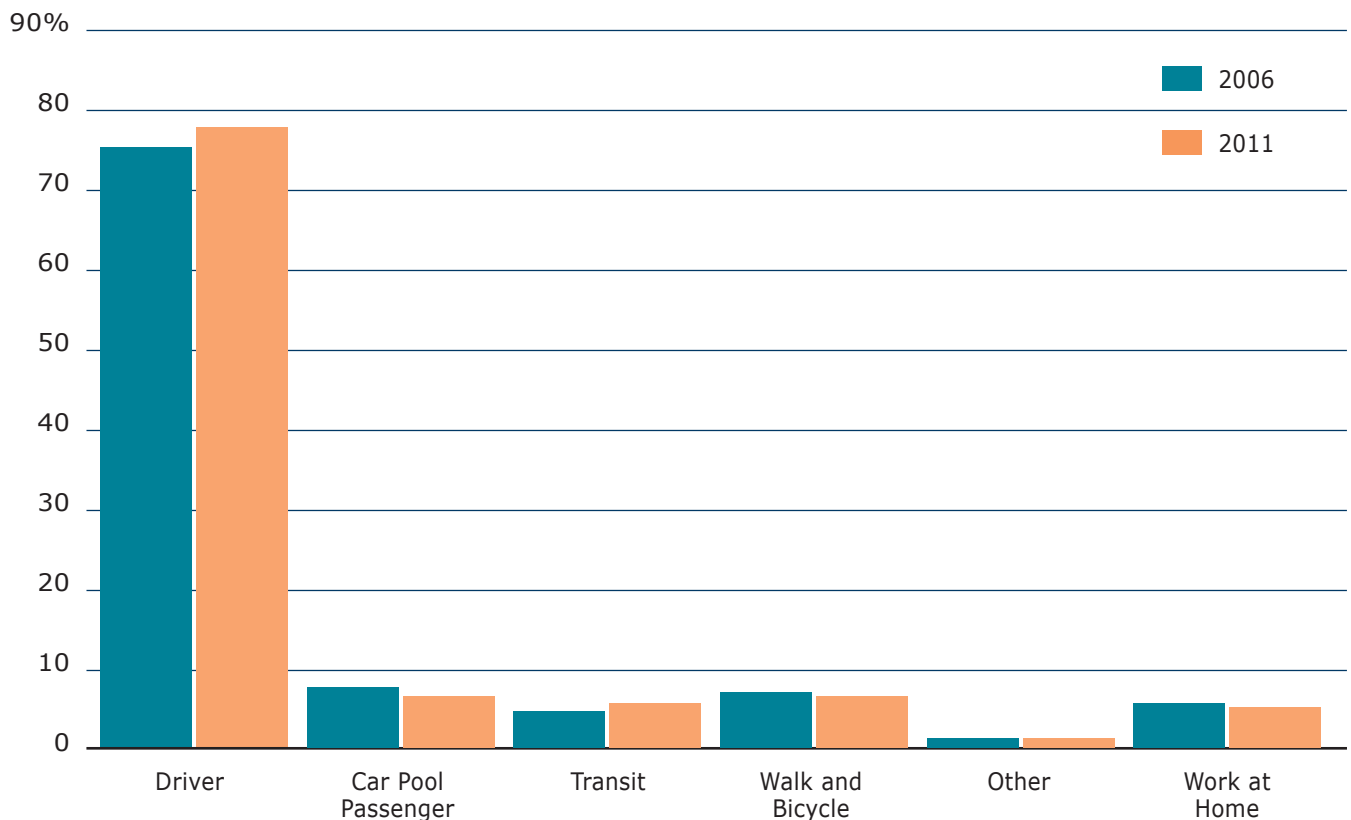
Much of urban containment policy is based on the assumption that light vehicle use should be replaced by transit, the bicycle and walking.

The reality is much more complicated. In every metropolitan area of Canada, Western Europe, the United States, Australia and New Zealand, the overwhelming majority of motorized travel is by car. Further, there are no cases where there is a substantial decline underway in the market share of motorized travel. Moreover, no metropolitan area has serious plans that would materially reduce the share of travel by automobiles (which here refers to automobiles, sport utility vehicles and

pickup trucks). That is because most of the modern metropolitan area cannot be accessed by transit, cycling or walking in travel times that are competitive with automobiles. An exception is some trips to the largest downtown areas. These areas represent a minority of employment, averaging approximately 15 per cent in the major metropolitan areas of Canada. Approximately 17 per cent of employment in the Regina metropolitan area was downtown in 2006.<sup>63</sup>

Considerable attention is given to transit in city planning documents. Yet, the overwhelming majority of travel in the Regina metropolitan area is by light vehicle. In 2011, the Regina metropolitan area had an automobile driver one-way work trip market share of 78.1 per cent, up from 75.5 per cent in 2006. Between 2006 and 2011, car travel increased by 11,500 daily one way trips. The total transit increase was 1,100 one way trips between 2006 and 2011. This increase was offset by a decline of 1,300 in carpool passengers, walking and cycling as well as people working at home. All of the net new travel to work was by car drivers (Chart 22).

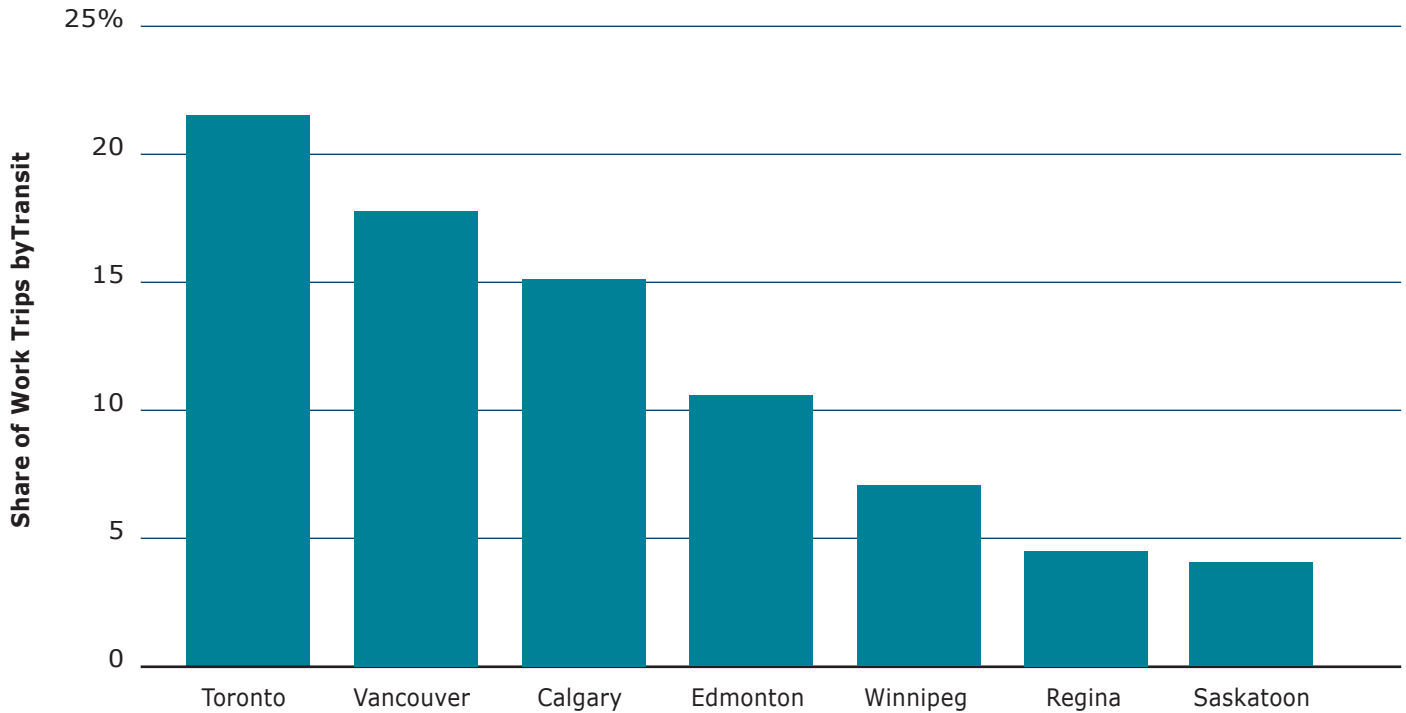
**CHART 22** Change in Transit Work Trip Market Share  
Regina Metropolitan Area 2006/2011



Source: From Statistics Canada data.

Overall, approximately 4.6 per cent of one way work trips were on transit in 2011. This is up from 4.0 per cent in 2006. Regina’s transit market share is far below those of the largest areas, at less than 1/5 that of Toronto, less than 1/4 that of Vancouver and less than one third that of Calgary (Chart 23).

**CHART 23** Transit Work Trip Market Share 2011  
Selected Metropolitan Areas



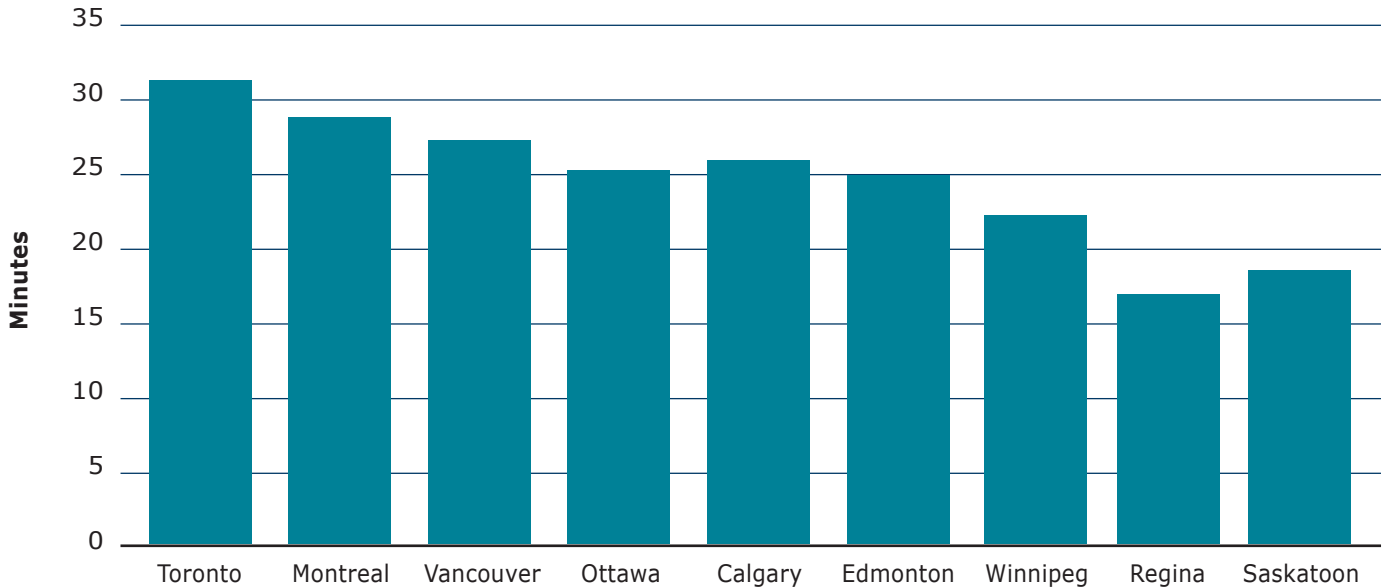
Source: From Statistics Canada data.

Working at home accounts for nearly the same level of employment access as transit in the Regina metropolitan area (4.5 per cent versus 4.6 per cent). Working at home is the ultimate sustainable form of work access, because it totally eliminates the work trip. Statistics Canada research indicates that working at home has been especially successful in suburban areas of the larger metropolitan areas, where transit access is less substantial.<sup>64</sup> Yet, despite the considerable opportunities for expanding working at home due to information technology advances, this mode of access declined over the last census period.

One of Regina’s competitive advantages is its short average one-way commuting time, which averages 17.3 minutes and considerably less than the nation’s larger metropolitan areas (Chart 24, next page).

CHART 24

**Work Trip Travel Time: One Way 2011**  
Selected Metropolitan Areas

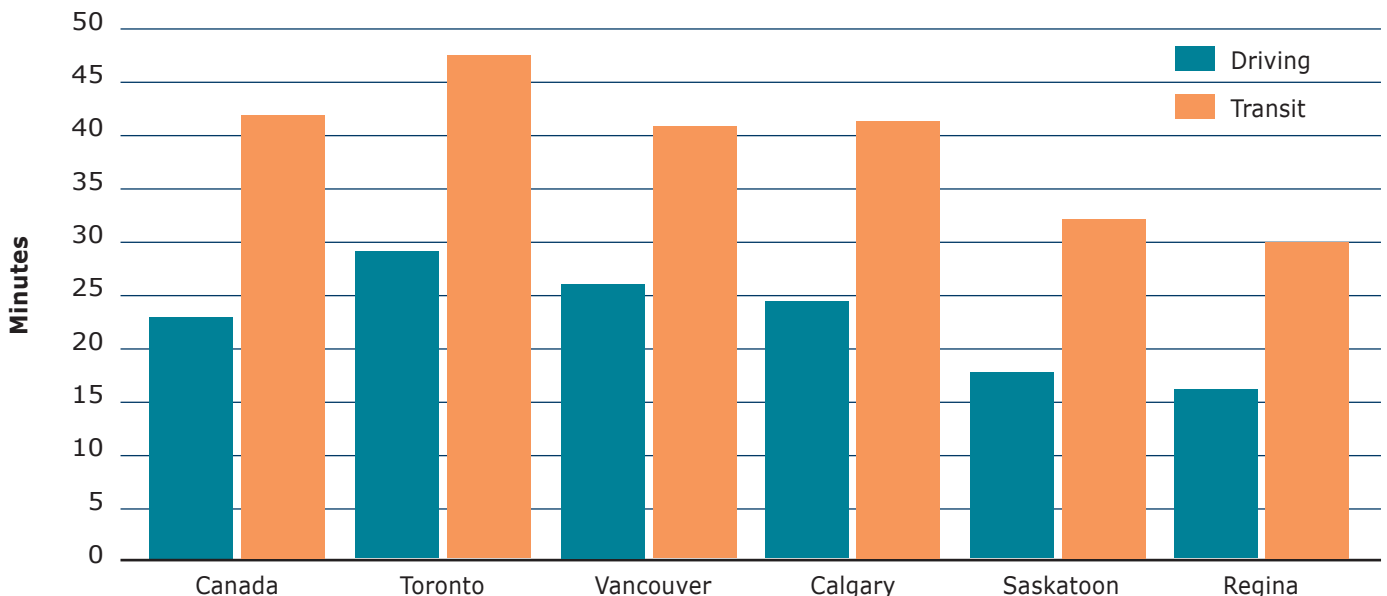


Source: From Statistics Canada data.

Further, as in the rest of the nation, automobile drivers spend considerably less time commuting to work than those who use transit. In 2011, automobile drivers averaged 16.1 minutes commuting. The duration of transit commuting was nearly double that, at 30.1 minutes in Regina. At the national level, the ratio is similar, with automobile commuters taking 23.2 minutes each way commuting to work and transit users commuting 42.2 minutes (Figure 25).<sup>65</sup>

CHART 25

**Work Trip Travel Time: One Way 2011**  
Selected CMA's: Driving and Transit



Source: From Statistics Canada data.

There may be an expectation that improvements to transit, such as rapid busways or light rail might improve on automobile travel times.<sup>66</sup> Yet, door-to-door transit travel times are *inherently* longer than by car, virtually throughout the Western world. This is regardless of population density and regardless of the extent of transit investment. Even in Toronto and Vancouver, with their high-quality rail based mass transit systems, automobile travel is, on average, much faster for the average commuter than transit travel.

## Calgary and Portland comparisons

Regina is a similar size to that of Calgary in the 1950s, but which has grown to more 1 million persons. Calgary has had strong urban containment policies, including an urban growth boundary and the development of North America's most successful new light rail system. Even so, new data from the *National Household Survey*<sup>67</sup> indicates that Calgary had the largest increase in the share of people commuting to work by driving of any major metropolitan area in Canada between 2006 and 2011. Indeed, 99.7 per cent of new employment access in Calgary was by single-occupant driver between 2006 and 2011. Among the major metropolitan areas, Calgary has the highest driver market share, except for Edmonton.<sup>68</sup>

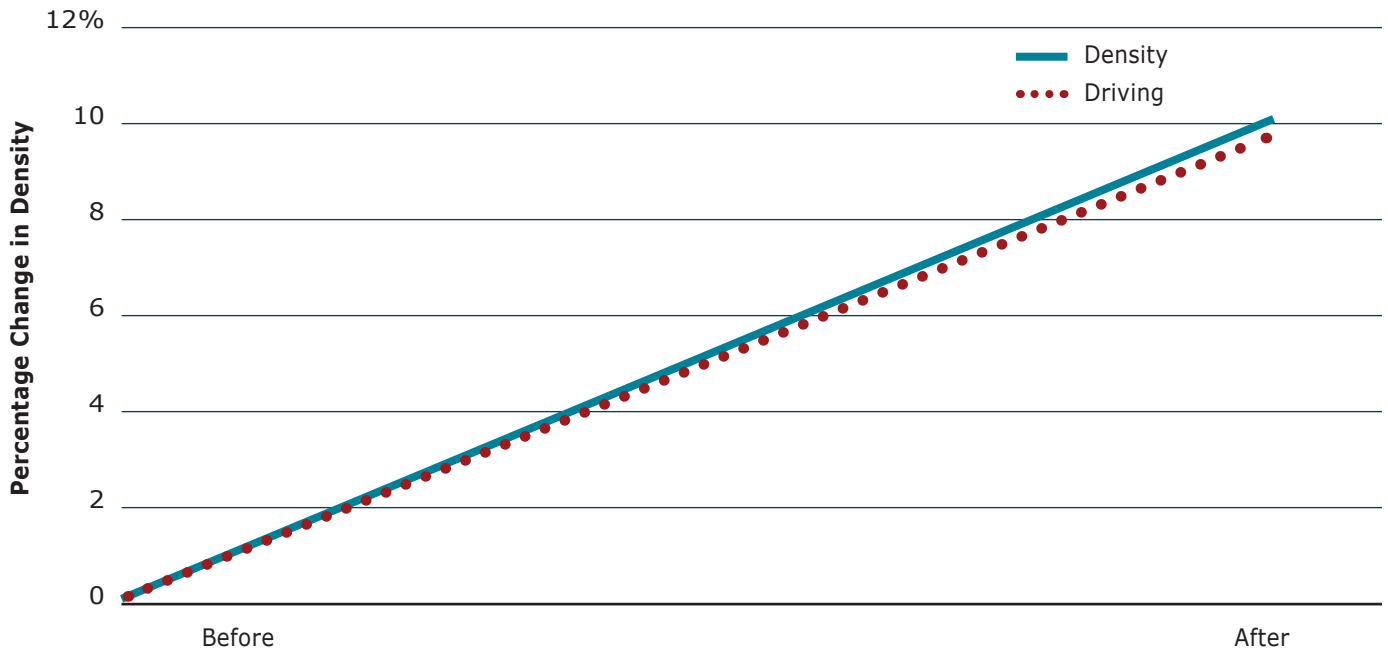
Similarly, in Portland, with some of the strongest urban containment policies in the world, transit share of work trips is one third below its level before the metropolitan area began operating its first of five light rail lines, during the early years of its urban growth boundary. The Portland urban area remains less dense than the Regina urban area (population centre). Portland's traffic congestion has intensified considerably, and now ranks 6th worst in the United States out of 100 of the largest urban areas, compared to its much lower congestion level in 1982, when it ranked 39th. Portland's high ranking in traffic especially notable, since it is only the 23rd largest urban area in the United States.

**Traffic and Density:** The view is sometimes expressed that higher densities will induce people to use transit rather than cars. In fact, car usage increases almost at the same rate that population density increases. Often cited research on the subject, by Robert Cervero of the University of California and urban containment proponent Reid Ewing of the University of Utah indicates that a 10 per cent increase in population density leads to only a 0.4 per cent reduction in kilometers traveled per person.<sup>69</sup> This means that in an area that increases its density by 10 per cent, total travel by automobile can be expected to increase by 9.6 per cent (Figure 26). Further, international data indicates that traffic congestion is more intense and work trip travel times are longer in more dense urban areas.<sup>70</sup>



CHART 26

### Densification and Vehicle Travel Impact of a 10% Increase in Population Density



Source: Based on Ewing & Cervero, 2010

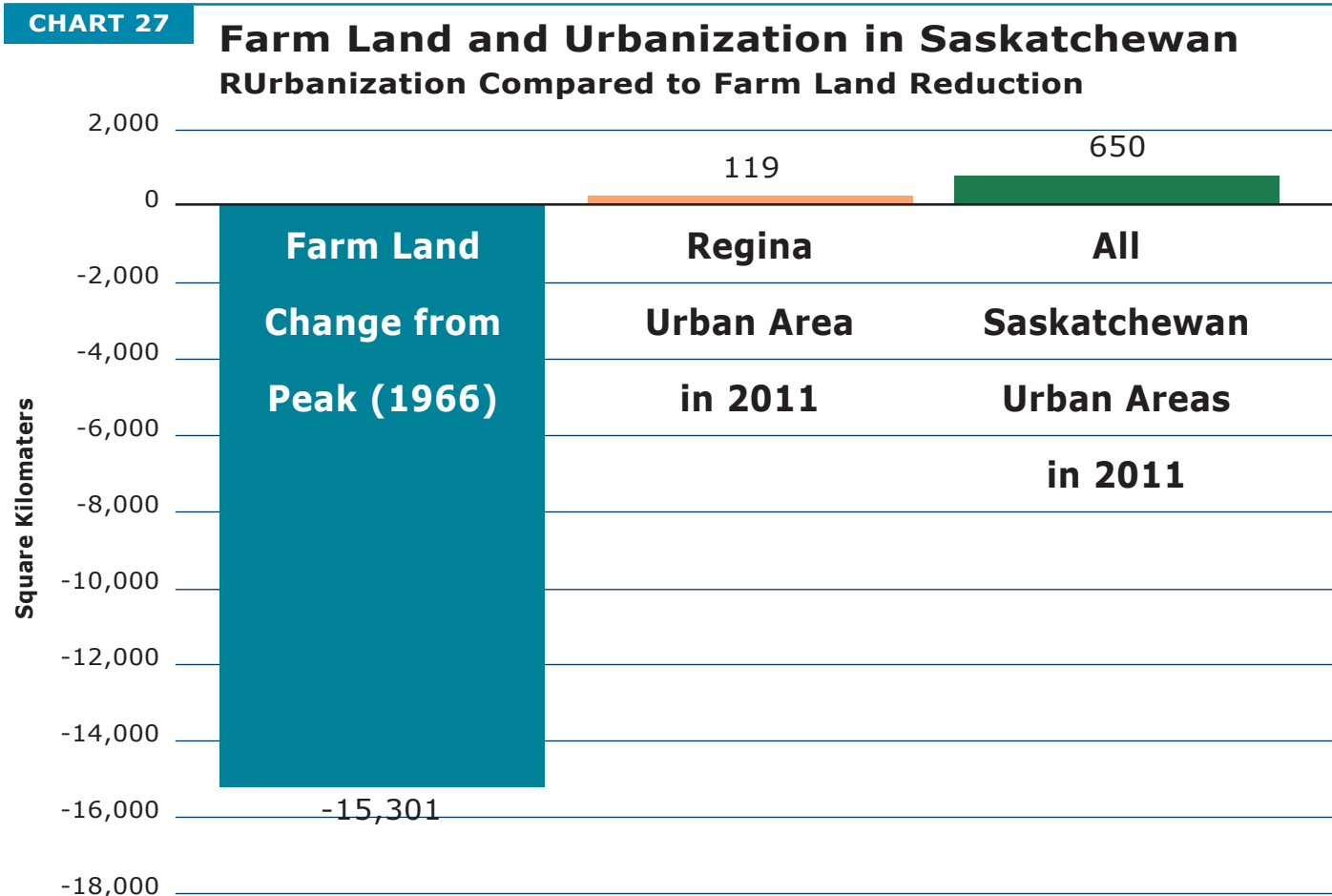
In short, urban containment policy appears to be structurally incapable of materially reducing automobile use. However, the increased traffic congestion is likely to slow travel times, thereby imposing costs on the economy, which leads to less employment, lower discretionary incomes and more poverty. Quick commutes throughout a metropolitan area an important driver of economic growth and job creation, according to the economic literature. Greater mobility – the ability to travel quickly throughout the metropolitan area – improves the economic performance of cities.<sup>71</sup> This broadens affluence and reduces poverty. Prud’homme and Lee (University of Paris), Hartgen and Fields (University of North Carolina-Charlotte), Cervero (University of California) and others, who have shown that the more jobs people can reach in a fixed period of time (such as 30 minutes), the more economically productive the metropolitan area is likely to be.<sup>72</sup>

## A.5: Agriculture

Concerns have been expressed that expanding urbanization is reducing agricultural land and could threaten food security. As is indicated in *Urban Policy: Time for a Paradigm Shift*,<sup>72</sup> the reduction in Canadian farmland has far exceeded the total urbanization in the four centuries of European settlement. The agricultural land that is been taken out of production exceeds the total land area of the Maritime provinces (New Brunswick, Nova Scotia and Prince Edward Island). Yet, agricultural productivity has improved substantially. Moreover, urban land areas are very small compared to agricultural lands. The total urban land area is approximately 3 per cent of the combined agricultural and urban land area.

Saskatchewan has by far the largest agricultural land area of any province, at approximately 250,000 square kilometers. This is more land area than all of the United Kingdom. Saskatchewan’s agricultural land dwarfs the area covered by urbanization, which is only 0.3 per cent of the combined agricultural and urban land. Since 1966, Saskatchewan has seen its agricultural land reduced by approximately 15,300 square kilometers. This is nearly 20 times the land area of all of the 2011 urbanization in the province and more than 125 times the 120 square kilometers of urbanization in Regina (Chart 27).<sup>74</sup>

Urbanization is not a threat to agricultural production or the supply of rural land.



Source: Statistics Canada.

# Appendix B:

## Similar metropolitan areas

The loss of housing affordability that has been experienced in larger metropolitan areas that have adopted urban containment policies has been repeated in smaller metropolitan areas as well. Metropolitan areas of similar size to Regina that have had longer term urban containment policies have experienced substantial reductions in housing affordability. In each case, the cost or value of a median priced house was three times or less median household income before urban containment policies were adopted. For example:<sup>75</sup>

Victoria (population 350,000) has had strong urban containment policies for some time, including a strict urban containment boundary. By 2009, the median house price was 7.9 times the median household income (“median multiple”). More recent data indicates a median multiple of 6.3. Smaller Kelowna, BC (population 180,000), which is subject to similar land-use policies, has even less affordable housing than Victoria, with a median multiple of 6.9.

San Luis Obispo California (population 270,000) has been subject to a mesh of state, local and municipal urban containment policies for some time. The most recent data indicates a median multiple of 7.5, indicating that house prices are now 2.5 times the housing affordability standard. The median multiple was under 3.0 before the adoption of stringent land use regulations.

Christchurch New Zealand (population 550,000) has imposed urban containment land-use policies over the last two decades. Now, the median house price is 6.6 times the median household income. While Christchurch is somewhat larger than Regina, the same loss of housing affordability has occurred across New Zealand, in virtually all markets by virtue of the near universal adoption of urban containment policies by regional authorities. The median multiple was under 3.0 before the adoption of stringent land use regulations.

Wollongong (New South Wales), Australia (population 280,000) has been subject to strong state urban containment policies. The median house price is now 7.5 times the median household income. Urban containment policy has been imposed principally from the state or territory level, virtually throughout Australia. Geelong, Victoria (population 140,000) has a median multiple of 6.5. Port Hedland, in the land rich mining area of Western Australia has only 15,000 residents, yet has a median multiple of 6.4.

At the same time, not all metropolitan areas that have imposed urban containment policies have been subject to this level of house cost escalation. For example, the state of Tennessee imposed urban containment policies for its metropolitan areas. However, these appear to have had little impact on the housing prices in the two largest metropolitan areas. For example, in Memphis (population 1,325,000), the urban growth boundary has been drawn liberally enough to maintain a sufficient land supply and, as a result, competitive land prices and housing affordability.

Finally, urban containment policy can have devastating impacts on housing affordability even in metropolitan areas that are growing slowly or declining. For example, by far the slowest growing major metropolitan area in Australia is Adelaide (population 1,100,000), yet the median multiple has reached 7.5 in recent years. Liverpool, in England (population 1,350,000) and Glasgow in Scotland (1,775,000) have experienced population decline and relative economic decline growth since before World War II, yet urban containment policies have driven median multiples to above 5.0 in recent years. The role of urban containment policy in driving up the cost of housing in the United Kingdom was documented more than 40 years ago by Sir Peter Hall,<sup>76</sup> and more recently by Kate Barker, who was a member of the Monetary Policy Committee of the Bank of England.<sup>77</sup> Current U.K. Planning Minister Nick Boles has called Britain's housing affordability "the biggest social justice crisis we have," and called it bigger than education and unemployment.<sup>78</sup>

## Endnotes

1. Much of current urban planning theory can be traced to the *British Town and Country Planning Act* of 1947.
2. See: P. C. Cheshire, & C. Hilber (2008), *Office Space Supply Restrictions in Britain: The Political Economy of Market Revenge*, London School of Economics, [http://www2.lse.ac.uk/geographyandenvironment/pdf/office\\_per\\_cent20space\\_per\\_cent20supply\\_per\\_cent20restrictions\\_per\\_cent20in\\_per\\_cent20britain.pdf](http://www2.lse.ac.uk/geographyandenvironment/pdf/office_per_cent20space_per_cent20supply_per_cent20restrictions_per_cent20in_per_cent20britain.pdf), B. Lewis, M. Ballek, C. Craig, V. Harris, B. Levi, H. Mullings, I. Osborne, S. Anthoy, D. Bugrov, J. Kondo, V. Palmade, J. Rames, S. Fidler, N. Lovegrove & M. Baily (1998), *Driving productivity and growth in the UK economy*, McKinsey Global Institute, [http://www.mckinsey.com/insights/mgi/research/productivity\\_competitiveness\\_and\\_growth/driving\\_productivity\\_and\\_growth\\_in\\_the\\_uk\\_economy](http://www.mckinsey.com/insights/mgi/research/productivity_competitiveness_and_growth/driving_productivity_and_growth_in_the_uk_economy), R. E. Saks (2005), *Job Creation and Housing Construction: Constraints on Metropolitan Area Employment Growth*, Federal Reserve Board, and W. Vermeulen and J. Van Ommeren (2008), "Does Land Use Planning shape Regional Economies?" Tinbergen Institute, <http://www.tinbergen.nl/discussionpapers/08004.pdf>.
3. <http://goo.gl/Q0ISKd>.
4. The most recent *Demographia International Housing Affordability Survey* showed all rated British Columbia markets (Vancouver, Victoria, Kelowna and Abbotsford) to be severely unaffordable, with median multiples above 5.0 (ranging from Victoria, at 6.3 to Vancouver, at 9.5).
5. <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil130a-eng.htm>.
6. <http://www.spatialeconomics.ac.uk/textonly/SERC/publications/download/sercpp004.pdf>.
7. <http://www.fcpp.org/publication.php/4631>.
8. The report largely focuses on the city of Regina, since the city represents most of the metropolitan area population.
9. From the *Demographia International Housing Affordability Survey* (2005 to 2013). <http://www.demographia.com/dhi.pdf>.
10. <http://www.demographia.com/dhi.pdf>.
11. 2011 income adjusted to 2012 using weekly earnings.
12. <http://www.bankofcanada.ca/about/what-we-do/what-is-monetary-policy/>.
13. Reserve Bank of New Zealand Deputy Governor Grant Spencer recently told a parliamentary committee that the monetary policy tools available to his central bank were not sufficient to restrain the growth of house prices in Auckland, which has strong urban containment policy (See: <http://money.msn.co.nz/businessnews/national/8626288/rbnzs-tool-kit-wont-stop-housing-bubble>).
14. Calculated from Statistics Canada data.
15. See for example, <http://onlinelibrary.wiley.com/doi/10.1111/j.1465-7287.2000.tb00030.x/abstract;jsessionid=3F931C91A37ED7A508706B27612E8460.d03t02?deniedAccessCustomisedMessage=&userIsAuthenticated=false>.
16. [http://www.stats.gov.sk.ca/stats/pop/QPR\\_per\\_cent202013\\_per\\_cent20q1.pdf](http://www.stats.gov.sk.ca/stats/pop/QPR_per_cent202013_per_cent20q1.pdf).
17. <http://www.newgeography.com/content/003925-canada-s-changing-income-patterns>.
18. Based on Statistics Canada annual population estimates.
19. <http://www.regina.ca/opencms/export/sites/regina.ca/residents/urban-planning/.media/pdf/population-employment.pdf>.
20. Data from Association of Regina Realtors
21. Data from CHMC.
22. Calculated from 2011 National Household Survey data (Statistics Canada).
23. University of Regina, Business Centre for Management Development, *Review of Home Construction Costs & Prices*, August 2012 (prepared for Regina and Region Home Builders' Association).
24. Data from CMHC.
25. University of Regina, Centre for Management Development, *Review of Home Construction Costs & Prices*, August 2012 (prepared for Regina and Region Home Builders' Association).
26. University of Regina, Business Centre for Management Development, *Review of Home Construction Costs & Prices*, August 2012 (prepared for Regina and Region Home Builders' Association).
27. [http://www.amazon.com/New-Urban-Development-Looking-Forward/dp/0813547938/ref=sr\\_1\\_1?ie=UTF8&qid=1379607332&sr=8-1&keywords=claud+gruen](http://www.amazon.com/New-Urban-Development-Looking-Forward/dp/0813547938/ref=sr_1_1?ie=UTF8&qid=1379607332&sr=8-1&keywords=claud+gruen).
28. <http://www.federalreserve.gov/pubs/feds/2004/200450/200450pap.pdf>.
29. Land converted from rural (non-urban) to urban uses. This is in contrast to "infill" development, which involves new construction within the built up urban area.
30. <http://www.journalofcommerce.com/article/id56966/--agreement-reached-after-regina-annexation-dispute>.

31. Greenbelts are “no-build” zones around cities that may be many kilometers in width. The boundary of the greenbelt closest to the built up urban area is an urban growth boundary.
32. [http://www.rmofsherwood.ca/images/documents/News\\_Announcements\\_Public\\_Notices/DOC091113-003.pdf](http://www.rmofsherwood.ca/images/documents/News_Announcements_Public_Notices/DOC091113-003.pdf). Agreement appeared ready for execution in late September, should have been executed by the time of this publication.
33. <http://www.journalofcommerce.com/article/id56966/--agreement-reached-after-regina-annexation-dispute>.
34. <http://planneronline.homestead.com/files/pogoreport.htm>.
35. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.197.7545&rep=rep1&type=pdf>.
36. [http://01ece72.netsolhost.com/assets/PDFS/Economic\\_Return\\_New\\_Urbanism.pdf](http://01ece72.netsolhost.com/assets/PDFS/Economic_Return_New_Urbanism.pdf).
37. <http://www.traditionalbuildingportfolio.com/features/residential/grail.html>.
38. R. K Green and S. Malpezzi (2003), *A Primer on U.S. Housing Markets and Housing Policy*, Urban Institute Press, p. 146.
39. <http://www.fcpp.org/publication.php/4631>.
40. <http://www.newgeography.com/content/001808-property-values-11-times-higher-across-portlands-urban-growth-boundary>.
41. [http://download.springer.com/static/pdf/34/art\\_per\\_cent253A10.1007\\_per\\_cent252Fs12061-008-9010-8.pdf?auth66=1380197453\\_c3c2d715001ce38fef5bf0a09f42af58&ext=.pdf](http://download.springer.com/static/pdf/34/art_per_cent253A10.1007_per_cent252Fs12061-008-9010-8.pdf?auth66=1380197453_c3c2d715001ce38fef5bf0a09f42af58&ext=.pdf).
42. Barker, K. (2004). *Review of Housing Supply: Delivering Stability: Securing Our Future Housing Needs: Final Report—Recommendations*. Her Majesty’s Stationery Office and Barker, K. (2006), *Barker Review of Land Use Planning*, Her Majesty’s Stationery Office.
43. <http://environmentblog.ncpa.org/consequences-of-urban-containment-policy-higher-relative-housing-costs-for-low-income-households/>.
44. Calculated from 2006 census and 2011 National Household Survey data (Statistics Canada). See: <http://old.fcpp.org/publication.php/4694>.
45. Estimated from the broad pre-tax income categories in the 2011 National Household Survey (Statistics Canada) and applying the CMHC mortgage qualifications, assuming a 4 per cent interest rate, 25 year amortization and a 10 per cent down payment. See [http://www.cmhc-schl.gc.ca/en/co/buho/hostst/hostst\\_002.cfm](http://www.cmhc-schl.gc.ca/en/co/buho/hostst/hostst_002.cfm).
46. [http://business.financialpost.com/2012/07/24/immigrants-face-steep-climb-to-success/?\\_lsa=f27a-efcd](http://business.financialpost.com/2012/07/24/immigrants-face-steep-climb-to-success/?_lsa=f27a-efcd).
47. Additional options are described in [http://www.chba.ca/uploads/policy\\_per\\_cent20archive/2012/Infrastructure\\_per\\_cent20Evidence\\_per\\_cent20and\\_per\\_cent20Issues\\_per\\_cent20Synthesis\\_per\\_cent20May\\_per\\_cent202012.pdf](http://www.chba.ca/uploads/policy_per_cent20archive/2012/Infrastructure_per_cent20Evidence_per_cent20and_per_cent20Issues_per_cent20Synthesis_per_cent20May_per_cent202012.pdf) and <https://www03.cmhc-schl.gc.ca/catalog/productDetail.cfm?cat=150&itm=7&lang=en&fr=1364224781452>.
48. Less price escalation in new housing is likely to moderate cost escalation in the existing housing stock.
49. See: <http://www.newgeography.com/content/003950-unblocking-constipated-planning-new-zealand> (New Zealand), <http://www.orrick.com/Events-and-Publications/Documents/1180.pdf> (California), <http://westten.com/docs/texas-municipal-utility-districts-an-infrastructure-financing-system.pdf> (Texas) and an example in Colorado: <http://highlandsranch.org/>.
50. This would be appropriate in the “growth and development” section. (<http://municipal.gov.sk.ca/Growth-Development>).
51. See: [http://reason.org/files/reducing\\_greenhouse\\_gases\\_mobility\\_development.pdf](http://reason.org/files/reducing_greenhouse_gases_mobility_development.pdf) and <http://www.newgeography.com/content/00932-uli-moving-cooler-report-greenhouse-gases-exaggerations-and-misdirections>.
52. <http://www.nrel.gov/docs/fy13osti/55634.pdf>.
53. [http://reason.org/files/reducing\\_greenhouse\\_gases\\_mobility\\_development.pdf](http://reason.org/files/reducing_greenhouse_gases_mobility_development.pdf).
54. Similar regulations are proposed in Canada. U.S. Environmental Protection Agency (2012), *Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards: Regulatory Impact Analysis*, <http://epa.gov/otaq/climate/regulations/420r10009.pdf>.
55. [http://wagner.nyu.edu/files/rudincenter/NYU-BMWi-Project\\_Urban\\_Mobility\\_Report\\_November\\_2012.pdf](http://wagner.nyu.edu/files/rudincenter/NYU-BMWi-Project_Urban_Mobility_Report_November_2012.pdf).
56. See: [http://www.chba.ca/uploads/policy\\_per\\_cent20archive/2013/Recognizing\\_per\\_cent20Success\\_per\\_cent20-per\\_cent202012.pdf](http://www.chba.ca/uploads/policy_per_cent20archive/2013/Recognizing_per_cent20Success_per_cent20-per_cent202012.pdf).
57. From examination of Statistics Canada population centre (2011) and US Census Bureau urban area (2010) data. “Population centre” has replaced “urban area” in Statistics Canada parlance, as of the 2011 census.

58. A megacity is an urban area or metropolitan area over 10,000,000.
59. <http://demographia.com/db-worldua.pdf>.
60. In Boston and Atlanta, the unusually low population densities have been driven by urban planning regulations requiring large minimum lot sizes. Other US urban areas have had similar regulations to a lesser degree. These regulations, which produce artificially low population densities, have not generally been adopted in Canada.
61. For example, Vancouver, Portland, Sydney, Melbourne, Auckland, Hong Kong and others.
62. Such as in the San Francisco Bay area and the Washington, DC area, where urban containment policies are pervasive at the local level, producing house price increases of a magnitude that would be expected from regional planning.
63. Calculated from data in Transportation Association of Canada 2010, Urban Transportation Indicators Fourth Survey, <http://www.tac-atc.ca/english/resourcecentre/readingroom/pdf/uti-survey4.pdf>.
64. [http://www.fcpp.org/files/1/PS109\\_Telecommut\\_JN23F1r.pdf](http://www.fcpp.org/files/1/PS109_Telecommut_JN23F1r.pdf).
65. From National Household Survey 2011 (Statistics Canada).
66. [http://www.fcpp.org/files/1/PS135\\_Transit\\_MY15F3.pdf](http://www.fcpp.org/files/1/PS135_Transit_MY15F3.pdf).
67. Calculated from 2006 Census and 2011 *National Household Survey* (Statistics Canada).
68. <http://www.newgeography.com/content/003815-new-data-commuting-canada>.
69. Ewing, R. & R. Cervero (2010), "Travel and the Built Environment," *Journal of the American Planning Association*, Volume 76, Issue 3, 2010.
70. [http://ltaacademy.gov.sg/doc/J12\\_per\\_cent20Nov-p19Cox\\_Urban\\_per\\_cent20Travel\\_per\\_cent20and\\_per\\_cent20Urban\\_per\\_cent20Population\\_per\\_cent20Density.pdf](http://ltaacademy.gov.sg/doc/J12_per_cent20Nov-p19Cox_Urban_per_cent20Travel_per_cent20and_per_cent20Urban_per_cent20Population_per_cent20Density.pdf).
71. <http://www.newgeography.com/content/001044-traffic-congestion-time-money-productivity>.
72. See Prud'homme, R. & Lee, C. (1998), "Size, Sprawl, Speed, and the Efficiency of Cities," *Observatoire de l'Économique et des Institutions Locales*, <http://usj.sagepub.com/content/36/11/1849.abstract>, Cervero, R. (2000), *Efficient Urbanization: Economic Performance and the Shape of the Metropolis*, Lincoln Institute of Land Policy Working Paper, [http://www.lincolninst.edu/pubs/88\\_Efficient-Urbanization](http://www.lincolninst.edu/pubs/88_Efficient-Urbanization) and David T. Hartgen and M. Gregory Fields, "Gridlock and Growth: The Effect of Traffic Congestion on Regional Economic Performance," Reason Foundation, <http://reason.org/news/show/gridlock-and-growth-the-effect>.
73. <http://www.fcpp.org/publication.php/4631>.
74. Calculated from Statistics Canada data.
75. Median multiple data from editions of the *Demographia International Housing Affordability Survey*. <http://www.demographia.com/dhi.pdf>.
76. Hall, P., R., T. H. Gracey and R. Drewett (1973), *The Containment of Urban England*, George Allen & Unwin.
77. Barker, K. (2004). *Review of Housing Supply: Delivering Stability: Securing Our Future Housing Needs: Final Report—Recommendations*. Her Majesty's Stationery Office and Barker, K. (2006), *Barker Review of Land Use Planning*, Her Majesty's Stationery Office.
78. <http://www.bbc.co.uk/news/uk-politics-20957422> and <http://www.bbc.co.uk/news/uk-politics-20957422>.

## Further Reading

July 2013

### **Urban Policy: A Time for a Paradigm Shift**

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