

GreenApple Canada 2008
SMART Transportation
Ranking Report



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GreenApple Canada 2008

SMART Transportation Ranking Report



**Barry Appleton Displays the GreenApple Prize
Awarded for Sustainable Transportation Practices**

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The GreenApple Canada 2008 Ranking Report is available at www.appletonfoundation.org

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Our GreenApple 2007 Expert Panel was comprised of the following members:

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Prof. James Tansey fields media questions at the 2007 release of the GreenApple Canada Ranking Report

Executive Summary

The past year has been a turbulent one for people who follow the fortunes of transportation systems. Rising energy prices have made our dependence on energy-intensive forms of transportation painfully apparent. As gasoline prices peaked at around \$1.50 per litre, consumers began to seriously reflect on how they move around and reconsidered what vehicles they will buy next. The 2008 federal election saw vigorous debate about a federal carbon tax. This was also a year in which the Government of British Columbia introduced a carbon tax on fossil fuels, adding roughly 2.5 cents to a litre of gas. Data gathered for this Report suggest that on average, emissions from transport increased by roughly 2% in urban areas over the course of the year, following the trends of previous years.

The GreenApple SMART Transportation Ranking Report was launched last year because we recognized that the accurate measurement of the sustainability of transportation systems is important if we are to make progress in improving Canada's urban areas. This second annual Report captures the latest data on the performance of these urban areas but also clearly indicates where progress has been made. We believe that measurement systems, combined with realistic performance targets, will serve to encourage policy makers to enhance data monitoring and incorporate measurable targets into their urban transportation policies.

This second GreenApple Canada SMART Transportation Ranking Report identifies areas of best practice and draws attention to some of the real success stories from urban areas over the last year. Feedback from the first Report was incorporated into the 2008 Report, although the overall Smart Transportation ranking system remains the same.

In developing the GreenApple Canada 2008 Ranking Report, we have used both measurement and expert panel recommendations. The GreenApple Canada 2007 Ranking Report assessed urban transportation policies undertaken by Canada's largest urban areas against 17 indicators tracked in 4 policy categories:

- Air Quality
- Public Policy
- Transport Policy
- Technology Adoption

The 2008 GreenApple Canada Ranking Report assessed these indicators based on Statistics Canada geographic boundaries known as Census Metropolitan Areas (CMAs). It is important to note that these CMAs tend to extend beyond particular named cities to include a number of adjacent towns and cities that constitute urban settlements. (For example, the Toronto CMA encompasses 24 different communities). When we refer to urban regions or urban communities in the GreenApple Report, we are referring to the specific CMA for that particular urban area.

The GreenApple Canada 2008 Ranking team developed a methodology to assess sustainable urban transportation policy goals for 27 of the largest urban areas in Canada. These CMAs are home to around two-thirds of the population of Canada and 77% of the urban population. In developing this methodology, we initially asked the expert panel to identify specific achievable medium term targets for these cities and then we assessed how

close each CMA comes to meeting them. Our hope is that the GreenApple Canada 2008 Ranking Report is able to provide a broader context to enable the public and policy makers to evaluate sustainable urban transportation policy performance.

The real value of the GreenApple Canada 2008 Ranking Report is that it creates an ability to identify the leading municipalities which are best coping with the challenges of providing sustainable urban transportation. This second Report also allowed us to carefully track the progress of urban areas over the last year. While some changes appear simply because of the appearance of more recent data, many of the changes reflect policy innovation by policy makers.

The 2008 GreenApple Canada Smart Transportation Ranking Report top four ranked urban areas are Victoria, BC, Vancouver, BC, Ottawa-Gatineau (Ontario – Quebec) and Montreal, Quebec — all four of these urban regions have demonstrated a commitment to directing significant public resources to address urban transportation in an environmentally sustainable manner. While none of these cities was awarded an "A" grade, all four urban areas have shown improved progress in most of the Report's 17 policy indicators, and are in a position to meet the 10 year benchmark targets advanced by the GreenApple Expert Panel. This year, Victoria moved up to a B+ grade, by means of its extended leadership in sustainable transportation. This is the highest grade received by any Canadian city within the GreenApple Canada 2008 Ranking Report.

The GreenApple Canada 2008 Report identified the four lowest-ranked Canadian cities: St. John's, Newfoundland, Greater Sudbury, Ontario, Moncton, New Brunswick and Barrie, Ontario. All four of these urban areas received failing grades in this year's GreenApple Canada ranking due to their limited commitment to sustainable urban transportation.

Within the lower rankings, only one Canadian region was able to improve its 2007 failing grade to a passing 2008 grade. The St. Catharines-Niagara region moved out of the 'failing grade' category and earned a pass with a 'D' grade this year. Much of this score is attributable to the region's adoption of anti-idling bylaws throughout much of the region.

In spite of challenges created by data gaps and methodological limitations contained in this or the inaugural Report, the GreenApple Canada 2008 Ranking Report demonstrates that sustainable transportation policy results can be measured and assessed. The Report also demonstrates that real progress can be tracked on an annual basis and that overall, the sustainability of Canada's urban areas is improving.

The listing of the 17 sustainable transportation policy indicators used in the GreenApple Canada 2007 Ranking Report and the Table of Ranked Canadian City scores are set out below.

GreenApple SMART Transportation Policy Indicators

Indicator Data
Air Quality
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)
CO parts per million, median of maximum daily 1 hour averages (2006)
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)
Registered vehicles per capita (2007)
Public Policy
Percentage of the population living under an anti-idling bylaw (2008)
Percentage of housing starts that were apartment or row units (2007)
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)
Transportation Policy
Percentage of the housing stock that is defined as either apartment or row units (2006)
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)
Percentage of total public transit kilometres that are free in the downtown core (2007)
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income
Percentage of the labour force holding employer issued transit passes (2007)
Technology Adoption
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)

GreenApple SMART Transportation Ranking of the Census Metropolitan Areas

Rank	Census Metropolitan Area	Normalized Score
1	Victoria (B.C.)	79.6
2	Vancouver (B.C.)	76.4
3	Ottawa-Gatineau (Ont.-Qué.)	71.1
4	Montréal (Qué.)	69.9
5	Toronto (Ont.)	68.2
6	Winnipeg (Man.)	67.4
7	Québec City (Qué.)	63.3
8	Hamilton (Ont.)	59.0
9	Sherbrooke (Qué.)	57.1
10	Kelowna (B.C.)	55.9
11	Kingston (Ont.)	54.9
12	Saguenay (Qué.)	53.8
13	London (Ont.)	53.6
14	Abbotsford (B.C.)	53.2
15	Kitchener-Waterloo (Ont.)	50.9
16	Halifax (N.S.)	50.7
17	Regina (Sask.)	49.5
18	Edmonton (Alta.)	47.8
19	Calgary (Alta.)	47.5
20	Windsor (Ont.)	47.3
21	Saskatoon (Sask.)	46.7
22	Oshawa (Ont.)	46.7
23	St. Catharines-Niagara (Ont.)	45.7
24	Barrie (Ont.)	42.9
25	Greater Sudbury (Ont.)	42.0
26	Moncton (N.B.)	41.3
27	St. John's (N.L.)	39.5

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Sauder School of Business Professors Daniel Muzyka (left) and James Tansey (right) join Barry Appleton at the release of the 2007 GreenApple Canada SMART Transportation Ranking Report

Summary

The publication of the first GreenApple Smart Transportation Ranking in 2007 represented a significant milestone in the evaluation of sustainability policy in Canada's 27 largest cities. The first Report received national and international coverage in the media and was well-received by mayors and municipalities.

In the introduction to that first Report, we noted that the planet had reached a critical threshold in 2007, with more than 50% of the population living in cities, for the first time in human history. *Homo Urbanis*, the new species we identified in the recent fossil record has had a very difficult time in the 12 months since our first Report. Global pressure on oil supplies drove up energy prices to unprecedented levels affecting home heating and transportation in particular. The mobility we have taken for granted as a result of decades-low energy prices became a luxury good. Sales of larger vehicles fell dramatically as consumers started to look more closely at fuel efficiency statistics. As we started gathering data for the 2008 study, the team speculated about whether consumers would also respond by purchasing less fuel. While there is some variability, the data suggests that fuel consumption increased by an average of 2% over the course of the year. This illustrates the extent to which consumers are locked into their transportation habits by the kind of infrastructure a city provides for them. Emissions vary from city to city, from a low of 2 tonnes per capita to a high of over 4 tonnes per capita. The stability of demand shows the extent to which the choices of city planners create long-term legacies with respect to the sustainability of cities.

The second assault on *Homo Urbanis* in 2008 was the contraction of housing markets across the globe. While there has been a slowdown in the rate of construction across Canada, one of the positive results to emerge from this survey is that many areas increased the density of their housing starts. Density is the ultimate ally of sustainable transportation.

This Report tries to do three things. First we set out to collect data on the sustainability of the transportation systems of the 27 largest urban areas in Canada. Secondly, we ranked these areas to show how some areas have adapted to the challenge of improving their transportation systems. We hope that by ranking urban regions in this way, we can energize a spirit of adaptation and competition among the mayors and political leaders responsible for making critical decisions about the type of mobility their citizens will enjoy in the future. Thirdly, our expert panel, created to assist us in our inaugural 2007 study, established performance targets for the variables, which they believe are achievable within ten years. The performance targets are shown in this year's Report, creating a comparison between the two years, which will show real progress towards these ideal goals.

City planning is a long and detailed process; we would not expect to see radical changes manifest over the course of a single year. Nonetheless, the ranking has been designed in such a way that cities can reap significant rewards for proactive policy making. For instance, the adoption of proactive public policies allowed the greater Kelowna urban region to move up four places from last year in the 2008 GreenApple Canada Smart Transportation Ranking Report.

This year's GreenApple Ranking Report highlights the examples of leadership across Canada's urban centres. The GreenApple Canada Report suggests that there has been real progress in most areas over the last 12 months. As new policy initiatives emerge, including the Western Climate Initiative and as policy makers continue to search for the holy grail of sustainability, we hope this year's GreenApple Canada Ranking Report will provide further guidance and feedback to the people most responsible for shaping the future of Canada's urban centres.

Climate Change

City planners have been struggling for decades to find the right balance between the convenience of mobility and the social and environmental impacts of transportation systems. Cities like Amsterdam and Curitiba, Brazil have shown leadership in developing integrated transit and land use systems that are being copied in other parts of the world. The problem of climate change has given new momentum to this challenge. Between 1990 and 2004, emissions in the 40 most developed countries identified in the Kyoto protocol decreased by 3.3% overall from 18.6 billion tonnes to 17.9 billion tonnes, but this hides the real variation between countries. While Lithuania's emissions fell by 60.4%, largely because of the collapse of the Soviet Union, emissions in the US grew by 15.8% and emissions from Canada grew by 26.6% from 598,911 Gigatons to 758,067 Gigatons CO₂ equivalent. Overall, emissions in Canada are the third highest in the industrial world at 23.5 tonnes per capita. While this includes industrial emissions, even direct emissions from household and individual consumption are among the highest in the industrial world. Most worryingly, global emissions from transport grew faster than any other sector: 23.3% in this period. Emissions from the transportation sector in Canada grew by 32.8% (48.8 million tonnes) between 1990 and 2005 and emissions from light duty gasoline trucks grew by 109% in this period, a trend explained by the popularity of sport utility vehicles.¹

We have focused on transportation in this Report because it is the fastest growing source of emissions and also because it is the sector where the capacity for change is greatest. From the hybrid vehicles developed by Honda and Toyota to the biodiesel and hybrid buses already being tested on Canada's roads, transportation emissions reductions are feasible and can be implemented quickly. In contrast, it is hard to quickly reduce emissions from electricity generation, manufacturing processes and industrial plants. We believe *Homo Urbanis* can move quickly if the incentives are right.

Canada's Cities

People traveling to Canada are surprised to learn that despite it being the second largest country in the world, with vast areas of cheap undeveloped land, most people live in cities and towns. Canada is one of the more urbanized countries in the world with

¹ United Nations Framework Convention on Climate Change. (2003) "Report on the in-depth review of the third national communication of Canada and UNFCCC".

81.1%² of the population residing in urban areas. Over 85% of the population lives within 350km of the US border, mostly in medium and large cities.³ This survey focuses on the 27 largest urban regions in Canada that are home to about 20.7 million people or 77% of the total urban population. In defining the city, we focus on what is called the 'Census Metropolitan Area' (CMA), which may include a number of different municipalities. The Vancouver Municipal region, for instance, includes a number of distinct municipalities including Richmond, West Vancouver, Langley, Delta and New Westminster. The Toronto region contains twenty-four separate entities. In selecting these boundaries we had to find a balance between the size of the city, the geographic coverage of the survey and the availability of data. The smallest urban region on our list is Moncton, with 126,000 residents, while the largest is Toronto with 5.1 million. The cities studied in the GreenApple Canada 2008 Report are spread across the country with representatives from most of the provinces. These urban areas have very different histories and economies but share common transportation challenges. The full list of census metropolitan areas we included in this study is in Table 1.

The argument for focusing on urban regions is simple: density makes transportation policy easier to implement. While rural areas have their own challenges to face, if policy makers in cities, provinces and the federal government focus their efforts on urban areas, they can have the biggest influence on energy use, greenhouse gas emissions and land use policies. For this reason, the Clinton Foundation has brought together approximately forty cities to develop strategies for reducing greenhouse gas emissions.⁴ The GreenApple Canada Report looks beyond greenhouse gas emissions to consider the overall sustainability of cities: we need to reduce emissions and create liveable urban centres for the new millennium. The variables we selected focus on air quality, innovation and best practices in Canada.

As will become clear below, there is a great deal of variation between the cities selected for this Report, across a range of variables. International comparisons are always difficult, because of variation in measurement protocols. Australian researcher Jeff Kenworthy has reviewed approximately 100 cities globally and has compared their performance across a shared list of variables.⁵ Focusing just on carbon dioxide emissions, the highest emissions of carbon dioxide per capita from private transportation can be found in Atlanta at 7.5 tonnes per annum, followed by Houston at just over 6 tonnes per annum. Emissions per capita are broadly related to wealth, but a number of countries defy this convention: emissions per capita are around 0.5 tonnes per annum in Hong Kong and approximately 0.75 tonnes per annum in Barcelona. Cities in developed countries that keep their emissions below 1 tonne per capita include Seoul, Tokyo, Helsinki, Singapore, Osaka and Prague. Emissions in London, England are around 1.25 tonnes per capita. Of the top nineteen cities, all of whom emit over 2 tonnes per capita, most are

in North America, while the remainder are in Australia. North America faces unique challenges when it comes to tackling the sustainability of its cities. While average emissions in the American cities Kenworthy studied were almost double the emissions of the Canadian cities sampled, our average emissions per capita are still double or triple the figure for comparable European cities.

Many of the causes of unsustainable transportation practices are built into the structure and layout of the cities. Once suburbs and freeways have been built, it is hard to reduce travel and emissions. Alternative mass transit options become essential and efforts to increase density using in-fill and location-specific mortgages can be highly effective. While it is impossible for a city to limit what cars citizens can buy, a number of cities have discussed differential charging for congestion and toll charges based on engine size. This alternative is currently being considered as an enhancement to the congestion charge in London. Ultimately, policies to improve the sustainability of transportation must be a combination of "carrots and sticks". The most innovative cities have expanded the range of services they offer, improving the quality of transit.

Finding the data

For all the great virtues of the Canadian federal system, it makes data collection much more difficult. Just as laws vary among provinces, so do data collection standards. Unlike more centralized countries like the United Kingdom, there are very few national agencies that collect all the key data required for a survey like this. Statistics Canada was an important source, but for some data—such as carbon dioxide emissions from transportation—we performed primary data collection. A full account of our approach to data collection is provided separately. In the absence of shared standards, we had to make our own judgments about the best available data. The GreenApple team was guided by an expert panel at the University of British Columbia composed of a range of disciplines including atmospheric chemistry, economics and epidemiology. The Report marks the first attempt to pull this data together in Canada. There are areas for improvement, but the GreenApple team is confident that the general findings of the GreenApple Report are robust and more importantly, that the Report will stimulate an interest in improving the quality of data collection in Canada.

In completing this GreenApple Canada Report we hope we have filled a vacuum in the area of sustainable transportation, and also in the measurement of greenhouse gas emissions nationally. It is difficult to measure how much carbon dioxide is emitted annually and it may come as a surprise that the Kyoto Protocol recognizes that uncertainty about the precise figure is as high as 4%⁶, while the uncertainty around methane emissions is much higher. The data that we have gathered for this Report provide a useful cross-reference for national inventories. More importantly, it is difficult for cities to gauge their performance if they cannot compare themselves with the competition.

Recognizing that many organizations will want to provide feedback about the GreenApple Canada 2008 Report or, in some cases, may wish to propose alternate data sources, information

2 United Nations Framework Convention on Climate Change. (2006) "GHG Data 2006: Highlights from Greenhouse Gas (GHG) Emissions Data for 1990-2004 Annex 1 Parties". Retrieved November 6, 2008 from: http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/ghg_booklet_06.pdf

3 Global Virtual University. (Date unknown) "Indicator – Urban Population 2005". Retrieved November 6, 2008 from: <http://globalis.gvu.unu.edu/indicator.cfm?Country=CA&IndicatorID=30#rowCA>

4 C40 Cities: Climate Leadership group, 2008: <http://www.c40cities.org/about/> (Date Accessed: November 09, 2008).

5 Kenworthy, JR. (2003) "Transport Energy Use and Greenhouse Gases in Urban Passenger Transport Systems: A Study of 84 Global Cities". Retrieved November 6, 2008 from: http://cst.uwinnipeg.ca/documents/Transport_Greenhouse.pdf

6 United Nations Framework Convention on Climate Change. (2006) "GHG Data 2006: Highlights from Greenhouse Gas (GHG) Emissions Data for 1990-2004 Annex 1 Parties". Retrieved November 6, 2008 from: http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/ghg_booklet_06.pdf

about the GreenApple Canada Ranking Report is available on the GreenApple section of the Appleton Foundation website (www.appletonfoundation.org).

Building a Ranking

At each step along the way, a group of experts, listed in the introduction, worked with a steering committee to review the data we gathered and offered judgements about the quality of the sources. We started with a much longer list of variables and only those of sufficiently high quality are reported here. Once the final list of variables had been assembled, the team of experts provided weights for the variables, so that the final score for an urban area captured the relative importance of the variable in contributing to the sustainability of the transport system. The methods used for developing the weights and the method for normalizing and adding up the variables into a single score are documented in the appendices and in separate documentation. The list of variables and their relative weights in the final index as well as the maximum values and ideal values for each variable is presented in Table 2. The expert panel assigned the ideal values and they reflect what was considered achievable for the cities within a decade. For some variables the ideal is the lowest value achieved by the existing cities; for other variables the threshold has not been achieved by any of the cities.

Canada can be proud of being home to some of the most sustainable cities in North America, but it will require a significant amount of effort and innovation to fulfill our Kyoto obligations, let alone to achieve the cuts in emissions necessary to tackle climate change. In light of this, we assigned grades to the cities reflecting their performance relative to a set of overall goals; we identified ideal targets for each of the variables, presented graphically in the next section of this Report.

There is no 'straight A' student in this survey; no single city received top marks for every variable. Given the scale of climate challenge, every city shows room for improvement. Instead, we assigned grades to census metropolitan areas and identified the top performer for each variable. Graphs and figures in the last section of this Report show the variation among the urban areas and also illustrate what our expert panel considered to be the ideal score for each variable.

The Results

While the overall ranking remained fairly stable, this hides significant change by a number of CMAs included in the survey. We will highlight what progress has been made.

Table 3 shows the final ranking of Canada's 27 largest cities including the final score awarded to that city and the letter grade. Within each city's ranking results ten year target values are listed. Ideal values were calculated for all variables to provide some indication of what might represent realistic targets for the urban areas. In some cases, like that of anti-idling bylaws, the panel deemed the ideal level to be 100% coverage within ten years. In most cases, the ideal level within ten years was not immediately apparent. Given that the road transportation sector is responsible for the sharp rise in greenhouse gas emissions during the past half century, the expert panel devised the following approach for these cases. The ideal target represents a cut to 6% below 1990 levels. This reduction reflects Canada's announced intentions under the Kyoto protocol.

Victoria, British Columbia is the winner in this year's ranking, securing a grade of B+, closely followed by Vancouver and Ottawa-Gatineau. In fact, the top seven census metropolitan areas stand out as being the leaders in sustainable transportation in Canada and the remaining cities have each been awarded a grade of B. These top seven metropolitan areas range in size from 330,000 people in Victoria to 5.1 million in Toronto and are spread across four provinces. In total, these seven urban regions are home to over 13 million Canadian residents. All seven of these regions deserve real recognition for what they have accomplished. There were some changes among the top seven urban areas with Winnipeg slipping from 4th place to 6th place and Montreal rising to 4th place with a notable improvement in a number of areas.

Focusing on Victoria, the winner of the GreenApple Canada 2008 ranking, this urban area continues to improve in a number of areas: the city has the highest proportion of municipal and transit fleet vehicles using Alternative Fuels. The municipal fleet contains a high number of alternative fuel vehicles (AFVs): rising 8% this year to 44% of the total fleet. Emissions of carbon dioxide per capita are well below the average of 2.5 tonnes at 2.1 tonnes and levels of ozone—a key air quality variable—are among the best observed in our study. In Victoria, 61% of housing starts are row and apartment units, compared to an average of 40% across the 27 metropolitan areas and 52% of the total stock of housing is composed of row and apartment units, compared to an average of 40%. Victoria benefits from the fact that the Province of British Columbia offers tax incentives to shift to low emission vehicles and the region has a high level of transit ridership, with 26% of the population walking, riding or taking the bus to work. Victoria saw a significant growth in the coverage of anti-idling bylaws within its full urban region and the conversion of the transit fleet to alternative fuel sources.

Vancouver comes in second and saw the greatest increase in the number of people walking, cycling or taking transit to work. Vancouver also has the highest number of housing starts in medium and high density categories and has the highest level of annual transit revenue kilometres per capita. Vancouver performs well across a number of the variables including use of alternative fuels in its municipal fleet. Vancouver also has a significant number of hybrid taxis, growing 6% to 16.4% of the total fleet this year. These are all significant achievements worthy of a silver medal performance in Canada.

In third place, the Ottawa-Gatineau urban region has been very successful at creating a scheme that allows transit riders to purchase transit passes through their employers. Transit passes, in general, are very affordable when adjusted for income levels. The region held its position with a consistent performance across a number of variables. The major improvement was in the number of Alternate Fuel Vehicles in the transit fleet. Over 28% of workers in the metropolitan area walk, ride or take the bus to work, the second highest figure overall. Ottawa-Gatineau has a high number of housing starts in the form of row housing and apartments units (around 49% of the total number of housing starts) and 95% of the population of the region is subject to anti-idling bylaws, which encourage drivers to switch off their engines when they are stationary.

The remaining metropolitan areas within this leading group of seven all excel in some areas and are weaker in others.

Toronto has the fourth best performance in vehicles per capita of any of the cities and has the third highest number of workers bicycling, walking, or taking public transit to work at just under

28%, a figure exceeded only by Montréal and Ottawa-Gatineau. The total stock of row and apartment housing is high at 50%, although the number of housing starts in this category declined 7% to 47% in 2008.

Montréal performs well overall and distinguishes itself in two areas: it has the highest stock of row housing or apartments at 62% of the total and it has the highest number of citizens walking, riding or taking the bus to work. Montréal's ranking was boosted this year by declines in carbon monoxide and ozone levels and by the introduction of Alternative Fuel Vehicles to the transit fleet.

Winnipeg does well in a number of areas; notably it has free transit in the downtown core. These are all best practices in sustainable transportation and have greatly contributed to Winnipeg's high scores. Winnipeg also has relatively low carbon dioxide emissions per capita and lower vehicle ownership than average.

Québec City moved up one grade to a 'B' this year improving its score by 4 points. The Québec City region saw best in class improvements in a number of areas, including a decrease in the number of registered vehicles per capita, an increase in the percentage of its population living under anti-idling bylaws. Québec also has dense housing stock and housing starts – factors that can greatly contribute to municipal sustainable transportation policies.

The next group of cities received a grade of 'C' overall. These six cities—Hamilton, Sherbrooke, Kelowna, Kingston, Saguenay and London—scored significantly lower on average across the full list of variables, although a number of cities performed well in some areas. The Hamilton metropolitan area has the highest proportion of the population subject to anti-idling bylaws and offers the largest discount among the major urban regions to its municipal employees who buy transit passes at work. Hamilton also has a high proportion of its transit fleet using Alternative Fuel Vehicles – at 41% of the total fleet. Despite this, the number of people walking, riding or taking transit to work in Hamilton is average at 15% of the total. Sherbrooke has low carbon dioxide emissions per capita and performs well in terms of the housing density measures. Kingston also has better than average carbon dioxide emissions per capita and the authorities in the Kingston metropolitan area have also been proactive in establishing anti-idling bylaws.

The third group of cities barely received a pass with a grade of 'D' overall. The regions with low grades include the fifth and sixth largest metropolitan areas in Canada: Calgary and Edmonton, respectively. The problems that these two metropolitan areas face are well known and are illustrated in the ranking if one looks at high-density housing starts and high-density housing stock. In both cases, around 35% of housing starts are row houses or apartments and around a third of housing stock is in the form of row housing or apartments. As a result, Calgary has high carbon dioxide emissions per capita and the highest level of vehicle ownership per capita. Calgary fell three places in the GreenApple Canada 2008 ranking and recorded a 5% rise in CO₂ emissions per capita. The other metropolitan areas in this group are Abbotsford, Kitchener-Waterloo, Halifax, Regina, Edmonton, Calgary, Windsor, Saskatoon, Oshawa and St. Catharines-Niagara. We note that the St. Catharines-Niagara region recovered from a failing grade last year as a result of the expansion of coverage of anti-idling bylaws within its region, in addition to the introduction of Alternative Fuel Vehicles to its transit fleet.

In every class, there are students who simply fail. The last group composed of Barrie, Moncton, Greater Sudbury, and St. John's (Newfoundland) was graded by the expert panel with a failing grade of 'F' reflecting poor performance across a number of variables. As the St. Catharines-Niagara region this year clearly demonstrates, all four of these regions have the potential to improve their failing grades next year. These municipalities need to pay attention to the majority of urban centres in Canada who are better at addressing sustainable transportation. Just 15% of St. John's, Newfoundland housing starts take the form of higher density housing; Barrie, Ontario registered a 8% improvement in this figure over last year. A number of cities including Moncton and Greater Sudbury continue to have no anti-idling policies.

A number of cities, including London and Sherbrooke have no hybrid vehicles in their taxi fleets and in some cases this is because local bylaws prohibit the use of hybrid vehicles. New York had this problem until recently, when the Mayor showed that strong local leadership can make a difference. Kelowna saw a significant jump to 6.2% hybrid vehicles in the overall fleet. While a municipality can provide transit passes to employees and can encourage other employers to do the same, changing travel habits is more difficult.

Larger metropolitan areas might appear to have an advantage in our ranking, because they are able to generate economies of scale and can afford to make larger scale investments in sophisticated transport systems. There is a moderate correlation between city size and score, but the presence of Victoria and Winnipeg in the top seven metropolitan areas and Edmonton and Calgary in the middle of the pack shows that this relationship is complicated. In the 2008 GreenApple Canada Ranking Report, we can see once again that consistent application of best practices across policy categories results in the best overall results. Victoria has demonstrated that a smaller city can be a leader in sustainable transportation. This year, Kelowna has demonstrated that rapid progress through the ranks is possible by consistently focusing on small, consistent, sustainable transportation policy gains.

GreenApple Canada 2008 SMART Transportation Ranking Report

Tables & Maps

Table 1: Census Metropolitan Areas (CMAs) included in the survey

Census Metropolitan Areas (2006 Census Data)	Population '000
Toronto (Ont.)	5,113
Montréal (Qué.)	3,636
Vancouver (B.C.)	2,117
Ottawa–Gatineau (Ont.–Qué.)	1,131
Calgary (Alta.)	1,079
Edmonton (Alta.)	1,035
Québec (Qué.)	716
Winnipeg (Man.)	695
Hamilton (Ont.)	693
London (Ont.)	458
Kitchener-Waterloo (Ont.)	451
St. Catharines–Niagara (Ont.)	390
Halifax (N.S.)	373
Oshawa (Ont.)	331
Victoria (B.C.)	330
Windsor (Ont.)	323
Saskatoon (Sask.)	234
Regina (Sask.)	195
Sherbrooke (Qué.)	187
St. John's (N.L.)	181
Barrie (Ont.)	177
Kelowna (B.C.)	162
Abbotsford (B.C.)	159
Greater Sudbury (Ont.)	158
Kingston (Ont.)	152.4
Saguenay (Qué.)	151.6
Moncton (N.B.)	126

Source:

Statistics Canada. (2007, March 29). Table 3: Population of census metropolitan areas in 2006. Ottawa. Retrieved April 26, 2007 from <http://www12.statcan.ca/english/census06/analysis/popdwell/tables/table3.htm>

Table 2: Indicators in the survey, weighting in the ranking and best value achieved**GreenApple Canada 2008 SMART Transportation Ranking Report**

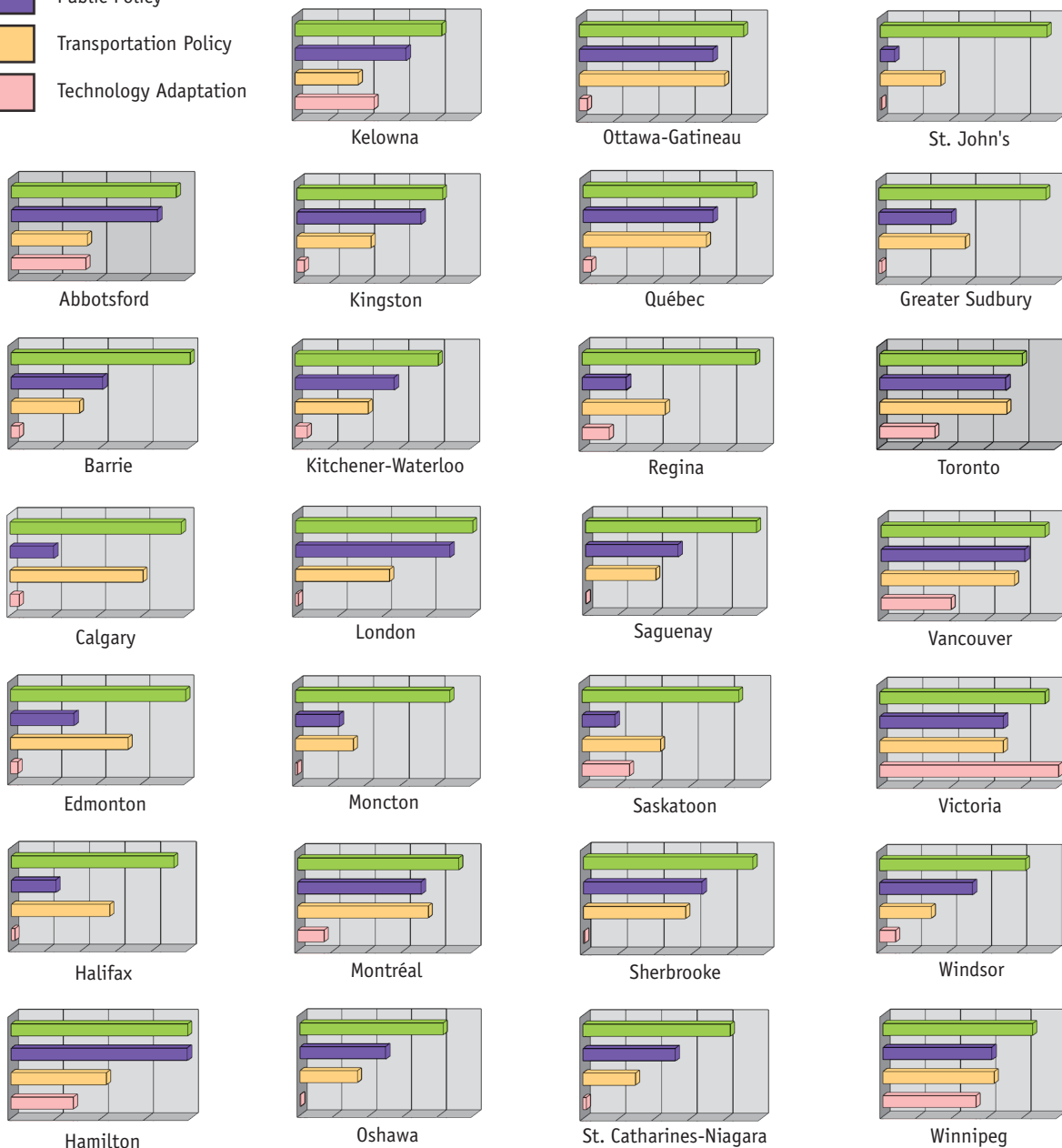
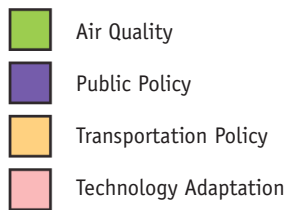
Category Name	Weighting	Best Value	Winner
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	3	2.0	Saguenay
CO parts per million, median of maximum daily 1 hour averages (2006)	2	0.1	Halifax
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	2	27	Regina
Registered vehicles per capita (2007)	1	0.49	Montréal
Percentage of the population living under an anti-idling bylaw (2008)	1	97%	Hamilton
Percentage of housing starts within the CMA that were apartment or row units (2007)	3	76%	Vancouver
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	1	51%	Hamilton
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	2	24%	Winnipeg
Percentage of the CMA housing stock that is defined as either apartments or row units (2006)	2	62%	Montréal
Annual public transit regular revenue service kilometers traveled per capita, excluding heavy rail and commuter coach (2006)	2	55	Vancouver
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	3	29%	Montréal
Percentage of total public transit kilometers that are free in the downtown core (2007)	1	0.8%	Calgary
Population-weighted annual adult transit pass cost (2008) adjusted by 2006 median family income	1	0.9%	Abbotsford
Percent of the CMA labour force holding employer issued transit passes (2007)	1	3.4%	Ottawa-Gatineau
Percentage of the CMA public transit bus fleet using alternative fuels, excluding commuter coach (March 2008)	1	100%	Victoria, Abbotsford, Kelowna, Saskatoon
Percentage of the CMA taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	2	44%	Winnipeg
Percentage of the CMA municipal road fleet that is powered by alternative fuels (December 2007)	1	44%	Victoria

Table 3: Normalized score, ranking and letter grade of the Census Metropolitan Areas (CMA)**GreenApple Canada 2008 SMART Transportation Ranking Report**

Rank	Census Metropolitan Area (CMA)	Normalized Score	Grade	Population (000's)
1	Victoria (B.C.)	79.6	B+	330
2	Vancouver (B.C.)	76.4	B	2,117
3	Ottawa-Gatineau (Ont.-Qué.)	71.1	B	1,131
4	Montréal (Qué.)	69.9	B	3,636
5	Toronto (Ont.)	68.2	B	5,113
6	Winnipeg (Man.)	67.4	B	695
7	Québec (Qué.)	63.3	B	716
8	Hamilton (Ont.)	59.0	C	693
9	Sherbrooke (Qué.)	57.1	C	187
10	Kelowna (B.C.)	55.9	C	162
11	Kingston (Ont.)	54.9	C	152
12	Saguenay (Qué.)	53.8	C	152
13	London (Ont.)	53.6	C	458
14	Abbotsford (B.C.)	53.2	D	159
15	Kitchener (Ont.)	50.9	D	451
16	Halifax (N.S.)	50.7	D	373
17	Regina (Sask.)	49.5	D	195
18	Edmonton (Alta.)	47.8	D	1,035
19	Calgary (Alta.)	47.5	D	1,079
20	Windsor (Ont.)	47.3	D	323
21	Saskatoon (Sask.)	46.72	D	234
22	Oshawa (Ont.)	46.67	D	331
23	St. Catharines-Niagara (Ont.)	45.7	D	390
24	Barrie (Ont.)	42.9	F	177
25	Greater Sudbury (Ont.)	42.0	F	158
26	Moncton (N.B.)	41.3	F	126
27	St. John's (N.L.)	39.5	F	181

GreenApple Canada 2008 SMART Transportation Ranking Report

Performance Comparison of the 27 Largest Urban Regions in Canada



Abbotsford

British Columbia

Regional Population (2006): 159,200

GreenApple Ranking

2008 Rank: 14
Score: 53.2
2007 Rank: 14

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	4.1	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	33	26
Registered vehicles per capita (2007)	0.58	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	78%	100%
Percentage of housing starts that were apartment or row units (2007)	51%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	22%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	46%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	10	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	6%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	0.9%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	100%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	1.7%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	12%	48%

The Abbotsford region retained 14th place in the GreenApple 2008 Rankings.¹ It has the lowest score for a major urban area in British Columbia, but still has a respectable placement compared to urban settlements in other provinces.

Air Quality values in the GreenApple 2008 Ranking Report have shown dramatic improvements but this urban region still has a long way to go to catch up with other British Columbia communities covered by the GreenApple Report. Abbotsford achieved an impressive 11% reduction in Carbon dioxide emissions based on retail fuel sales, but despite this reduction, it still had the highest per capita values in Canada for Carbon dioxide emissions produced from retail fuel sales.

Abbotsford has municipal policies that support active and sustainable transportation. These policies include a Bicycle Master Plan² and a Trail Development Strategy.³ Such policies make alternative transportation options like biking, walking and public transit more attractive. The Local Motion program will construct a 10 km stretch of paved accessible pathway including: bridges, boardwalks and pedestrian crossing at roadways.⁴

The Abbotsford Seniors' Transportation Initiative will improve accessibility for seniors using public transit. Under the initiative,

the city has implemented four programs: bus buddies, medical transportation, adopt-a-stop and a model bus stop.⁵

The City's Official Plan contains several initiatives that Abbotsford has already implemented to address the environmental consequences of urban growth and development. In order to prevent urban sprawl, policy encourages increasing the density of the downtown core and focuses new residential and commercial areas in existing developments.

Abbotsford can still improve its ranking for sustainable transportation. Adoption of policies to address Transportation Demand Management, for example would increase Abbotsford's ranking and encourage public transit ridership by reducing the use of single occupancy vehicles.

1 The region of Abbotsford includes: Abbotsford (City), Fraser Valley H (Regional district electoral area), Matsqui Main 2 (Indian reserve), Mission (District municipality), and Upper Sumas 6 (Indian reserve).

2 City of Abbotsford. (2003, April) "Bicycle Master Plan". Retrieved November 4, 2008 from: <http://www.abbotsford.ca/AssetFactory.aspx?did=2314>

3 City of Abbotsford. ("Trail Development Strategy". Retrieved November 4, 2008 from: <http://www.abbotsford.ca/AssetFactory.aspx?did=2307>

4 Official website of the Province of British Columbia <http://www.localmotion.gov.bc.ca/media/gallery/abbotsford/default.html>

5 Access Abbotsford website: Retrieved November 6, 2008 from: <http://www.accessabbotsford.ca/seniors.asp>

Barrie

Ontario

Regional Population (2006): 177,040

GreenApple Ranking

2008 Rank: 24
Score: 42.9
2007 Rank: 24

GRADE: **F**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.8	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	37	26
Registered vehicles per capita (2007)	0.63	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	22%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	25%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	17	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	8%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	2.5%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	2%	48%

For a second consecutive year, Barrie maintains its position in twenty-fourth place in the GreenApple Canada SMART Transportation Ranking Report.¹ Once again, this urban region remains one of the lowest-ranked Municipal regions surveyed in our national index as it failed to fundamentally address the sustainable transportation issues that confront it.

Several factors have prevented Barrie from reducing its atmospheric pollution over the last year. The Barrie region has high carbon dioxide levels per capita based on retail fuel sales. The region has also been slow to implement any transportation or public policy initiatives. For example, it has failed to enact an anti-idling bylaw, does not offer employer-issued transit passes, nor does it use Alternative Fuel Vehicles in its transit fleet.

An increasingly urbanized Barrie needs to demonstrate attention to sustainable transportation. Nonetheless, transit ridership has increased in the past year. This could be partly due to the fact that housing stock and housing density as evidenced by the number of row and apartment units has increased, providing more demand for public transit as more people cluster in close proximity to urban transportation exchanges. The Barrie region would do well to adjust to this change by investing in its transit fleet to cater to an increasing demand.

The Simcoe Area Growth Plan outlines the planning policies to direct growth in order to minimize urban and suburban sprawl and make the most efficient use of infrastructure to achieve

more sustainable development.² Simcoe County is also in the process of creating a new Official Plan which commits to creating Transportation Demand Management programs and improvements to the County transportation system.³

These policies could enhance sustainable transportation in the communities that constitute the Barrie region.

Because these policies and plans have yet to yield measurable results, it will be up to municipal leaders to ensure that improvements in sustainable transportation result from these planning exercises. Barrie has the ability to make rapid progress in future rankings.

1 The district of Barrie consists of: Barrie (City), Innisfil (Town), and Springwater (Township).

2 Hemson Consulting, (2008, May) "Simcoe Area Growth Plan." Retrieved November 5, 2008 from http://www.county.simcoe.on.ca/ws_cos/groups/public/@pub/@cos/documents/web_content/wscos_002206.pdf.

3 County of Simcoe. (date unknown). "Transportation Master Plan Terms of Reference." Retrieved November 4, 2008 from http://county.simcoe.on.ca/ws_cos/media/media/planning%20files/TMP%20Terms%20of%20Reference%20FINAL%20Jan%208%202007.pdf

Calgary

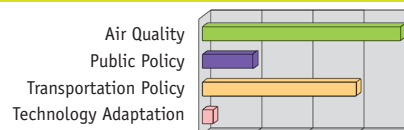
Alberta

Regional Population (2006): 1,079,310

GreenApple Ranking

2008 Rank: 19
Score: 47.5
2007 Rank: 16

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.7	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	42	26
Registered vehicles per capita (2007)	0.75	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	1%	100%
Percentage of housing starts that were apartment or row units (2007)	35%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	34%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	41	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	22%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.8%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.1%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	1.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	6%	48%

Calgary¹ is one of Canada's fastest growing regions² and the seat of Canada's petroleum industry. Calgary ranks nineteenth in the GreenApple Canada 2008 Ranking Report. Calgary falls three positions in the 2008 GreenApple rankings due to its apparent inertia in the area of sustainable transportation: its failure to implement sustainable public policy measures and its demonstrable lack of progress in the adoption of new technologies such as the adoption of Alternative Fuel Vehicles have allowed other regions to surpass Calgary in the rankings.

Calgarians continue their love affair with their cars. Carbon dioxide per capita from retail fuel sales in the Calgary region rose five percent from 2006 to 2007, the most recent year for which statistics are available. Residents of Calgary still do not have access to transit passes through their places of employment nor do they have access to provincial incentives for the purchase of hybrid gasoline-electric vehicles. Calgary continues to favour the creation of single-family dwellings over apartment and row units: the density of its 2007 housing starts is commensurate with that seen in lightly-populated urban centres whose populations are dwarfed by that of Calgary. Not surprising, then, is Calgary's lack of symbolic, low-cost policies which, while muted in their effects, signal a city's intentions in the area of sustainable transportation: the city of Calgary has yet to bring into effect an anti-idling bylaw or to offer transit pass discounts to city of Calgary employees to show leadership on the issue of sustainable transit.

Calgary has made efforts to adopt sustainable transportation technologies that are marginal at best. With none of its transit vehicles using alternative sources of fuel as defined by Natural Resources Canada, Calgary falls short in scores awarded for the adoption of technology for sustainable transportation. The prevalence of hybrid taxis has moved somewhat but is still microscopic at one percent of total taxis in use: municipal law-makers could easily change this percentage in a very short time-frame with legislation.

Calgary should be commended however, for offering Free Transit in the core, which makes it one of only a few urban major urban areas in Canada to adopt such a progressive policy. Calgarians from all walks of life therefore enjoy ease of access via the light rapid transit in the city's downtown core. Whether or not Calgary wishes to expand upon this sustainable showpiece is a decision that city leaders will need to make: in the city's Transportation Infrastructure Investment Plan, a number of light-rail extensions and pedestrian improvements are identified as being currently unfunded despite the city council having identified a number of sustainability principles to guide decision-making.³

Apart from big-ticket spending on sustainable infrastructure improvements, Calgary could choose to take far less costly measures to improve its ranking in this Report, such as introducing alternative fuels into its fleets and offering discounted bus passes to those who purchase their passes at work. By taking less-costly actions now, Calgary can set itself on a path to sustainable transportation and development.

¹ The urban area of Calgary is comprised of Airdrie (City), Beiseker (Village), Calgary (City), Chestermere (Town), Cochrane (Town), Crossfield (Town), Irricana (Village), Rocky View No. 44 (Municipal district), and Tsuu T'ina Nation 145 (Sarcee 145) (Indian reserve).

² Statistics Canada. (2007, March) "Population and Dwelling Counts". Retrieved November 6, 2008 from: <http://www.statcan.ca/Daily/English/070313/d070313a.htm>

³ City of Calgary. (2008, June) "Transportation Infrastructure Investment Plan (TIIP) 2009-2018"

Edmonton

Alberta

Regional Population (2006): 1,034,945

GreenApple Ranking

2008 Rank: 18
Score: 47.8
2007 Rank: 19

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.6	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.40	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	44	26
Registered vehicles per capita (2007)	0.65	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	6%	100%
Percentage of housing starts that were apartment or row units (2007)	37%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	25%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	36%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	39	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	16%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.1%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	1.1%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	6%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	1.5%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

The Edmonton region has slightly improved its 2007 status to eighteenth overall in Canada in the GreenApple 2008 Report.¹ Despite Edmonton's overall improvement, emissions, such as carbon dioxide from retail fuel sales have increased. This places Edmonton well-behind other cities in meeting the goal of reducing carbon dioxide emission. In addition, daily maximum observed ozone levels have risen appreciably even though most of the country is experiencing a secular decline in such levels.

The city of Edmonton deserves praise for having increased by 8% the discount on transit passes that it offers to city hall employees, which makes it the most improved region in Canada for that particular variable.

The city of Edmonton has recently enacted numerous initiatives to promote environmental sustainability. An awareness and education program aimed at reducing excessive idling of motor vehicles was developed and approved in 2007.² This program will commence in spring 2009. In 2007, the City of Edmonton invested in cleaner air by purchasing 231 clean diesel buses: though these are not alternative fuel vehicles as defined by Natural Resources

Canada, their operation will result in the reduction of nitrogen dioxide emissions by 80 tonnes a year and particulate matter by six tonnes a year.³ Edmonton also invested in a new 7.5 km Light Rail Transit service which will encourage more Edmonton residents to use public transit to get to work and other daily destinations.⁴ Another inducement offered potential transit riders is the recent introduction of the Employee Discounted Transit Pass Pilot Program by Edmonton Transit which enables employees to obtain up to a 24% discount on monthly transit passes.⁵

The town of Beaumont⁶ and the city of St. Albert⁷ both recently passed anti-idling bylaws. In addition, St. Albert launched the 2008 Idle-Free Campaign that aims to educate the public about this environmental nuisance.⁸

Edmonton provides a good example of an urban region that is capable of taking small public policy steps to enhance sustainable transportation. Even small and gradual policy changes provide beneficial impacts that will result in large future improvements for Edmonton.

1 The Edmonton Census Metropolitan Area includes the following: Alexander 134 (Indian reserve), Beaumont (Town), Betula Beach (Summer village), Bon Accord (Town), Bruderheim (Town), Calmar (Town), Devon (Town), Edmonton (City), Fort Saskatchewan (City), Gibbons (Town), Golden Days (Summer village), Itaska Beach (Summer village), Kapasiwin (Summer village), Lakeview (Summer village), Leduc (City), Leduc County (County municipality), Legal (Town), Morinville (Town), New Sarepta (Village), Parkland County (County municipality), Point Alison (Summer village), Redwater (Town), Seba Beach (Summer village), Spring Lake (Village), Spruce Grove (City), St. Albert (City), Stony Plain (Town), Stony Plain 135 (Indian reserve), Strathcona County (Specialized municipality), Sturgeon County (Municipal district), Sundance Beach (Summer village), Thorsby (Village), Wabamun (Village), Wabamun 133A (Indian reserve), Wabamun 133B (Indian reserve), and Warburg (Village).

2 City of Edmonton. (Date unknown) EcoVision Annual Report 2007. p.15 Retrieved November 4, 2008 from: <http://www.edmonton.ca/environmental/documents/Environment/EcoVisionAnnualReport2007.pdf>

3 City of Edmonton. (Date unknown) EcoVision Annual Report 2007. p.10 Retrieved November 4, 2008 from: <http://www.edmonton.ca/environmental/documents/Environment/EcoVisionAnnualReport2007.pdf>

4 City of Edmonton. (Date unknown) "LRT Projects." Retrieved November 4, 2008 from: <http://www.edmonton.ca/transportation/ets/lrt-projects.aspx>

5 City of Edmonton. (Date unknown) ETS@Work.. Retrieved November 3, 2008 from: <http://www.edmonton.ca/transportation/workplace-commuter-bus-pass-sa.aspx>

6 Town of Beaumont. (Date unknown) "Beaumont's Idle-Free Bylaw". Retrieved November 5, 2008 from: <http://www.town.beaumont.ab.ca/PDF/Bylaw/2008/BYLA%20-%20Idle-Free%20Web%20brochure.pdf>

7 City of St. Albert. "Bylaw 16/2007: A bylaw to regulate vehicle idling". Retrieved November 5, 2008 from: http://www.stalbert.ca/uploads/files/our_government/bylaws/borrowing_bylaws/IdleFreeBylaw16-2007.pdf

8 City of St. Albert. (2008, June 4) "St. Albert Clears The Air With Idle-Free Campaign Launch". Retrieved November 5, 2008 from: <http://www.stalbert.ca/06-04-08-idle-free-campaign-launch/?id=342>

Halifax

Nova Scotia

Regional Population (2006): 372,858

GreenApple Ranking

2008 Rank: 16
Score: 50.7
2007 Rank: 11

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.3	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.10	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	30	26
Registered vehicles per capita (2007)	0.55	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	45%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	39%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	30	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	23%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.1%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	8%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.1%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

The Halifax region's GreenApple SMART Transportation Ranking fell sharply from eleventh to sixteenth place in 2008.¹

The urban region retains acceptable marks for air quality, while its transportation policy has improved slightly. Halifax continues to struggle with implementing public policy that supports sustainable transportation, and its adoption of green technologies is less than favourable.

While the ratio of registered vehicles per capita rose somewhat in 2008, causing the need for more land-use to be given over to parking spaces, the amount of carbon dioxide released from retail fuel sales remained constant compared to 2007. Carbon monoxide levels fell from 0.7 parts per million in 2007 to 0.1 parts per million in this year's Report, substantially reducing the minimal presence of this pollutant.

Public policy development for sustainable transportation in the Halifax region needs significant improvement. While the city has introduced an anti-idling policy for its municipal vehicles, it has failed to introduce an anti-idling bylaw for private vehicles. There is also a lack of incentives or credits for purchasers of hybrid gasoline-electric automobiles. With housing starts in row and apartment complexes falling by seven percent, local governments must step up to the challenge of providing its citizens with incentives for commuting in a sustainable fashion and currently Halifax residents lack this important incentive.

Halifax's efforts to improve its transportation policy have been effective. With the introduction of the ninety minute transfer on all bus and ferry routes, the expansion of the U-Pass for local

university and college students, and a pilot E-Pass with the province of Nova Scotia, ridership is increasing.² Indeed, in 2008, Halifax increased the number of kilometers per capita of public transit offered to its residents. Halifax has also added nearly eleven kilometers of dedicated bicycle lanes and paved shoulders which additions serve to increase the city's total bicycle-friendly road lanes to nearly 48 kilometres. The results of these expansions are beginning to show: 23% of the workforce is now walking, bicycling, or using public transit to work, 3% more than previously. Halifax also has free transportation in its downtown core during the summer months.³ Continued policy development with respect to employer-issued transit passes and an increased focus on row and apartment construction will improve Halifax's GreenApple Canada ranking in the future.

Halifax has failed to implement green technologies that would assist in reducing greenhouse gas emissions, while creating a more sustainable transportation policy for its residents. The percentage of its transit fleet using alternative fuel vehicles (AFVs) has remained the same, and AFV taxis have not changed meaningfully. In 2008, a tender was issued for three hybrid diesel-electric buses, but the contract has not yet been awarded. While an anti-idling policy for municipal vehicles is a step forward, Halifax has failed to purchase AFVs for its municipal fleet. With added investment for green technologies for its transit and municipal vehicles, the City of Halifax can improve its transportation sustainability.

¹ The Halifax region includes: Beaver Lake 17 (Indian reserve), Cole Harbour 30 (Indian reserve), Halifax (Regional municipality), Sheet Harbour 36 (Indian reserve), and Shubenacadie 13 (Indian reserve).

² Halifax Regional Municipality. (Date Unknown) "The U-Pass". Retrieved November 6, 2008 from: <http://www.halifax.ca/metrotransit/upass.html>

³ Halifax Regional Municipality. (Date Unknown) "Free Rides Everywhere Downtown". Retrieved November 6, 2008 from: <http://www.halifax.ca/metrotransit/fred.html>

Hamilton

Ontario

Regional Population (2006): 692,911

GreenApple Ranking

2008 Rank: 8
Score: 59.0
2007 Rank: 7

GRADE: C



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.8	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	45	26
Registered vehicles per capita (2007)	0.56	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	97%	100%
Percentage of housing starts that were apartment or row units (2007)	38%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	51%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	39%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	22	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	15%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	41%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.6%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	30%	48%

Hamilton continues to rank within the top ten Canadian urban regions for sustainable transportation in the 2008 GreenApple Report, however it has dropped one place since the last year.¹ Once again, the Hamilton urban region did very well in a number of categories. The city of Hamilton demonstrated leadership to local area employers by offering the largest possible discount on the cost of a local transit pass to city hall employees. Hamilton has shown leadership in the expansion of its Alternative Fuel Vehicle municipal and transit fleets. Since 2007, the region has increased its use of municipal alternative fuel vehicles by 19% and its use of alternative fuel vehicles in its transit fleet by 12%.

As part of the Green Fleet Implementation Plan², Hamilton is transitioning its transportation fleet to greener alternatives. Over the past ten years, Clean Air Hamilton has been working to reduce greenhouse gas emissions through programs such as The Commuter Challenge and Anti-Idling Campaign, which are focused on changing the behaviour of motorists.³ As part of the Smart Commute Initiative, the city is contemplating the creation of a Transportation Management Association which will work with major businesses to help implement employer-trip reduction programs.⁴

In 2007 the city of Hamilton's council approved the Hamilton Transportation Master Plan which endorsed a Bus Rapid Transit line. The current Rapid Transit Feasibility Study is looking at ways to increase transit's share of trips to 15%, which will help to achieve a 20% reduction in the distance travelled.⁵ One of the city's newest initiatives encouraging transit use is the Affordable Transit Pass Program focused on lower income residents.⁶ Approved applicants who are working can receive a 50% discount on a monthly pass.

Hamilton has the potential to boost its ranking further. Not only did it have the highest percentage increase in its municipal road fleet using Alternative Fuel Vehicles, it also stands apart as having the best trip reduction programs in place. Increased investments in technology adoption and implementing policy changes such as offering free transit in the downtown core and widening its anti-idling bylaws will have a positive effect on Hamilton's future ranking.

1 The Hamilton region includes: Burlington (City), Grimsby (Town), and Hamilton (City).

2 City of Hamilton, (2005, May 30) "Green Fleet Implementation Plan", Retrieved November 5, 2008 from: <http://www.myhamilton.ca/NR/rdonlyres/45DA2BA5-3877-4048-9535-4E3615E0F38E/0/GreenFleetImplementationPlan.pdf>

3 City of Hamilton, (2008, June 18) "Clean Air Hamilton," Retrieved October 1, 2008 from: <http://www.cleanair.hamilton.ca/default.asp>

4 Smart Commute Association, (Date unknown) "Smart Commute Hamilton", Retrieved September 29, 2008 from: <http://www.smartcommute.ca/hamilton/>

5 City of Hamilton, (Date unknown) "Rapid Transit: Moving Hamilton Forward", Retrieved September 29, 2008 from: <http://www.myhamilton.ca/myhamilton/CityandGovernment/ProjectsInitiatives/RapidTransit/>

6 City of Hamilton, (Date unknown) "Affordable Transit Pass Program", Retrieved September 29, 2008 from: http://www.myhamilton.ca/NR/rdonlyres/B325B7CC-99BC-4075-9A64-712F808B05D5/0/ATP_Brochure.pdf

Kelowna

British Columbia

Regional Population (2006): 162,276

GreenApple Ranking

2008 Rank: 10
Score: 55.9
2007 Rank: 14

GRADE: **C**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.5	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.60	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	39	26
Registered vehicles per capita (2007)	0.69	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	56%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	15%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	22%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	32%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	20	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	9%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.1%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	100%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	6.2%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	21%	48%

Kelowna¹ scored 55.9, placing the urban region within Canada's top ten urban regions for sustainable urban transportation. This is an improvement from its fourteenth-place score in the 2007 GreenApple Canada Ranking Report.

Kelowna still does not have an anti-idling bylaw. In order to meet the geographical coverage target of 100%, the municipal region must create trip reduction programs for its employees that include discounts on the cost of transit passes. Kelowna drastically increased its hybrid transit fleet to 100%. Nevertheless, Kelowna must also work to adopt alternative fuel vehicles for its taxi and municipal fleets.

The Kelowna 2030 Community Plan outlines long term sustainability goals which aim to reduce greenhouse gas emissions by 33% by 2030.² The principal goals include implementing transportation demand management policies, advancing transit infrastructure and green building rating programs.

The Official Community Plan outlines Transportation Demand Management initiatives such as education programs to encourage

the use of alternative modes, trip reduction programs to support carpooling and municipal Transportation Demand Management programs geared towards city employees.³ Currently, there are regional community networking programs including Bike-to-Work Week, Bike-to-School Week, Walk and Roll Day and the National Commuter Challenge. The Sidewalk Master Plan works to improve the pedestrian environment and expand the sidewalk network to support safe routes to schools and the town centre land-use policy.⁴

Another initiative to reduce vehicle use encourages behavioural change at the household level. Such initiatives include the Eco-Pass Parking Program⁵ and the Carpooling Parking Incentive, the Off-Street Parking & Transit Pricing Incentives, the cost-sharing of bike racks, the Pro-pass for transit bulk purchase, and Transit Education & Outreach. In addition, the City of Kelowna is also a member of the E3 Fleet which uses different blends of bio-diesel and includes four hybrid vehicles and eighteen smart cars in their municipal fleet. Kelowna's noticeable improvement bodes well for its performance in future editions of the Report.

1 The metropolitan area of Kelowna includes: Central Okanagan (Regional district electoral area), Central Okanagan J (Regional district electoral area), Duck Lake 7 (Indian reserve), Kelowna (City), Lake Country (District municipality), Peachland (District municipality), Tsinstikeptum 9 (Indian reserve), and Tsinstikeptum 10 (Indian reserve).

2 City of Kelowna. (2008, November 3) "Kelowna 2030 Official Community Plan." (Draft Copy). p. 12 Retrieved November 4, 2008 from: <http://www.kelowna2030.ca/spaw2/uploads/files/OCF%20Draft%20Final%20-%20Web%20Version.pdf>

3 City of Kelowna. (2006, July 11) "Kelowna 2020 Official Community Plan". p. 12-4 Retrieved November 4, 2008 from: <http://www.kelowna.ca/CityPage/Docs/PDFs/%5Cbylaws%5COfficial%20Community%20Plan%20-%20Bylaw%20No.%207600/OCF%202020%20Chapter%2012%20-%20Transportation.pdf>

4 City of Kelowna. (Date unknown) "Sidewalk Master Plan". Retrieved November 4, 2008 from: <http://www.kelowna.ca/CM/Page428.aspx>

5 City of Kelowna. (Date unknown) "Eco-Pass". Retrieved November 3, 2008 from: <http://www.kelowna.ca/CityPage/Docs/PDFs/Transportation%20Division/ECO%20pass%20parking.pdf>

Kingston

Ontario

Regional Population (2006): 152,358

GreenApple Ranking

2008 Rank: 11
Score: 54.9
2007 Rank: 10

GRADE: **C**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.5	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	43	26
Registered vehicles per capita (2007)	0.55	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	77%	100%
Percentage of housing starts that were apartment or row units (2007)	30%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	50%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	35%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	18	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	16%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.1%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	3.6%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

Kingston slipped from its tenth position in the 2007 GreenApple Ranking to 11th place in 2008.¹

Although there were few improvements in the Kingston region's 2008 scores, it is worth noting that the Kingston region had the highest percentage increase (22%) in the total amount of transit revenue kilometres per capita. The city also has quite a high percentage of residents living in an area with an anti-idling bylaw in effect. Kingston's coverage is excellent in comparison to bigger urban centres such as Vancouver (54%) and Montreal (52%). In addition, although it is not as densely populated, Kingston scores well on transit ridership and this is likely due to its massive increase of transit service since the publishing of last year's Report. The recent addition in August, 2008 of a smart card initiative which expands payment options and will collect very meaningful data on trip duration and customer usage; these data in turn will allow the city's transit service to provide better service to passengers.

The City of Kingston's Transportation Master Plan², released in 2004, outlined a number of sustainability initiatives including anti-idling campaigns and trip-reduction programs. Yet, in the past year there has been no increase in utilization in these two areas. Additionally, technology adoption is slow within the transit fleet and municipal road fleet. However, the number of

hybrid/Alternative Fuel Vehicle taxis has increased, and this development is promising.

The Kingston region is continuing its efforts to reduce its environmental impacts. If it is vigorous in its implementation, Kingston could improve its future rankings quite considerably. The City recently passed a bylaw which controls the idling time of vehicles and boats. It also established a greenhouse gas monitoring program. This year saw the publication of the 2000-2006 "Trends in Kingston's Community Greenhouse Gas Emissions" Report.³ This Report evaluates the impact of the reduction policies adopted by the City in 2004, and creates a framework to reduce greenhouse gas reductions of 10% by 2014.

Loyalist Township recently unveiled an Official Plan which outlines a policy framework for social and economic development until the year 2020. The Plan emphasizes growth in the transportation system that connects with roads, bicycling pathways and the rail system. It also looks to work with the provincial government to improve and expand its ferry transit.⁴

The Kingston region's progress is impressive but all the more so because of its small population: community leaders are making effective use of policy levers to make sustainable transportation a viable option for Kingston residents.

1 The urban area of Kingston consists of: Frontenac Islands (Township), Kingston (City), Loyalist (Township), and South Frontenac (Township).

2 City of Kingston. "Kingston Transportation Master Plan: Final Report," July, 2004. P. 6. http://www.cityofkingston.ca/pdf/transportation/ktmp/KTMP_FinalReport_July04.pdf

3 Hsu, Ted.. (2008, January 15) "Trends in Kingston's Community Greenhouse Gas Emissions (2000-2006)" Retrieved November 3, 2008 from: <http://www.cityofkingston.ca/pdf/cityhall/committees/keaf/KingstonGHGEmissionsTrends.pdf>

4 Loyalist Township. (Date unknown) "Official Plan." p.p.3-7. Retrieved November 4, 2008 from: <http://www.loyalisttownship.ca/business-pdplan>

Kitchener-Waterloo

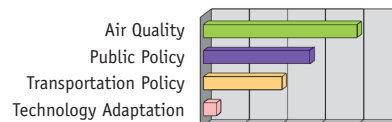
Ontario

Regional Population (2006): 451,235

GreenApple Ranking

2008 Rank: 15
Score: 50.9
2007 Rank: 16

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.6	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.80	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	42	26
Registered vehicles per capita (2007)	0.60	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	49%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	37%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	22	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	11%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	0.9%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.1%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	14%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.3%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	5%	48%

The Kitchener-Waterloo region improved by one position in the ranking to fifteenth place with a score of 50.9 in the GreenApple Canada 2008 Ranking Report.¹ The region has seen values in each policy category remain largely static from the 2007 Report. Air pollution remains a threat to the region; carbon dioxide from retail fuel has jumped 0.2 tonnes per capita. The region has a rather middling performance with regard to public policy indicators. Although it has yet to show leadership by offering city employees discounted transit passes or by enacting an anti-idling bylaw, it has nonetheless turned in a markedly improved performance with regard to residential densification: its 2007 residential housing starts were 17% more dense than in the year previous. Similarly, Kitchener-Waterloo's transportation policy performance produced mixed results: it provides very affordable transit but offers a lackluster level of service; its employer-transit pass program has yet to receive widespread participation. Kitchener-Waterloo has the most ability to improve with regard to technology adoption: the vast majority of its transit, municipal and taxi vehicle do not yet use alternative sources of fuel.

Kitchener-Waterloo appears poised to make significant improvements to the sustainability of its transportation. It is in the process of introducing bicycle racks on all transit vehicles.² Its transit system will become more accessible with the soon-to-be-launched next-generation transit information

system which will offer web-based trip planning, among other features.³ Though it is a mid-sized region by population, the Region of Waterloo has launched an initiative to introduce rapid transit service in anticipation of future population growth. The city of Kitchener has commenced a growth management strategy planning exercise as a first step to ensuring that density is encouraged; the jump in multi-family housing starts appears to bear out Kitchener's commitment to increased density of future growth.⁴

The region of Kitchener-Waterloo can significantly improve its current standing by developing public policy that supports trip reduction programs and utilizing government incentives for hybrids. The use of hybrids for the region's taxi fleet, in addition to an increase of alternative fuel vehicles for the region's transit authority and the enactment of an anti-idling bylaw would improve Kitchener-Waterloo's GreenApple Sustainable Transportation Ranking.

1 The urban metropolitan area of Kitchener-Waterloo includes the following: Cambridge (City), Kitchener (City), North Dumfries (Township), Waterloo (City), and Woolwich (Township).

2 Vincent, Graham. (2008, November 6.) Email correspondence with Patrick Doré.

3 Grand River Transit. (Date unknown) "easyGO introduction". Retrieved November 6, 2008 from: <http://www.grt.ca/web/transit.nsf/vwArticles/TE-GR-ROU-LIN-2100?OpenDocument>

4 City of Kitchener. (2008) "Kitchener Growth Management Strategy (KGMS)". Retrieved November 7, 2008 from: http://www.kitchener.ca/city_hall/departments/devtech_services/planning/growth_management_strategy.html

London

Ontario

Regional Population (2006): 457,720

GreenApple Ranking

2008 Rank: 13
Score: 53.6
2007 Rank: 11

GRADE: C



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.5	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.30	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	49	26
Registered vehicles per capita (2007)	0.58	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	88%	100%
Percentage of housing starts that were apartment or row units (2007)	36%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	30%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	40%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	22	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	14%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	2%	48%

London scored 53.6 and was ranked thirteenth overall in Canada in the 2008 Report, declining two positions from its 2007 ranking.¹

There were some minor differences in London's score compared to 2007, including small changes in the percentage of London's population walking, bicycling or using public transit to get to work. Similar to many mid-size regions, London has low adoption of green transportation technologies including Alternative Fuel Vehicles in both its taxi and municipal fleets.

The City of London has been making changes to its carbon emission reduction policies. In 2007 the London Transit Commission completed a Long Term Transit Growth Overview with the purpose of gaining an understanding of the actions the Commission and the municipal government need to take to achieve their goal of increasing transit ridership from 7% to 10% by 2024.² The Long Term Transit Growth Overview calls for an Enhanced Corridors and Nodes Transit Strategy which will use a Bus Rapid Transit service. The next steps include inter-institutional discussions and an Official Plan review.

In 2005, London City Council adopted the Bicycle Master Plan which outlines long-term and short-term goals for shaping

the region's cycling infrastructure.³ According to the municipal website, the implementation strategy was developed in 2006 such as amending all relevant policies in the Official Plan and corresponding bylaws. The extent of the city's progress in the implementation of the plan is not clear as the information is not published by the municipal government.

Over the past year, London has steadily increased the number of Alternative Fuel Vehicles in its city fleet by adding twelve Ford Escape hybrids, which are expected to reduce greenhouse emissions by twenty tonnes every year.⁴ The fleet already includes three Toyota hybrids, seven Honda Civic hybrids, two Mercedes Benz Smart Cars and four advanced street sweepers. London is making progress if perhaps too slowly as compared with its peers: it will need to accelerate the pace of its decision-making in the area of sustainable transportation if it wishes to avoid losing further ground to its peers in coming years.

1 The London area includes: Adelaide Metcalfe (Township), Central Elgin (Municipality), London (City), Middlesex Centre (Township), Southwold (Township), St. Thomas (City), Strathroy-Caradoc (Township), Thames Centre (Municipality).

2 City of London. (2007, June 2) "Long Term Transit Growth Overview". p.2. Retrieved November 5, 2008 from: <http://www.londontransit.ca/Pubs/LTG-Overview.pdf>

3 City of London. (2005, March) "Bicycle Master Plan". p.13. Retrieved November 4, 2008 from: http://www.london.ca/Reference_Documents/PDFs/BMP_Report.pdf

4 Simunac, Daniela. (2008, February 22) "City's fleet goes green, saves cash". The London Free Press. Retrieved November 3, 2008 from: <http://www.lfpress.ca/cgi-bin/publish.cgi?p=225569&s=health>

Moncton

New Brunswick

Regional Population (2006): 126,400

GreenApple Ranking

2008 Rank: 26
Score: 41.3
2007 Rank: 24

GRADE: **F**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.7	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.40	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	28	26
Registered vehicles per capita (2007)	0.62	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	24%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	41%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	29%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	10	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	11%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.9%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

The 2008 SMART Transportation Ranking Report ranks Moncton in twenty-sixth place with a score of 41.3, with the Moncton urban region¹ falling two positions lower compared to the 2007 Report.

This year's results reflect the region's inability to improve its air quality or its public policy relating to transportation issues, and an almost total rejection of green technologies.

In contrast with the Report's most successful cities, Moncton lacks provincial incentives or credits for the purchase of hybrid vehicles. Coupled with the fact that Moncton has failed to pass an anti-idling bylaw, Moncton's public policy development regarding transportation issues is quite weak. However, in an effort to encourage students to use public transport, Codiac Transit and Moncton's universities have partnered to provide monthly discount passes to its students.

Moncton's attempt to increase ridership among students and residents seems to be working. Compared to its standing in the 2007 GreenApple Canada SMART Transportation Ranking Report, in 2008, the percentage of the Moncton labour force that walked, bicycled, or utilized public transport to reach their job increased marginally from 9.9% to 10%. In addition, the number of kilometres travelled on public transit per capita rose by 16%. With increased ridership, Codiac Transit completed in 2007 a Bus Rapid Transit system which connects two major commuter areas with the downtown. This limited-stop, direct bus route service

operates in a mixed traffic lane. Stations have Park and Ride and Bike and Ride facilities (racks and lockers), while buses are equipped with bike racks.² The city has also increased the number of accessible low floor buses in its transit fleet.³ These advances are promising.

Adopting green technologies is still an issue for Moncton as there has been little improvement from the 2007 Report. The city's transit fleet remains without any Alternative Fuel Vehicles, while the municipal road fleet also lacks such vehicles. Minimal uptake of hybrid gasoline-electric taxis was seen during 2007, making Moncton one of the weakest cities when dealing with technology adoption. Moncton has much to accomplish if it is to demonstrate its desire to implement truly sustainable transportation policies.

Overall, Moncton has had little success in increasing its rank in the SMART Transportation Report. There are significant improvements to be made in air quality, public policy, transportation policy, and the adoption of green technologies if the region wishes to halt its continual decline on the index.

1 The Metropolitan Region of Moncton includes: Coverdale (Parish), Dieppe (City), Dorchester (Village), Dorchester (Parish), Elgin (Parish), Fort Folly 1 (Indian reserve), Hillsborough (Village), Hillsborough (Parish), Memramcook (Village), Moncton (City), Moncton (Parish), Riverview (Town), Saint-Paul (Parish) and Salisbury (Village).

2 City of Moncton. (2003, May) "Looking Beyond The Immediate: An Urban Transportation Showcase Program Proposal", p. 10 Retrieved November 6, 2008 from: <http://www.moncton.ca/AssetFactory.aspx?did=1308>

3 City of Moncton. (2003, May) "Looking Beyond The Immediate: An Urban Transportation Showcase Program Proposal", p. 18 Retrieved November 6, 2008 from: <http://www.moncton.ca/AssetFactory.aspx?did=1308>

Montréal

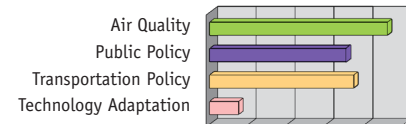
Québec

Regional Population (2006): 3,635,571

GreenApple Ranking

2008 Rank: 4
Score: 69.9
2007 Rank: 5

GRADE: **B**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.2	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	35	26
Registered vehicles per capita (2007)	0.49	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	52%	100%
Percentage of housing starts that were apartment or row units (2007)	62%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	62%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	45	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	29%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.2%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	55%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.1%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	2%	48%

The Montréal Region increased its standing to rank fourth overall in Canada in the 2008 GreenApple Canada rankings. This was an increase over its fifth position (a tie with Toronto) in the 2007 GreenApple Smart Transportation Ranking Report.

Montréal continues to have the highest percentage of people walking, riding or taking public transit at 29% followed very closely by Toronto and Ottawa. Montreal also continues to have the highest proportion of high density housing stock in Canada at 62%. These two factors make sustainable public transit very feasible for this region.

There have been changes after last year's poor performance in the technology adoption category. Montréal has improved by investing heavily in its transit fleet. Since January 2008, all 225 transit buses in Laval have been converted to bio-diesel.¹ Now over half of that city's transit fleet are alternative fuel vehicles. This is a marked improvement from last year where Montréal had no alternative fuel vehicles in its fleet. It is estimated that this conversion will reduce Carbon dioxide emissions by 1,050 tonnes each year. This is evident in the data collected this year: Montréal's air quality has indeed improved quite significantly.

Montréal can also boast a Canadian first. The city launched a pilot public bike system, which uses Radio Frequency Identification and solar energy to operate the bike stations.² By 2009, the full program will launch 2,400 bikes which will provide an easy avenue for short distances. A tramway system will be in service by 2013 covering both the downtown and surrounding areas. Côte des

Neiges/Notre Dame de Grâce launched its first municipal electric vehicle and a cycling plan consisting of 45 km of bike pathway.³ Another city showing leadership is Sainte Thérèse, which will purchase a Nemo all-electric truck from the manufacturer which assembles them within the city of Sainte-Thérèse.⁴

The City of Montréal's Master Plan outlines new policies to encourage active transportation. Policies include restricting the number of automobile parking spots in central Montreal, developing bike-parking requirements for developers and the installation of bike posts near Metro stations and public buildings.

In the 2007 Transportation Plan, the city put forth a "Pedestrian Charter" which includes a number of policies to encourage walking, such as the development of pedestrian friendly design guidelines for the streets. The city also plans to extend the indoor pedestrian networking in the downtown core and operate streetcars to alleviate traffic and congestion.

Although the region has various long term plans and initiatives in place, Montréal can improve its ranking quite significantly by implementing more immediate and less expensive initiatives in the public policy category. This year's data show that there has been little change in anti-idling bylaws since last year, and the region still must promote trip reduction initiatives and employer issued discount transit passes. It also needs to focus on converting its taxi fleet and municipal fleet to alternative fuel vehicles or hybrids.

1 Société de Transport de Laval website: <http://www.stl.laval.qc.ca/communiques/20080205-fr.shtm> Date accessed: October 29, 2008.

2 Stationnement de Montreal (Date Unknown) "Montreal's Public Bike System" Retrieved November 6, 2008 from: <http://www.statdemtl.qc.ca/en/bike/>

3 Borough of Cote-De-Neiges/Notre-Dame-de-Grace. (June 19, 2008) "Cycling Plan" Retrieved November 6, 2008 from: http://ville.montreal.qc.ca/pls/portal/docs/page/arr_cdn_v2_en/media/documents/Cycling_Plan.pdf.

4 Ville de Sainte-Thérèse. (2008, October 23) "Sainte-Thérèse acquiert un premier camion urbain Nemo". Retrieved November 7, 2008 from: <http://www.ville.sainte-therese.qc.ca/0-0.html>

Oshawa

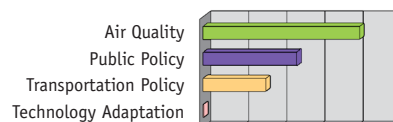
Ontario

Regional Population (2006): 330,594

GreenApple Ranking

2008 Rank: 22
Score: 46.67
2007 Rank: 20

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.6	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	1.00	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	38	26
Registered vehicles per capita (2007)	0.60	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	43%	100%
Percentage of housing starts that were apartment or row units (2007)	26%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	28%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	15	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	12%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.4%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	1%	48%

The GreenApple Canada 2008 Ranking Report ranked Oshawa in 22nd place with a score of 46.67, just fractionally behind Saskatoon.¹

Known as Canada's automobile manufacturing capital, Oshawa enjoyed noticeable improvements in its air quality performance; daily maximum observed ozone declined 16% from the 2007 GreenApple Ranking Report and carbon dioxide emissions per capita from retail fuel sales decreased slightly. Oshawa's performance in other categories is largely unchanged from the 2007 Report. As a smaller urban community, building residential units near transit stops can be crucial to enable residents to take advantage of public transit yet the densification of housing starts in the Oshawa region has declined further in the most recent year for which figures are available. The Oshawa region must also address problems regarding its transportation policy and technology adoption. Although its municipal road fleet has seen the introduction of its first alternative fuel vehicles, substantial improvement is needed to achieve a meaningful representation of these vehicles among the total fleet. The city of Oshawa has made a notable effort to reduce vehicle use within the fleet by creating a bylaw enforcement unit which patrols on mountain bicycles rather than cars. Recent developments have revealed municipal initiatives in favour of transportation sustainability. Durham Region Transit's Quick-Win project will undergo a new Bus Rapid Transit system to connect to other communities in

Durham.² In conjunction with the Durham District School Board, the transit authority launched a pilot program which encouraged secondary students to ride public transit with a reduced price bus pass.³

Although the city of Oshawa has yet to offer its employees discounted transit passes, it will soon offer non-discounted transit passes for sale at work to encourage their purchase by city employees. The city has also recently undertaken a SMART transportation survey of employee commuting habits to inform the design of the new city hall facilities currently under construction; these facilities will feature bike storage rooms and shower facilities to encourage bicycling to and from work. The city also is rolling out a ride-sharing program which will serve many city hall employees.

To address the focus on single-family units in this sprawling metropolitan region, Durham Region has commissioned a growth management study called Growing Durham.⁴ The study is being reviewed by the region's planning committee and following the committee's revisions, will be discussed with provincial and municipal authorities. Some relevant policies include changes to the local and regional official plans as well as altering transportation strategies.

² Durham Region Transit. (2008, March 26) "\$82.3 Million for Bus Rapid Transit". Retrieved November 5, 2008 from: <http://www.durhamregiontransit.com/durham/index.aspx?ArticleID=475&lang=en-CA>

³ Region of Durham. (2008, October 14) "Growth Plan Implementation Study". Retrieved November 3, 2008 from: <http://www.region.durham.on.ca/growthplan/growth.htm>

⁴ Region of Durham. (2008, October 14) "Growth Plan Implementation Study". Retrieved November 3, 2008 from: <http://www.region.durham.on.ca/growthplan/growth.htm>

¹ The area of Oshawa consists of: Clarington (Municipality), Oshawa (City), Whitby (Town).

Ottawa-Gatineau

Ontario - Québec

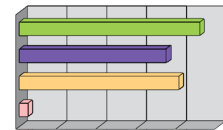
Regional Population (2006): 1,130,761

GreenApple Ranking

2008 Rank: 3
Score: 71.1
2007 Rank: 3

GRADE: **B**

Air Quality
Public Policy
Transportation Policy
Technology Adaptation



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.2	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.40	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	34	26
Registered vehicles per capita (2007)	0.53	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	95%	100%
Percentage of housing starts that were apartment or row units (2007)	49%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	15%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	47%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	48	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	28%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.1%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	3.4%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	16%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.1%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

The nation's capital holds on to its 2007 rank of third place in the GreenApple Canada 2008 Ranking Report.

The Ottawa-Gatineau region¹ has fared well in the air quality category and is taking positive steps to reduce greenhouse emissions. The most significant improvement involved reducing carbon dioxide per capita from retail fuel sales emissions by two percent in one year. To encourage further reductions, the city of Gatineau recently strengthened its anti-idling bylaw: allowed idle times are now three minutes and fines for infractions are now 70% higher.²

The region has expressed its determination to reach the sustainable transportation goals outlined in the city of Ottawa's 2020 City Plan and the Transportation Master Plan. Among the notable initiatives in the works for this region are the recently-approved plans for a city-wide Rapid Transit Network which features plans for electric light rail that will also extend to the Ottawa airport and the Rapidbus project in Gatineau which aims to deliver rapid-transit quality service to residents.³ The approved network contains both immediate and long term goals

in the surrounding communities. The Ottawa-Gatineau region is undertaking a public bicycle path network study that will allow residents to better commute by bicycle in both Gatineau and Ottawa. The region is also reconfiguring its roads and traffic signals to give priority to public transit. The city of Gatineau continues to champion the expansion of auto-share stations having recently expanded to a suburban location within the city.⁴

Ottawa-Gatineau distinguishes itself from its peers in its ability to convince transit riders to purchase passes through their employers. It also distinguishes itself as having the second highest (95%) number of residents subject to anti-idling bylaws second only to Hamilton (97%).

Although the Ottawa-Gatineau region has made progress this year, it still needs to focus on technology adoption such as in the taxi fleet. The City of Gatineau recently demonstrated its desire to address these issues by initiating a two-year review of sustainable transportation options: the final Report will provide city planners with options to encourage sustainable transportation choices by residents.⁵ Steps such as these show that this region is determined to deliver sustainable urban transportation.

1 The urban area of Ottawa – Gatineau includes: Cantley (Municipalité), Chelsea (Municipalité), Clarence-Rockland (City), Denholm (Municipalité), Gatineau (Ville), L'Ange-Gardien (Municipalité), La Pêche (Municipalité), Ottawa (City), Pontiac (Municipalité), Russell (Township), Val-des-Monts (Municipalité).

2 Ville de Gatineau. « GATINEAU : ENTRÉE EN VIGUEUR DU NOUVEAU RÈGLEMENT SUR LA MARCHÉ AU RALENTI DES VÉHICULES À MOTEUR » Gatineau. October 1, 2008. Retrieved November 3, 2008. < http://www.ville.gatineau.qc.ca/documents/C-08-115.AFM_000.pdf >

3 McCormick Rankin. (date unknown). "Gatineau Rapidbus Planning and Design". Retrieved November 4, 2008 from. < <http://www.mccormickrankin.com/viewproject.asp?id=91?> >

4 Ville de Gatineau. "COMMUNAUTO ET LA VILLE DE GATINEAU LANCENT LE SERVICE D'AUTOPARTAGE DANS LE SECTEUR D'AYLMER." Gatineau. June 19, 2008. Retrieved November 3, 2008. < http://www.ville.gatineau.qc.ca/documents/C-08-083.AFM_000.pdf >

5 Ville de Gatineau. "VERS UNE STRATÉGIE NOVATRICE EN TRANSPORT DURABLE : SIGNATURE D'UNE ENTENTE ENTRE LA VILLE DE GATINEAU ET VIVRE EN VILLE DANS LE CADRE D'UNE ÉTUDE SUR LA GESTION DES DÉPLACEMENTS". Gatineau. September 16, 2008. Retrieved November 3, 2008. < http://www.ville.gatineau.qc.ca/documents/C-08-110.AFM_000.pdf >

Québec City

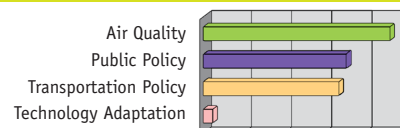
Québec

Regional Population (2006): 715,515

GreenApple Ranking

2008 Rank: 7
Score: 63.3
2007 Rank: 9

GRADE: **B**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.2	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	31	26
Registered vehicles per capita (2007)	0.51	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	69%	100%
Percentage of housing starts that were apartment or row units (2007)	54%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	10%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	52%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	26	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	19%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	1.6%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	2%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.7%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	6%	48%

The municipal region of Québec City¹ advances two places in this year's rankings as a result of its outstanding performance on a number of variables. Québec's performance is tempered by its slow adaptation of new technologies. Few municipal regions in Canada can claim performances better than Québec City in terms of number of vehicles per capita and the amount of carbon dioxide produced per capita. Though Québec benefits from its dense housing stock, a result of its 400 year history, it has also taken care to ensure that a majority of its new housing starts are in the form of apartments and row housing.

Since 2007, the Québec City region has enacted anti-idling bylaws applicable to more than two-thirds of its population. The city of Québec has doubled the discount on a transit pass purchased by its employees at work. The region has made strides in expanding employer-issued transit passes to the local workforce: the number of workers throughout the region holding

such passes increased by nearly half since 2007.

The most prominent of Québec's improvements since 2007, however, is its introduction of a free transit service within its downtown core. Not only is this service free during an inaugural two-year period, but the aptly named *écolobus* vehicles used to provide this free transit service are themselves environmentally friendly, being powered entirely by electricity.² In addition to encouraging transit use in its downtown core, Québec is actively planning to expand its bicycle network. The expanded network will be specifically designed to accommodate cyclists commuting to and from work; this will change the character of the cycle-path network, making it more hospitable to commuters.³ In another effort to reduce automobile trips, Québec City recently announced that it would no longer collect or accept recyclable household yard waste; the city is signalling to residents that they need to re-use these materials through composting, thereby eliminating the travel associated with the collection and disposal of such waste.⁴

With these prominent initiatives and its strong showing in this year's results, Québec appears to be making substantial progress toward the goal of sustainable urban transportation.

1 The Québec region consists of: Beaumont (Municipalité), Boischatel (Municipalité), Château-Richer (Ville), Fossambault-sur-le-Lac (Ville), L'Ancienne-Lorette (Ville), L'Ange-Gardien (Paroisse (municipalité de)), Lac-Beauport (Municipalité), Lac-Delage (Ville), Lac-Saint-Joseph (Ville), Lévis (Ville), Notre-Dame-des-Anges (Paroisse (municipalité de)), Québec (Ville), Saint-Augustin-de-Desmaures (Ville), Saint-François-de-l'Île-d'Orléans (Municipalité), Saint-Gabriel-de-Valcartier (Municipalité), Saint-Henri (Municipalité), Saint-Jean-de-l'Île-d'Orléans (Municipalité), Saint-Lambert-de-Lauzon (Paroisse (municipalité de)), Saint-Laurent-de-l'Île-d'Orléans (Municipalité), Saint-Pierre-de-l'Île-d'Orléans (Municipalité), Sainte-Brigitte-de-Laval (Municipalité), Sainte-Catherine-de-la-Jacques-Cartier (Ville), Sainte-Famille (Paroisse (municipalité de)), Sainte-Pétronille (Village), Shannon (Municipalité), Stoneham-et-Tewkesbury (Cantons unis (municipalité de)), Wendake (Indian reserve).

2 Réseau de Transport de la Capitale. (2008). "Écolobus, en service depuis le 14 juin!" Retrieved November 4, 2008 from : http://www.rtcquebec.ca/francais/quoi_de_neuf_nv_ecolobusenjuin_juin08.html

3 Ville de Québec. (Date unknown). "Plan directeur du réseau cyclable". Retrieved November 4, 2008 from : http://www.ville.quebec.qc.ca/apropos/vie_democratique/participation_citoyenne/consultations_publicques/reseau_cyclable.aspx

4 Ville de Québec. (2008, August 15). "Collecte des résidus verts et des rognures de gazon". Retrieved November 4, 2008 from http://www.ville.quebec.qc.ca/actualites/fiche_autres_actualites.aspx?id=7404

Regina

Saskatchewan

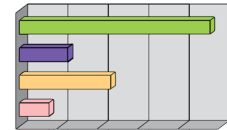
Regional Population (2006): 194,971

GreenApple Ranking

2008 Rank: 17
Score: 49.5
2007 Rank: 20

GRADE: **D**

Air Quality
Public Policy
Transportation Policy
Technology Adaptation



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.1	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.70	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	27	26
Registered vehicles per capita (2007)	0.72	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	35%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	17%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	28%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	24	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	11%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.0%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	2.2%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	5.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	16%	48%

Ranked seventeenth in 2008, the Regina region¹ has made limited progress in the GreenApple Canada 2008 Ranking Report.

Regina faces poor air quality, with an increase in the discharge of carbon monoxide, carbon dioxide and ozone observed in the 2008 Report. Registered vehicles per capita jumped seven percent suggesting a lack of initiatives to reduce private owner vehicles.

The Regina region has increased by two percent both the proportion of its labour force with employer-issued passes which is remarkable as there were almost no such passes issued in the previous year. However, there are still no changes with respect to anti-idling bylaws, trip reduction programs for city hall employees and provincial incentives to purchase hybrid vehicles. Although Regina has a number hybrid gasoline-electric taxis and alternatively-fuelled municipal vehicles on its roads, it has failed to adopt greener technologies for its transit fleet.

Recent developments such as "The Green Book" show promise. The Green Book encourages city residents to actively participate in reducing greenhouse gas emissions.² Despite having no anti-idling bylaw in place, the City has made several anti-idling educational campaigns as thanks to the Green Ribbon Community

Climate Change Advisory Committee.³

In order to improve sustainable transportation, the Regina urban region must create public policies favourable to sustainable transportation practises. It needs to focus on creating incentives to increase ridership for its public transportation system by issuing employer discount transit passes and other similar initiatives that will encourage more residents to use public transit. Only then will Regina show noticeable improvement as compared with its peers.

1 The metropolitan urban area of Regina includes: Balgonie (Town), Belle Plaine (Village), Buena Vista (Village), Disley (Village), Edenwold (Village), Edenwold No. 158 (Rural Municipality), Grand Coulee (Village), Lumsden (Town), Lumsden Beach (Resort village), Lumsden No. 189 (Rural municipality), Pense (Village), Pense No. 160 (Rural municipality), Pilot Butte (Town), Regina (City), Regina Beach (Town), Sherwood No. 159 (Rural municipality), White City (Town).

2 City of Regina. (Date unknown) "Reducing Emissions at Home". Retrieved October 1, 2008 from: <http://www.regina.ca/Page3041.aspx>.

3 City of Regina. (2007, February 20) "Green Ribbon Community Climate Advisory Committee 2006 Annual Report". Retrieved November 4, 2008 from: <http://www.regina.ca/AssetFactory.aspx?did=263>

Saguenay

Québec

Regional Population (2006): 151,643

GreenApple Ranking

2008 Rank: 12
Score: 53.8
2007 Rank: 13

GRADE: C



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.0	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.30	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	27	26
Registered vehicles per capita (2007)	0.57	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	45%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	43%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	29	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	8%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	1%	48%

Saguenay rose one position to twelfth place in the GreenApple Canada 2008 Ranking Report.¹

Saguenay's continued performance is due primarily to its low level of pollution: not only does it have low emissions of carbon monoxide and ozone, but its residents also emit the least amount of carbon dioxide per capita from their vehicles. Not surprisingly, Saguenay residents, despite having plentiful amounts of land on which to build, elect to keep the number of vehicles per capita to a minimum.

Despite its exceptional performance with regard to air quality, Saguenay lags in nearly every measure of progress in the areas of policy and technology adoption. Saguenay residents have yet to experience many of the policy and technology improvement measures discussed in this Report: they have yet to see an anti-idling bylaw, nor are they able to ride transit free of charge in the downtown core, purchase transit passes through payroll deduction, ride a local transit vehicle powered by an alternative fuel or hail a local hybrid taxi. Clearly, Saguenay has a virtual smorgasbord of options available to it once it decides to embark upon the improvement of its sustainable policies and practices. Saguenay has shown marginal improvement in its increased approval of multi-family housing units versus single-family dwellings and this will beneficially impact its land-use decisions for decades to come.

Saguenay has taken steps in 2008 to address its deficiencies. The city of Saguenay has formed a sustainable development

committee to be led by a municipal councillor and composed of local leaders. This committee will set the direction for sustainable development over the course of the next twenty-five years. Though the city has yet to make much progress with the adoption of alternative fuels, it did embark in 2008 on a program to substantially reduce gasoline and diesel fuel purchases for municipal vehicles: the program had the effect of producing nearly \$200,000 in savings through the first half of 2008 despite significant rises in the cost of fuel during this period. Though the city has yet to enact an anti-idling bylaw, it has taken the laudable step of directing city employees to refrain from idling municipal vehicles; to ensure compliance, the city went so far as to install anti-idling devices on the engines of a number of heavy trucks which are particularly notorious for fuel consumption. In 2008 the city also received a citation from HydroQuébec, the provincial utility, for the city's superior performance in replacing all street light bulbs with power-efficient bulbs. In a sign that Saguenay takes seriously the issue of reducing the city's emissions and energy use, in 2009 it will engage a consultant to advise it on how to further reduce the city's energy consumption.

While Saguenay has yet to realize the many improvements that would help it increase its rank and score, its numerous initiatives launched in 2008 point the way to improved performance in the years ahead.

¹ The Census Metropolitan Area of Saguenay includes Larouche (Municipalité), Saguenay (Ville), Saint-Fulgence (Municipalité), Saint-Honoré (Municipalité).

Saskatoon

Saskatchewan

Regional Population (2006): 233,933

GreenApple Ranking

2008 Rank: 21
Score: 46.72
2007 Rank: 20

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.4	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	32	26
Registered vehicles per capita (2007)	0.68	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	33%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	36%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	24	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	12%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.5%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	100%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	1.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

Saskatoon dropped to twenty-first place in the GreenApple Canada 2008 Ranking Report.¹ Its low score is a result of limited achievements in the area of sustainable transportation. The 2008 Ranking Report indicates public policy as the least-improved category: Saskatoon still lacks an anti-idling bylaw, a discounted bus pass trip reduction program for city hall employees and provincial incentives for hybrid vehicles. Saskatoon has one of the highest proportions of registered vehicles at 0.68 vehicles per capita.

A milestone for Saskatoon lies in the Technology Adoption category: the region has seen a 100% increase in the transit fleet's use of Alternative Fuel Vehicles. These contributions illustrate a step forward towards new transit technologies; however, Saskatoon should also invest in Alternative Fuel technology for its taxi and municipal vehicle fleets.

Despite its low ranking, the urban region has made an effort in its municipal policies. The city has recently introduced the Energy and Greenhouse Gas Management Plan, which aims to promote anti-idling awareness and commuter trip reduction programs for large employers and which lays the framework for a

transportation demand management strategy.² The introduction of trip reduction programs and anti-idling bylaws would help achieve the plan's community emissions reduction target of 6% below 1990 levels by 2013. The Saskatoon Transit Strategic Plan seeks a 10 year restructuring plan for its transit service.³ The plan addresses a need for a Bus Rapid Transit system, the expansion of developing areas, and trip reduction techniques to reduce the demand for vehicles.

As the percentage of registered vehicles increases, a push for provincial and municipal incentives is necessary to encourage the use of hybrid vehicles instead of gasoline models. In order to compete with other major cities, Saskatoon must invest in more Alternative Fuel taxies and purchase hybrid vehicles for its municipal vehicles. Saskatoon can do better by implementing the necessary changes that it appears to be contemplating in its Energy and Greenhouse Gas Management Plan along with the adoption of new technologies.

1 The region of Saskatoon includes: Allan (Town), Asquith (Town), Blucher No. 343 (Rural municipality), Bradwell (Village), Clavet (Village), Colonsay (Town), Colonsay No. 342 (Rural municipality), Corman Park No. 344 (Rural municipality), Dalmeny (Town), Delisle (Town), Dundurn (Town), Dundurn No. 314 (Rural municipality), Elstow (Village), Langham (Town), Martensville (Town), Meacham (Village), Osler (Town), Saskatoon (City), Shields (Resort village), Thode (Resort village), Vanscoy (Village), Vanscoy No. 345 (Rural municipality), Warman (Town), Whitecap (Indian reserve).

2 City of Saskatoon. (2007, November) "Energy & Greenhouse Gas Management Plan". Retrieved October 12, 2008 from: http://www.saskatoon.ca/org/environmental_protection/GHG_Plan.pdf

3 City of Saskatoon. (2005, October) "Saskatoon Transit Strategy Plan Study". Retrieved October 12, 2008 from: <http://www.saskatoon.ca/org/transit/strategicplan/FinalReport2005.pdf>

Sherbrooke

Québec

Regional Population (2006): 186,952

GreenApple Ranking

2008 Rank: 9
Score: 57.1
2007 Rank: 7

GRADE: C



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.1	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.30	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	34	26
Registered vehicles per capita (2007)	0.51	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	79%	100%
Percentage of housing starts that were apartment or row units (2007)	45%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	53%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	23	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	13%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	1%	48%

Sherbrooke ranked ninth overall in Canada with a score of 57.1 in the GreenApple Canada 2008 Ranking Report, falling two positions from the 2007 Report.¹ Sherbrooke is noteworthy because it is the highest-ranked of the smaller urban regions reviewed in this Report. Relative to these smaller regions, Sherbrooke performs well in public policy indicators with one exception: the City of Sherbrooke does not offer its employees a discount on the cost of local transit passes. To do so would send a signal of leadership that the city wishes to encourage its employees to take transit to work.

Similarly, Sherbrooke has returned a solid performance in the area of transportation policy, again with a single glaring omission: no widely-available employer transit pass program is offered (though selected public employers do offer such a program). Sherbrooke continues to delay the adoption of alternative fuels by its transit and municipal vehicle fleets; this contrasts unfavourably with the many regions which are expanding their use of such fuels. The city of Sherbrooke appears to be addressing the situation: it introduced two such vehicles into its municipal fleet in 2008. Sherbrooke residents continue to wait for the day when they will be able to ride in a local hybrid gasoline-electric taxi, despite the uptake of such vehicles by taxi fleets in regions small and large across the country.

Despite its reluctance to update its technology or to offer transit pass discounts, Sherbrooke nonetheless exhibits leadership among smaller urban centers. To eliminate multiple winter-time

trips by the city's heavy trucks to repeatedly patch potholes that previously could be permanently repaired only outside winter months, the city recently purchased an asphalt recycler. This recycler heats asphalt on the spot and as a result reduces total heavy truck usage in the municipal fleet during winter-time months.²

In a move that brings the promise of substantial performance in all areas that influence urban transportation, the City of Sherbrooke has announced the formation, effective in 2009, of a new Centre for Sustainable Urban Transportation. This body will coordinate the land-use and transportation-planning decisions made by the city, the regional transit authority and significant external partners such as major employers. This body will also strive to inform and sensitize both decision-makers and the general public about the importance of sustainable urban transport. Should the city be able to realize the potential of this novel approach to sustainable transportation planning, it will surely increase Sherbrooke's ranking performance in future editions of this Report.

¹ The Sherbrooke region includes: Ascot Corner (Municipalité), Compton (Municipalité), Hatley (Canton (municipalité de)), Magog (Ville), North Hatley (Village), Saint-Denis-de-Brompton (Paroisse (municipalité de)), Sherbrooke (Ville), Stoke (Municipalité), Waterville (Ville).

² Ville de Sherbrooke. (2008, October 8). "Un recycleur d'asphalte à la Ville de Sherbrooke". Retrieved November 4, 2008 from http://www.ville.sherbrooke.qc.ca/webconcepteur/web/VilledeSherbrooke/fr/service.prt?svcid=VS_LISTE_PG2&page=details.jsp&idoc=122324

St. Catharines-Niagara

Ontario

Regional Population (2006): 390,317

GreenApple Ranking

2008 Rank: 23
Score: 45.7
2007 Rank: 23

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.3	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	46	26
Registered vehicles per capita (2007)	0.59	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	63%	100%
Percentage of housing starts that were apartment or row units (2007)	25%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	27%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	14	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	9%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	7%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	0%	48%

This year, the St. Catharines – Niagara region¹ retained its ranking at 23rd. Situated across Lake Ontario from Toronto and near to Niagara Falls, the St. Catharines-Niagara region is an example of an urban region that can enhance its standings through the adoption of better public policies. While the region improved its score only by two points, it did make an important transition, moving from last year's failing grade of "F" to a pass with a "D" in 2008.

The main reason for the better grade has been St. Catharines-Niagara's earnest attempt to implement an effective anti-idling bylaw and educate the public about this bylaw. This picturesque region has a large volume of day-trip tourism. The region's anti-idling bylaw could be one of the most effective sustainable transportation policies in place in this region. Over 60% of St. Catharines – Niagara residents live in a municipality with an anti-idling by law in effect. This is more than double the figure in last year's Report. In addition, this urban area increased the number of Alternative Fuel Vehicles in its public transit fleet by seven percent. Taken together, these improvements represent good first steps to improve sustainable transportation in the region and as a result, St. Catharines-Niagara has a greatly improved grade for 2008 in the GreenApple Canada Ranking Report: it achieves a passing grade instead of a failing one.

However, there is considerable room for improvement. The region's overall low standing is a result of poor air quality scores and what appears to be a lack of effort by local governments to address sustainable transportation challenges. St. Catharines-Niagara has scored significantly lower than nearby Hamilton. Consistent enhancement of public policy would pay off for St. Catharines – Niagara. For example, the region has not implemented trip reduction programs for its staff nor has it made any improvements in increasing the use of alternative fuel vehicles in its taxi or municipal road fleets. St. Catharines – Niagara has much that it can improve in order to achieve a better ranking in future years.

¹ The urban metropolitan area of St. Catharines-Niagara consists of: Fort Erie (Town), Lincoln (Town), Niagara Falls (City), Niagara-on-the-Lake (Town), Pelham (Town), Port Colborne (City), St. Catharines (City), Thorold (City), Wainfleet (Township), Welland (City).

St. John's

Newfoundland and Labrador
Regional Population (2006): 181,113

GreenApple Ranking

2008 Rank: 27
Score: 39.5
2007 Rank: 27

GRADE: **F**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.1	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.35	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	33	26
Registered vehicles per capita (2007)	0.54	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	15%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	0%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	39%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	14	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	10%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.4%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	1%	48%

St. John's once again placed at the lowest rank in the GreenApple 2008 Canada Ranking Report.¹ This is the second consecutive year that the St. John's urban area has placed last in Canada. Numerous factors prevented the St. John's urban region from improving its score such as weak environmental public policy initiatives, weak transportation policies, and the region's lack of adoption of sustainable technologies such as alternative fuel vehicles.

The air quality in the St. John's region has deteriorated in comparison to the 2007 Report. Carbon dioxide from retail fuel sales per capita has increased from two tonnes in the 2007 Report, to 2.1 tons in this year's Report. In addition, registered vehicles per capita increased from 0.52 to 0.54, contributing to reduced air quality for St. John's.

The St. John's region lacks a strong public policy framework that enables citizens to utilize sustainable public transit. With no anti-idling bylaws, trip reduction programs, or discounted bus passes, St. John's has failed to provide its residents with green alternatives for transit. Provincial incentives and credits towards the purchase of hybrid vehicles are non-existent. St. John's requires leadership that will create and promote public policy that supports sustainable public transit.

The transit policy of St. John's has seen limited improvement from the 2007 Report. The percentage of the labour force using alternative forms of travel such as public transit to get to work has decreased 0.4%. Without free public transit in the city's

core, and the lack of employer-issued transit passes, ridership is faltering. In an attempt to educate St. John's residents, Metrobus, the city's transportation commission, is operating a campaign to inform residents of their carbon footprint, and the benefits of using public transit and other alternative forms of travel, such as bicycling and walking.²

The transit provider has also initiated a novel program to reward frequent travelers on transit much as airlines have done.³ Green technologies have not yet been embraced by St. John's officials. The city's transit fleet has no alternative fuel vehicles within its operations. The same can be said of the city's taxi companies. With respect to the municipal road fleet, the city is finally making progress, having introduced five hybrid vehicles in its bylaw enforcement division.

St. John's shows signs of wanting to create a sustainable transportation policy. It has completed a cycling plan which would improve cycling conditions; the plan's implementation, however, is dependent on funding from the province.⁴ The region requires a commitment from its elected officials to create a comprehensive sustainable transportation policy. Absent such a commitment, the City of St. John's seems destined to maintain its last-place ranking among all urban communities in Canada surveyed by the GreenApple SMART Transportation Ranking Report.

1 The urban region of St. John's consists of: Bauline (Town), Bay Bulls (Town), Conception Bay South (Town), Flatrock (Town), Logy Bay-Middle Cove-Outer Cove (Town), Mount Pearl (City), Paradise (Town), Petty Harbour-Maddox Cove (Town), Portugal Cove-St. Philip's (Town), Pouch Cove (Town), St. John's (City), Torbay (Town), Witless Bay (Town).

2 Metrobus Transit Authority. (Date unknown) "Play Your Part". Retrieved November 6, 2008 from: <http://www.metrobus.com/PlayYourPart/Site/Home.html>

3 Metrobus Transit Authority. (2007) "m-Rewards". Retrieved November 7, 2008 from: <http://mcard.metrobus.com/mpoints.html>

4 City of St. John's. (Date unknown) "Cycling Plan". Retrieved November 7, 2008 from: <http://www.stjohns.ca/cityservices/traffic/cyclingplan.jsp>

Greater Sudbury

Ontario

Regional Population (2006): 158,258

GreenApple Ranking

2008 Rank: 25
Score: 42.0
2007 Rank: 26

GRADE: **F**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	3.6	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.35	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	36	26
Registered vehicles per capita (2007)	0.66	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	0%	100%
Percentage of housing starts that were apartment or row units (2007)	8%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	0%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	33%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	23	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	12%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.2%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	3%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	1%	48%

The Greater Sudbury region received a low score of 42 in the GreenApple 2008 Ranking Report putting it in twenty-fifth place.¹ As one of the lowest ranked urban regions, Greater Sudbury falls short in some categories while demonstrating some improvement in others. Greater Sudbury has the second highest volume of carbon dioxide per capita generated from retail fuel sales – maintaining a level just below that of Abbotsford. While carbon monoxide concentrations remained the same, daily maximum ozone has improved by 11%.

Changes in public policy must be secured to reduce air pollution. The Greater Sudbury region has made little discernible effort to implement trip reduction programs or anti-idling bylaws which would improve air quality. These problems are magnified by the fact that the Greater Sudbury region has failed to invest in adopting newer, greener technologies. In particular, Greater Sudbury has failed to significantly increase the number of Alternate Fuel Vehicles in both its transit and taxi fleets.

There has been a 1% increase in Alternative Fuel Vehicles in Sudbury's municipal fleet. As part of its green fleet initiative, there are seven additional hybrids and two hydrogen injection system ambulances.

In 2007, the city approved the Ridership Growth Plan which includes a comprehensive transit strategy for improving

transit over the next three years.² In its new Official Plan, the city proposes policies that facilitate public transit in new developmental areas, the creation of accessible walkways to transit stops, and provide transit routes in new divisions.³ In conjunction with Laurentian University, the Greater Sudbury Transit Authority has established a U-Pass program to increase student ridership.⁴

Greater Sudbury does do a good job of providing affordable transit relative to its peers, though its performance at supplying adequate quantities of transit service are mediocre at best. Greater Sudbury can easily gain several places in the rankings of next year's Report by passing an anti-idling bylaw, offering discounts on transit passes to city employees and by changing taxi licensing requirements to favour the adoption of hybrid-electric gasoline taxis. These cost-effective measures will do much to advance the state of sustainable transportation in Greater Sudbury from its current nascent state.

1 The are of Greater Sudbury includes: Greater Sudbury/Grand Sudbury (City), Wahnapiitei 11 (Indian reserve), Whitefish Lake 6 (Indian reserve).

2 City of Greater Sudbury. (2008, February) "Local Action Plan 2008 Progress Report". Retrieved October 30, 2008 from: http://www.greatersudbury.ca/content/div_earthcare/documents/EarthCare_Sudbury_Progress_Report_2008.pdf

3 City of Greater Sudbury. (2008 September) "Official Plan". Retrieved November 5, 2008 from: http://www.greatersudbury.ca/content/div_planning/documents/September%2024%202008%20Amendment%20Number%203.pdf

4 City of Greater Sudbury. (Date Unknown) "Achievements and Outcomes". Retrieved November 5, 2008 from: http://www.greatersudbury.ca/cms/index.cfm?app=div_earthcare&lang=en&currID=8046&parID=6847

Toronto

Ontario

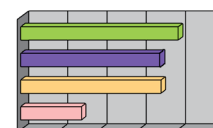
Regional Population (2006): 5,113,200

GreenApple Ranking

2008 Rank: 5
Score: 68.2
2007 Rank: 5

GRADE: **B**

Technology Adaptation
Transportation Policy
Public Policy
Air Quality



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.7	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	45	26
Registered vehicles per capita (2007)	0.52	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	74%	100%
Percentage of housing starts that were apartment or row units (2007)	47%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	19%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	50%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	49	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	28%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.9%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	1.3%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	82%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.5%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	17%	48%

Canada's most populous city, Toronto, maintained a comprehensive program of sustainable public transportation policies to secure it a fifth place in the GreenApple Canada Ranking Report for the second year in a row.

With a goal to convert all diesel-powered vehicles in the city fleet to bio-diesel by 2015, the city invested significant capital in Toronto's city fleet system.¹ The percentage of hybrids in its transit fleet increased by eight times; from 10% in 2007 to 82%. Although hybrid vehicles compromise 17% of the municipal fleet, the city is still far from reaching the target value of 48%.

This investment, however, has failed to increase transit ridership. This could partly be due to the fact that Toronto lacks the level of density which other large urban areas such as Montréal and Vancouver rely. Toronto has a relatively low number of housing starts in the form of row housing and apartment units in comparison to these two cities. The increase in the number of registered vehicles per capital is indicative of the fact that residents are still reliant on single vehicle commuting.

To help counter this problem, the city launched the Smart Commute Program, a transportation management initiative designed to discourage the use of single vehicle commuting and to encourage more sustainable modes of transportation.² In 2008, Toronto approved the Green Fleet Plan (2008-2011) to replace 200 city vehicles with green vehicles, expanding bio-fuel usage to vehicles used in city departments and to implement a low-carbon truck pilot project by 2011. It also introduced four-way stop lights in the downtown core to favour pedestrians over vehicles; while the city administration is mindful of increased idling caused by

this policy, it believes the benefits that accrue to pedestrians will increase the appeal of walking within the downtown core and therefore prove substantially beneficial in the long-run.

The Toronto urban region has been successful in issuing employer transit passes in 2008. The City of Mississauga has recently approved a discount-matching plan to subsidize transit passes offered by employers, which is expected to increase ridership.³ The Smart Commute Initiative in the Greater Toronto Area (GTA) works with local business and city employees to promote the use of trip reduction programs. Other communities within the region have contributed to Toronto's strong score. The City of Mississauga approved a bus rapid transit system, allowing more efficient commuting between cities. North of Toronto, Vaughan Vision 2020 plans to work with governments to expand public transit in that area.⁴ A Pedestrian and Bicycle Master Plan have also been approved that includes more than 600 kilometres of pedestrian and bicycle pathways.⁵

Toronto might consider adopting a similar "EcoDensity" approach taken by the City of Vancouver. Vancouver has managed to fuse population growth and sustainability effectively by ensuring that alternative forms of transportation are efficient and accessible to its residents. To score better in future sustainable transportation rankings, Toronto needs to focus on integrating commercial and residential areas into a single community that has greater access to businesses and public transit in order to eliminate the need for single vehicle trips that residents make to obtain basic services.

3 Kalinowski, Tess. (2007, October 17) "Fewer routes for more riders: Mississauga's transit dilemma". Toronto Star. Retrieved October 22, 2008 from: <http://www.thestar.com/News/GTA/article/519007>

4 City of Vaughan. (Date unknown) "The City of Vaughan Strategic Plan 2020". Retrieved November 5, 2008 from: http://www.vaughantomorrow.ca/vv2020/pdf/vv2020_StrategyBook.pdf

5 City of Vaughan. (2007, January) "Pedestrian and Bicycle Master Plan Study". Retrieved November 5, 2008 from: <http://www.city.vaughan.on.ca/newscentre/projects/pdf/PED%20AND%20BIKE%20FINAL.pdf>

1 City of Toronto. (2007, March) "Change is in the Air. Toronto's Commitment to an Environmentally Sustainable Future". Pp 7. Retrieved October 31, 2008 from: <http://www.toronto.ca/legdocs/mmis/2007/ex/bgrd/backgroundfile-2428.pdf>

2 Smart Commute Association. (Date unknown) "Smart Commute Toronto". Retrieved October 1, 2008 from: <http://www.smartcommute.ca/toronto/>

Vancouver

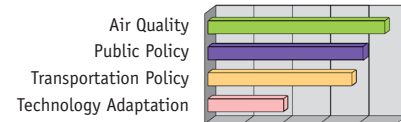
British Columbia

Regional Population (2006): 2,116,581

GreenApple Ranking

2008 Rank: 2
Score: 76.4
2007 Rank: 2

GRADE: **B**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.1	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	35	26
Registered vehicles per capita (2007)	0.57	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	54%	100%
Percentage of housing starts that were apartment or row units (2007)	76%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	14%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	22%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	61%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	55	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	24%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.4%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	1.2%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	27%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	16.4%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	25%	48%

The Vancouver urban region maintains its Silver Medal place standing for its achievement in sustainable urban transportation in 2008.

Vancouver continues its aggressive goal to reduce green house gas emissions to a level of six percent below 1990 levels by the year 2012.¹ Vancouver has shown the largest percentage increase of its labour force using public transit and aims to reduce emissions by reducing reliance on personal vehicles. These positive changes all work in tandem with the City of Vancouver's EcoDensity initiative to ensure that efficient public transportation is efficient and accessible.

Translink and Metro Vancouver have introduced "Six Innovative Projects" to provide greener transportation alternatives and to reduce greenhouse gas emissions. One such project includes the Central Valley Greenway which links Vancouver's downtown to the town centres in New Westminster and in Burnaby's Lougheed and Brentwood neighborhoods. The Greenway would also link to SkyTrain stations, bus routes, and workplaces in the Lower Mainland.² In January 2008, the regional transit authority announced that it will be investing \$81.5 million to purchase 141 new hybrid diesel-electric buses. These buses will run on electricity generated by small diesel engines and are expected to reduce gas emissions and fuel efficiency by 20%.³

1 City of Vancouver, Municipal Government, British Columbia, Canada, "The climate-friendly city — Vancouver's community climate change action plan", March 29, 2005 at p. 2: <http://vancouver.ca/sustainability/documents/CommunityPlan.pdf>

2 City of Vancouver. (2008, March 6) "City Greenway: Central Valley". Retrieved September 29, 2008 from: <http://vancouver.ca/ENG/SCS/streets/greenways/city/central.htm>

3 South Coast Transportation Authority (Translink). (2008, January 23) "Translink, Nova Ink Hybrid Bus Deal". Retrieved November 5, 2008 from: http://www.translink.bc.ca/About_TransLink/News_Releases/news01230801.asp

Awarded the title, "Best Walking City in Canada"⁴, it is not surprising to see a percentage higher than the national average of residents walking, cycling and using public transit to get to work. Through programs such as The Vancouver Active Communities, the City is determined to raise the proportion of the population which is physically active by 20% by the year 2010.

Recent changes to Vancouver public policy are making significant impacts on sustainable transportation. Over half of the city's residents are now living in a municipality with an anti-idling bylaw in effect. This is a significant change from last year's result of 33%. A bylaw in Vancouver allows electric vehicles on most city roads while the township of Langley approved an anti-idling policy which limits idling time to one minute for municipal vehicles. The township has also converted its entire fleet to a 20% blended bio-diesel vehicle. Overall air quality has improved: reductions in daily maximum observed carbon monoxide and ozone are approaching the target values.

In June 2008, Vancouver's city council voted to give city employees incentives to use sustainable modes of transportation⁵ such as discounted transit passes, subsidized carpool parking and a Guaranteed Ride Home service to encourage city employees to not use single occupancy vehicles. In addition, the city has also facilitated 20 low emission car sharing vehicles. These policies could result in an increase in Vancouver's score in the coming years.

4 City of Vancouver. (2008, May 8) "Vancouver named Best Walking City in Canada". Retrieved November 5, 2008 from: <http://vancouver.ca/ctyclerk/newsreleases2008/NRbestwalkingcity.htm>

5 City of Vancouver. (2008, June 6) "Rewards For City Employees Who Choose Green Commutes". Retrieved November 5, 2008 from: <http://vancouver.ca/ctyclerk/newsreleases2008/NREMP.htm>

Victoria

British Columbia

Regional Population (2006): 330,088

GreenApple Ranking

2008 Rank: 1
Score: 79.6
2007 Rank: 1

GRADE: **B+**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.1	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.58	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	33	26
Registered vehicles per capita (2007)	0.60	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	30%	100%
Percentage of housing starts that were apartment or row units (2007)	61%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	14%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	22%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	52%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	39	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	26%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	1.3%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	100%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	44.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	44%	48%

Victoria retains first place among the twenty-seven urban regions ranked in the GreenApple Canada 2008 Ranking Report for its role in promoting sustainable urban transportation.¹ The Victoria municipal region continues to provide an impressive example of the benefits which derive from sustainable public transportation practices.

With few exceptions, Victoria scored well on every indicator of sustainable urban transportation. For example, Victoria leads the nation in technology adoption of alternative fuels. The percentage of its transit and municipal vehicles powered by alternative fuels is highest in the nation and Victoria places a close second for its showing in percentage of hybrid-powered vehicles in its taxi fleet. The city of Victoria has shown leadership on the issue of investing in and adopting new technologies: fully seventy-five percent of all municipal vehicles owned by the city of Victoria are powered by alternative fuels as defined by Natural Resources Canada. Recently, the Town of Oak Bay became Canada's first community to allow vehicles powered solely by electricity to travel all municipal roads; the regional district is now contemplating a law that would expand the range of road network on which electric vehicles could

legally travel to include roads across the region.²

The region continues to build upon its leading performance in 2007. Anti-idling bylaws covering a third of the population were enacted in 2008 and newly-released census data show that in the five years from 2001 to 2006, the density of Victoria's housing stock increased by nearly 10% to over half of all units being multi-family: this represents remarkable progress for that five year period as compared with the other regions examined in this Report. Among regions with populations greater than 300,000, Victoria placed second in terms of its increase in transit service per capita with revenue-kilometres rising 11% in 2007 (the most recent year for which statistics are available) over 2006. Clearly, Victoria's regional leaders have established a momentum for making marked improvements toward environmentally sustainable transportation.

There still are some areas where Victoria can improve. With 61% of its 2008 residential housing starts being high density and with its sharp increase in the density of its housing stock, it is somewhat surprising that Victoria's percentage of workers walking, cycling or taking transit to work remains middling as compared to others in this Report. Victoria municipal leaders are, however, following on their momentum for change: for example, the city of Victoria plans to add nearly seven kilometres of designated bicycle lanes in 2009. With these lanes coming directly from existing automobile lanes, clearly the city is putting sustainable transportation first.

1 The region of Victoria includes: Becher Bay 1 (Indian reserve), Capital H (Regional district electoral area), Central Saanich (District municipality), Cole Bay 3 (Indian reserve), Colwood (City), East Saanich 2 (Indian reserve), Esquimalt (Indian reserve), Esquimalt (District municipality), Highlands (District municipality), Langford (City), Metchosin (District municipality), New Songhees 1A (Indian reserve), North Saanich (District municipality), Oak Bay (District municipality), Saanich (District municipality), Sidney (Town), Sooke (District municipality), South Saanich 1 (Indian reserve), T'Sou-ke 1 (Sooke 1) (Indian reserve), T'Sou-ke 2 (Sooke 2) (Indian reserve), Union Bay 4 (Indian reserve), Victoria (City), View Royal (Town).

2 Westad, Kim. (2008, August 19) "Oak Bay allows electric cars on streets". Victoria Times-Colonist. Retrieved November 7, 2008 from: http://www.canada.com/victoriatimescolonist/news/capital_van_isl/story.html?id=8c8039b4-7fd0-405f-9fac-2d69f1b0b8c7

Windsor

Ontario

Regional Population (2006): 323,342

GreenApple Ranking

2008 Rank: 20
Score: 47.3
2007 Rank: 18

GRADE: **D**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.3	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.55	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	48	26
Registered vehicles per capita (2007)	0.55	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	67%	100%
Percentage of housing starts that were apartment or row units (2007)	24%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	5%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	23%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	27%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	15	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	8%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.0%	100%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.0%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	0.0%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	16%	48%

Windsor, along with its surrounding communities, has continued to place in the lower ranks among Canadian communities for sustainable transportation. Windsor fell two places ranking 20th in the 2008 GreenApple Canada Ranking Report.¹

Windsor's proximity to a major foreign metropolitan area and its location at the busiest trade crossing in North America means that its citizens have constant exposure to trans-boundary pollution and emissions from out-of-region vehicles. Windsor had the largest increase in carbon monoxide pollution in 2006, the most recent year for which figures are available. There are positives that can be drawn out of this year's findings, however, as there has been a steady decline in carbon dioxide emissions from retail fuel sales and in ozone emissions: these declines could be attributed to Windsor's wide-reaching anti-idling bylaws.

Little has changed this year with regard to Windsor's urban transportation practices. The percentage of the local labour force using public transit has not changed since 2007. There are still no programs such as employer-issued mass transit passes or free transit in the downtown core. Transit ridership remains low at 15 kilometres per capita of public transit service. Windsor has announced some measures to improve sustainable public transit. Under the Bike and Ride service, Windsor Transit installed bike posts at all downtown terminals; additionally, bike racks have already been implemented on 49 transit buses. By early 2009, the city will launch 18 hybrid buses which will convert 18% of the transit fleet to hybrid technology.² These buses are expected

to produce 40% fewer greenhouse gas emissions than existing models.

The Environmental Master Plan Implementation Commission is currently preparing an implementation plan for the city's transit, bicycle, and waterfront revitalization. Some of the initiatives include the elimination of unnecessary "all-way stops" to reduce idling and improve traffic signal coordination.³ Windsor has also proposed an enhanced bicycle network in its Bicycle Use Master Plan.⁴ The Master Plan recommends developing additional bicycling parking programs, establishing community based cycling programs and implementing transportation systems that enhance physical mobility.

The Windsor urban region can significantly improve its ranking in future editions of the GreenApple SMART Transportation Ranking Report by focusing on sustainable transportation policies such as working to develop an employer transit pass program to increase ridership and to reduce the number of cars on the roads. Adopting practices in our Report's Technology Adoption category could enhance the region's scores. For example, while the City of Windsor has some Alternative Fuel Vehicles in its own municipal fleet, there are currently no Alternative Fuel Vehicles identified in the region's taxi and transit fleets. Improvements to this situation will do much to improve Windsor's performance in the area of sustainable transportation.

1 The Windsor area includes: Amherstburg (Town), LaSalle (Town), Lakeshore (Town), Tecumseh (Town), Windsor (City).

2 City of Windsor. (Date unknown) "Email To Help Move Transit: The Way Forward". Retrieved September 19, 2008 from: <http://www.citywindsor.ca/000810.asp?id=3615>

3 City of Windsor. (2007, January) "Environmental Master Plan: Implementation Plan". p. 90. Retrieved September 29, 2008 from: <http://www.citywindsor.ca/DisplayAttach.asp?AttachID=7349>

4 City of Windsor. (2001, April) "Bicycle Use Master Plan". p.21. Retrieved October 31, 2008 from: http://www.cyclewindsor.ca/bump_site/newsletter/finalrpt/BUMP.pdf

Winnipeg

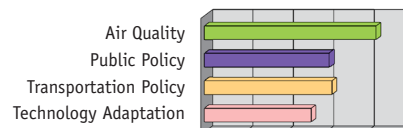
Manitoba

Regional Population (2006): 694,668

GreenApple Ranking

2008 Rank: 6
Score: 67.4
2007 Rank: 4

GRADE: **B**



GreenApple Canada 2008 SMART Transportation Indicator Data	Value	Target
Air Quality		
CO ₂ emissions per capita (tonnes) from retail fuel sales (2007)	2.6	1.5
CO parts per million, median of maximum daily 1 hour averages (2006)	0.50	5.0
O ₃ parts per billion, median of daily maximum 8 hour averages (2006)	35	26
Registered vehicles per capita (2007)	0.56	0.37
Public Policy		
Percentage of the population living under an anti-idling bylaw (2008)	1%	100%
Percentage of housing starts that were apartment or row units (2007)	44%	89%
Percentage discount on a local transit pass accorded employees of the CMA's largest city who purchase the pass at work (2008)	30%	69%
Percentage of the cost difference between the 2008 Honda Civic gasoline and hybrid models covered by provincial tax incentives (2008)	24%	100%
Transportation Policy		
Percentage of the housing stock that is defined as either apartment or row units (2006)	34%	84%
Annual public transit regular revenue service kilometres traveled per capita, excluding heavy rail and commuter coach (2006)	34	71
Percentage of the CMA labour force bicycling, walking or taking public transit to work (2006)	20%	37%
Percentage of total public transit kilometres that are free in the downtown core (2007)	0.5%	0.9%
Population-weighted annual adult transit pass cost (2008) adjusted by the CMA's 2006 median family income	1.3%	0.7%
Percentage of the labour force holding employer issued transit passes (2007)	0.7%	4.2%
Technology Adoption		
Percentage of the public transit bus fleet using alternative fuels, excluding commuter coach (2008)	0%	39.5%
Percentage of the taxi and limousine fleet that is powered by hybrid gasoline-electric means (2008)	44.3%	100%
Percentage of the municipal road fleet that is powered by alternative fuels (December 2007)	5%	48%

Winnipeg falls two spots to sixth place overall in the GreenApple Smart Transportation 2008 Ranking Report.¹ Winnipeg's change in position is largely attributable to its failure to obtain higher scores under the public policy and technology adoption categories.

Despite its decline in ranking relative to its peers, Winnipeg was the best performer in terms of the utilization of hybrid or Alternative Fuel taxis. The city of Winnipeg and its surrounding communities together increased the number of such sustainable transportation vehicles from 26% in 2007 to over 44% in 2008. This increase demonstrates Winnipeg's commitment to improving its urban sustainability and to achieving the goals set out in its "Winnipeg 2020 Vision".²

The increase in alternative fuel taxis did not prove to be sufficient for Winnipeg to improve its overall standing in the national rankings. Winnipeg still needs to do more to encourage the use of public transit. Even with the availability of free transit service in the downtown core, the percentage of Winnipeg's labour force using public transit still remains low at a 20%. In addition, the number of registered vehicles per capita has slightly increased since 2007. These levels far exceeded our expert panel's ten-year attainable target of 0.37 vehicles per capita, a level

set to reflect reductions in greenhouse gas emissions six percent below 1990 levels.

Nonetheless, Winnipeg has the potential to improve its standing significantly in the next few years. In June 2007, the federal and provincial governments committed to investing \$174,000 on fleet vehicle conversions from regular gasoline to E85 fuel (which contains up to 85% ethanol).³ The provincial and municipal governments are spending \$138 million for rapid transit buses to connect the downtown area and outlying neighbourhoods.⁴ The city will also start building dedicated bus lanes and dedicated bikeways to encourage more sustainable forms of urban transportation. Although there have been sizeable capital investments in the public transit system, Winnipeg still has much to do. Anti-idling bylaws remain largely absent from the region and provincial incentives for the purchase of hybrid vehicles, while relatively good as compared with other regions included in this study, are still at quite low absolute levels. Implementing these initiatives is one of the most effective methods of encouraging the immediate reduction of emissions and would also have a significant impact on Winnipeg's score in future GreenApple Canada Ranking Reports.

1 The Winnipeg Census Metropolitan Area includes the following: Brokenhead (Indian reserve), East St. Paul (Rural municipality), Headingley (Rural municipality), Macdonald (Rural municipality), Ritchot (Rural municipality), Rosser (Rural municipality), Springfield (Rural municipality), St. Clements (Rural municipality), St. François Xavier (Rural municipality), Taché (Rural municipality), West St. Paul (Rural municipality), Winnipeg (City).

2 City of Winnipeg. (Date unknown) "Winnipeg 2020 Vision". p.29. Retrieved May 11, 2007 from: http://www.winnipeg.ca/cao/pdfs/plan_2020.pdf

3 Province of Manitoba. (2006, March 8) "Manitoba Launches Model Ethanol Fuel Station". Retrieved November 5, 2008 from: <http://www.gov.mb.ca/chc/press/top/2006/03/2006-03-08-03.html>

4 Canadian Broadcasting Corporation. (2008, September 8) "Winnipeg, Manitoba sign \$138M rapid transit deal". Retrieved September 29, 2008 from: <http://www.cbc.ca/canada/manitoba/story/2008/09/08/rapid-transit.html>



Two veteran Vancouver hybrid taxi drivers show how successful hybrid taxis can be to New York City-Based SmartTransportation.org's Jack Hidary and GreenApple's National Director Barry Appleton in 2006

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