

# Bicycling *in québec* in 2000





**B**icycling in Québec in 2000 is designed to provide an overall portrait of cycling in Québec at the present time. As a sequel to *Bicycling in Québec in 1995-1996*, this report makes it possible to identify a certain number of trends, particularly with regard to the number of cyclists in Québec and their transportation habits. It also outlines the development of the Québec cycling industry and cycling facilities, and provides an update on the progress that has been made in terms of health and safety. The present document summarizes the information contained in the full-length version of the report.

Bicycling in Québec in 2000 is based on various sources of information, including surveys, counts and inventories. Two surveys conducted in the fall of 2000 by the firm Echo Sondage examine numerous aspects of this topic, ranging from bicycle ownership to trip frequency, as well as factors that encourage or discourage cycling.

Another key source, a compilation of counts conducted at approximately one hundred locations throughout Québec, for the most part in 2000, provides information about the rates of use for various bikeway networks. These counts were conducted by municipal officials, bikeway administrators and Vélo Québec. Selective studies and data collection made it possible to take stock of various elements – the cycling network, parking facilities, tourist services, etc. This report also involved comprehensive bibliographic research.

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# Cycling, facts and figures

In 2000, there were an estimated 5.5 million bicycles in Québec, including 4.2 million adult bicycles. This means that 61% of the adults in Québec own at least one bicycle and that almost all young people of cycling age also have a bicycle: the number of children's bicycles in Québec is the same as the number of people aged 4 to 17, namely 1.3 million. It follows that there is at least one bicycle in over 77% of households. In 1995, the total number of bicycles in Québec was estimated to be 5 million.

In other words, current figures indicate that there are 750 bicycles per 1,000 inhabitants in Québec. This places us among the leading group of cycling nations, behind the Netherlands and Denmark (approximately 1,000) but well ahead of France and Great Britain (less than 400).

In terms of equipment and accessories, it should be noted that over 300,000 people in Québec have the equipment required to cycle with their children; more specifically, 7% of cyclists have a child's seat, 4% a trailer and 2% a trailer bike. Over one quarter of bicycles are equipped with racks or baskets. Lastly, over one quarter of Québec cyclists own bicycle shorts, gloves, glasses, shoes or other accessories. 17% of them also have an odometer.

Bicycles are very popular. One indication of this is that 15,000 of them are reported stolen every year. If unreported thefts are taken into account, a full 1% of bicycles go missing annually. Relatively speaking, this is similar to the situation in the United States, where 376,000 bicycles per year are reported stolen.

## The cycling industry

The cycling industry is highly competitive and relies on very sophisticated technology. Within this rapidly evolving market, Québec manufacturers have succeeded in making their mark. The number of bicycles manufactured in Québec, which has remained relatively stable since 1995, climbed to over 900,000 units in 2000, or over one and a half times the number of bicycles purchased in Québec. Three major Québec manufacturers produce fully 80% of all the bicycles made in Canada: Procycle (Saint-Georges), Victoria-



Précision (Montréal) and R.T. Raleigh (Waterloo). The name Louis Garneau Sports, a major manufacturer of clothing and accessories, can now of course be included in this group of industry leaders.

In addition to these major manufacturers, numerous artisans and small manufacturers have earned Québec its enviable reputation as a source of top-quality bicycles: Marinoni, Devinci, Guru, Balfa, Gervais Rioux, Ryffranck and Cervélo are among the names that confer a certain amount of prestige on Québec bicycle producers. The bicycle manufacturing industry employs a total of 1,500 people.

## The retail market

625,000 bicycles were sold in Québec in 2000, while 500,000 sales were recorded in 1994. A similar increase has been observed in Canada as a whole, with sales climbing to 2 million in 1999 from an estimated 1.5 million units in 1994. Whether in terms of the number of bicycles sold or market share, the participation of Québec in the Canadian market is estimated to be 30%,

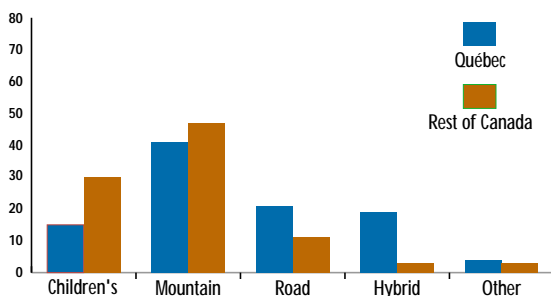
although the province is home to 24% of the Canadian population. A total of one bicycle per 12 people is sold in Québec, compared with one per 15 people in Canada and one per 16 in the United States. When sales of bicycles and accessories are combined, the respective amounts spent are \$26 per person in Québec, \$21 per person in Canada and \$14.50 per person in the United States.

The total value of the Québec market for bicycles and accessories is estimated to be \$193 million. Furthermore, a Statistics Canada study reveals that people in Québec spent approximately \$27 million on bicycle maintenance in 1997.

There has also been a significant increase in the average amount spent to purchase a bicycle. In 1994, the average price was \$120 for a children's bicycle and \$240 for an adult bicycle. In 1999, these prices were estimated to be \$140 and \$310 respectively.

Lastly, there are approximately 700 bicycle retailers in Québec: 450 bicycle shops and sporting-goods stores as well as 250 department stores. In 1997, 40% of those who bought a bicycle in Québec said they purchased it at a bicycle shop, 24% at a sporting-goods store and 36% at a department store.

*Sales of bicycles (by type) in Québec and the rest of Canada*







## Cycling as part of our daily lives

### Number of cyclists

Part of our daily lives, cycling is all around us. More specifically, 89% of people in Québec have cycled at least once in their lives. Even more significantly, over half (54%) of the people in Québec aged 6 to 74 cycled during the year 2000 – a total of 3.5 million people. This represents a decrease of 2% compared with the situation observed in 1995, reflecting a marked decline among young adults and the inclement summer of 2000. By way of comparison, people cycle much less in the United States, where barely 23% of those over the age of six cycled in 1999.

Since 1995, the number of cyclists in certain age groups has remained relatively stable. For example, 60% of those aged 35 to 44 (compared with 55% in 1995) and 44% of those aged 45 to 54 (47% in 1995) cycled in 2000; and 76% of young people aged 6 to 17 cycled one or more times a week in 2000 (73% in 1995). However, older people have clearly developed greater enthusiasm for cycling: the number of cyclists increased from 34% to 41% in the 55-64 age group, and from 12% to 21% among those aged 65 to 74. The opposite trend was observed among younger adults: again compared with 1995, the number of cyclists fell from 67% to 58% among those aged 25 to 34 and from 76% to 58% among those aged 18 to 24.

### Bicycle use

31% of adults and 76% of children in Québec cycle at least once a week. Since 1977, the number of adults who cycle weekly has practically doubled, rising from 900,000 people to 1.7 million in 2000. Québec thus has more regular cyclists than the United States (23% once per year) and France (8%) but far fewer than the Netherlands (66%) or Denmark (50%).

During the year 2000, Québec cyclists travelled over 1.7 billion kilometres by bicycle, or the equivalent of 2% of the total distance travelled by drivers. To put it more clearly, cyclists say they travel an average of 37 km per week, for a total of 630 km per year.

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Bicycling in Québec in 2000



Almost half (46%) of the bicycle trips made by cyclists in Québec are on routes closed to motorized traffic, either bike paths or mountain-bike trails. Almost as many trips (42%) are made on streets or roads with little traffic. Since 1995, the frequency of trips on rural roads with little traffic has remained stable, with cyclists spending about 23 minutes per week on such roads. Although the frequency of bicycle trips on rural roads with heavy traffic is relatively low, the amount of time cyclists spent on these roads increased by a factor of five, from 1 minute to 5 minutes. Lastly, bicycle paths and streets with little traffic have switched places in terms of how often they are used by cyclists, with the former coming out ahead: cyclists spent 83 minutes on paths in 2000 compared with 71 minutes in 1995, while the time spent on quiet streets fell from 87 minutes to 71 minutes.

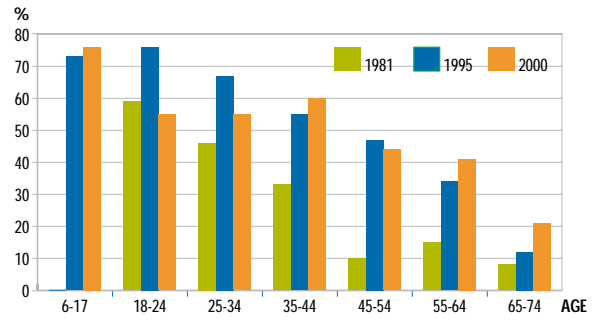
#### Means of transportation

About 500,000 people, or 20% of cyclists, currently rely on their bicycles as a means of transportation, at least occasionally. Approximately 6% of cyclists almost always use their bicycles for practical reasons (primarily to get to work) between May and September.

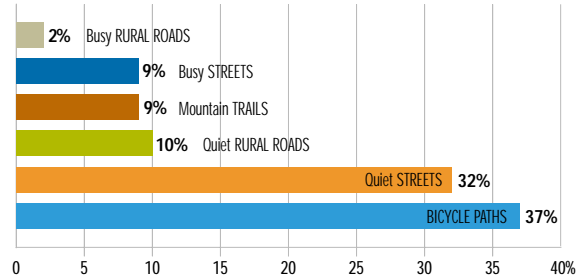
The origin-destination study conducted in metropolitan Montréal from the end of August until mid-December 1998, which examined 418,000 trips, revealed that 1.2% of these trips were made by bicycle. Not surprisingly, this proportion was 3.0% for trips made in August and gradually diminished with the change of seasons. In one particularly striking case, 32% of the trips made by the residents of the Plateau Mont-Royal in Montréal did not involve a motorized vehicle, including 11% made by bicycle.

An average of 18% of all the trips made by Québec cyclists are for practical purposes.

Proportion of cyclists in the population



Routes used by cyclists



#### Leisure activity

In Québec, the bicycle is primarily used for leisure. Indeed, 98% of cyclists cite pleasure as the main reason they use their bikes. However, a similar proportion (97%) spontaneously associated cycling with health and fitness. The opportunity to combine fun and exercise clearly accounts for the popularity of major cycling events for the general public. In 2000, these outings attracted 110,000 cyclists who travelled a total of 5 million kilometres in pursuit of pleasure and fitness.

And this does not include less official outings, the most structured of which are organized by approximately sixty cycling clubs with over 8,000 members. At the rate of about thirty outings per season, these cyclists pedal approximately 10 million kilometres per year. In fact, these group outings are so popular that many people in the cycling world think that there is a great future for competitive cycling events.

#### Tool of various trades

Now that traffic jams have become virtually chronic, the bicycle, in an ironic twist of fate, has come to be regarded as a practical vehicle. It is used by parking-control officers, neighbourhood delivery people, ice-cream vendors and street cleaners. It is now an essential piece of equipment for couriers, who make over a million bicycle deliveries in Montréal every year.

Since it produces no toxic waste or noise pollution, and because it can transport heavy or bulky loads, the tricycle now serves a broad range of functions, including park maintenance in the City of Longueuil, the transportation of parts and tools in the Bombardier-Canadair and Pratt & Whitney plants, and the delivery of samples and mail at Sacré-Cœur Hospital in Montréal.

For their part, police officers have come to rely on the extraordinary mobility provided by the bicycle and also appreciate the fact that cycling brings them much closer to the people they serve. About fifteen of the largest municipalities in Québec assign a total of 111 officers (or 3% of their law-enforcement staff) to bicycle patrols. Even some ambulance services use bicycles. In fact, several teams equipped with oxygen and defibrillators have already put the bicycle to the test in New York and Toronto, and plans have been made for two Montréal teams to follow their example in 2001, as part of a pilot project.







## Cycling means fitness!

Cycling and health go hand in hand, because health is very closely related to physical activity. Common sense suggests that this is the case, and this assumption is supported by a vast body of scientific literature<sup>1</sup>. Over the past two decades, various studies have helped define the relationship between activity and fitness. They have, for example, confirmed the health benefits of mildly to moderately intense physical activity. And this is precisely the type of physical activity that 31% of the adult population of Québec and 76% of young people aged 6 to 17 are engaging in by cycling at least once a week. Although most of these people are not competitive or skilled athletes, they are getting the exercise required to maintain or improve their level of fitness.

Furthermore, even at its most intense, cycling is a relatively “gentle” form of physical activity, because the bicycle supports your weight much like water supports the body of the swimmer. It is thus very unlikely to lead to injuries involving the muscles or joints. This is indirectly confirmed by an Australian study that examines the issue from a broader perspective: based on the number of hours of physical activity, it identifies cycling as by far the least dangerous form of exercise.

Lastly, and more specifically, cycling to work appears to be associated with a unique set of additional benefits: an impressive longitudinal study conducted in Denmark involving 30,640 people and covering a period of 14.5 years revealed a surprising fact: using your bicycle to get to work



reduces mortality risks by almost 40%, even in comparison with other physically active people! In addition to strictly physiological considerations, it would appear that the psychological benefits of cycling account to some extent for this extraordinary finding: it is well known, for example, that in addition to providing the relaxation associated with physical activity, travelling by bicycle shields cyclists from the stress and frustration that are the daily lot of drivers hindered by traffic jams and other inconveniences.

At a time when automobile congestion regularly turns roads into parking lots – increasing stress levels and sedentariness among drivers, not to mention pollution levels – and at a time when a number of observations regarding the health of the population, particularly obesity rates in Québec<sup>2</sup>, are beginning to cause alarm, cycling appears to be a very promising solution, not merely as a form of leisure but even more significantly as a means of transportation.

Bear in mind that in 2000 cyclists in Québec travelled 1.7 billion kilometres – 1.7 billion active, non-motorized kilometres. Furthermore, cyclists estimate that 18% of the trips they make are for practical purposes. Encouraging this type of behaviour represents a unique opportunity to promote a physically active lifestyle that is also environmentally friendly.

1. It is perhaps sufficient to refer to the opinion of the Kino-Québec science committee (which itself refers to those of, among others, the World Health Organization, the American College of Sports Medicine, the American Heart Association and the United States National Institutes of Health), which “recommends that people who are sedentary or physically unfit engage in moderately intense activities, for a relatively long period of time, on a frequent and regular basis.” Current scientific studies all reach the same conclusion: premature death, cardiovascular problems, high blood pressure, colon cancer, type-II diabetes, depression, obesity, etc., are among the problems that regular physical activity can prevent or alleviate.

2. A study conducted at Cégep de Lévis-Lauzon (a general and vocational college) in 1999 reveals that 55% of boys and 40% of girls have percentages of body fat that fall into the zone associated with health risks (Cégep de Lévis-Lauzon and Kino-Québec).

# Cycling and safety

Over the past five years (1996-2000), an average of 28 cyclists per year have lost their lives in Québec, where the total number of cyclists is estimated to be 3.5 million. According to the Québec coroner's office, the vast majority of these deaths (89%) resulted from an accident involving a motor vehicle.



However, one encouraging fact has come to light: according to figures compiled by Québec's public automobile insurance corporation (Société de l'assurance automobile du Québec), the number of fatal cycling accidents has fallen consistently over the past 25 years. Between 1966 and 1976, an average of 68 deaths per year were recorded, including the historical peak of 84 deaths in 1974. Throughout the period 1977-1982, this figure declined by five deaths each year. Since 1983, the number of deaths has declined by an average of one per year. To summarize, less than 25 deaths have been recorded per year since 1997, with 22 in 2000.



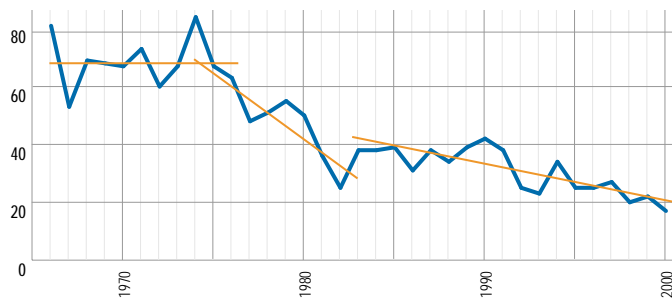
The number of injuries has also declined consistently since 1987, when 4,015 minor cycling injuries and 420 serious injuries were reported. These figures have fallen by an average of about a hundred and approximately fifteen respectively per year, reaching historic lows in 2000, when 2,506 minor injuries and 185 serious injuries were reported. Overall, between 1987 and 2000, the number of minor injuries decreased by 37%, the number of serious injuries by 56% and the number of fatal accidents by 42%. In short, these various statistics indicate that since 1987 the safety record of cyclists has shown greater improvement than that of any other group of road users (during this period, the number of fatal car accidents declined by just 28%).

It is quite remarkable that, during this same period, the total number of bicycles in Québec more than doubled (climbing from 2.1 to 5.5 million units), the number of regular cyclists increased by half (climbing from 1.1 to 1.6 million) and the number of kilometres travelled also doubled (climbing from 44 billion to 82 billion kilometres). This significant overall improvement in cycling safety is at least partly attributable to three major factors: safer driving by motorists (partly as a result of the criminalization of driving under the influence of alcohol in 1985), the extension of the cycling network in Québec from 800 km to almost 5,000 km during this period and, to lesser extent, the addition of certain safety devices to cars and bicycles.

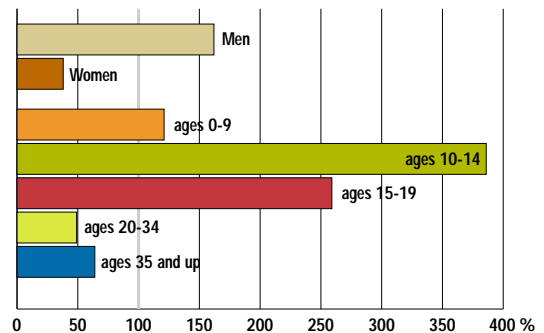
Furthermore, the number of cyclists who own and wear helmets has increased since 1995. The proportion of children (aged 6 to 17) who own helmets increased from 57% to 84%, while the proportion of adults who wear helmets increased from 36% to 41%. While most bicycles have the required set of reflectors, only 14% are equipped with lighting systems. Since 28% of cyclists use their bicycles after dark, only half of the bicycles used at night are adequately equipped.

Cyclists killed on the road

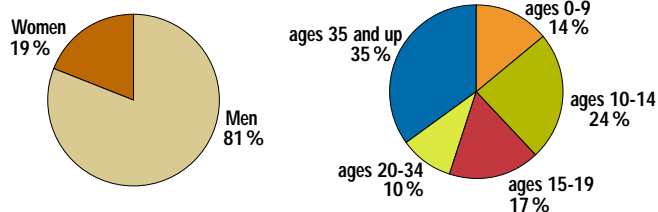
Number of victims 1966-2000



Proportion of victims based on demographic weight • 1995-2000



Number of victims based on gender and per age group • 1995-1999







## Bicycle tourism and the advent of La Route verte

**B**icycle tourism is a natural part of the trend known as adventure tourism, which has become increasingly popular since the early 1990s. Now offering an extremely broad range of travel options, bicycle tourism attracts a diverse clientele, including children.

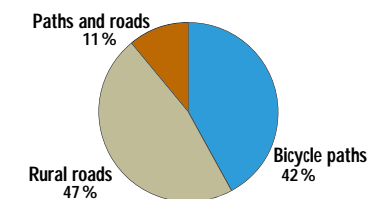
If people for whom cycling is the main motivation for travel (athletic bicycle tourists) are added to those for whom cycling is a leisure activity (vacationing bicycle tourists), the total number of bicycle tourists in Québec represents 21% of cyclists, or 11% of the population. These approximately 500,000 cyclists share the following general profile: they are well educated (49% have a university degree); they are well paid (83% earn over \$40,000 per year); most of them (70%) have no children living at home; and they are primarily older adults (66% are 35 to 54 years old; 20% are 55 or older).

On average, Québec bicycle tourists travel a total of 15 days per year, generally spread out over two, three or four trips. In terms of accommodations, they prefer either hotels (bed-and-breakfasts, hotels, motels, etc.) or campsites. Bicycle tourists spend an average of about a hundred dollars a day, making

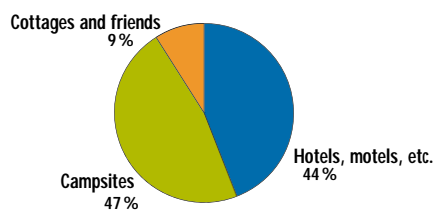


them a more lucrative tourist clientele than average Québec tourists, who spend only \$52 per day. Lastly, bicycle tourists travel mainly on quiet rural roads or on bicycle paths.

The range of facilities and services available to bicycle tourists in Québec has expanded considerably with the development of La Route verte. Of the 4,300 projected kilometres, 2,400 kilometres encompassing various regions have already been completed. And although the project is still in its early stages of development, it already provides bicycle tourists with access to a considerable number of services: on the existing segments of La Route verte, there are 150 establishments that rent bicycles and about 460 lodging services (bed-and-breakfasts, hotels and motels, etc.), not to mention the 80 campgrounds along the route.



*Types of routes preferred by athletic bicycle tourists*



*Types of accommodations preferred by athletic cyclists*



# Infrastructures and services



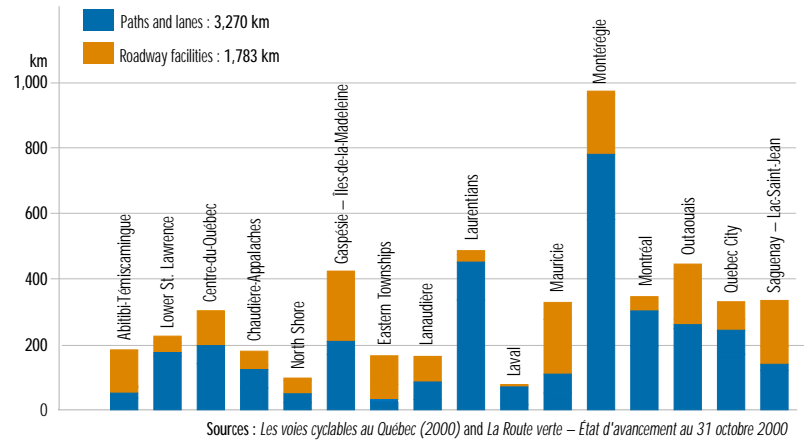
In 2000, the Québec cycling network comprised over 5,000 km of bikeways, two thirds of which are bicycle paths or lanes, while the remaining third are roadside facilities (paved shoulders and designated roadways). By way of comparison, the road network is over 130,000 km long. These bikeways serve 350 municipalities with a total of 5 million citizens, or 70% of the population of Québec. The Montréal, the Laurentians, and the Outaouais are the regions with the greatest number of bikeways.

The Québec cycling network is less than 30 years old. The first bicycle paths were built in the early 1970s, and there were barely 200 km of bikeways by 1979. Most of the existing network was developed in two major phases. From 1978 to 1983, 600 new kilometres of bicycle paths and lanes were constructed. During this period, a Ministry of Transport financial assistance program encouraged about sixty municipalities to invest over \$10 million to complete over 120 projects. One of the last projects to be completed during this phase was the main north-south route in Montréal. Celebrated by the first annual Tour de l'Île, this route soon became very popular with Montrealers and is now one of the busiest bikeways in Québec.

The decade following this initial phase was characterized by a significant slowdown in the development of the cycling network. However, it was during this period that the Ministry of Transport constructed bicycle paths on three bridges in the Montréal area (Viau, Galipeau and Taschereau) and along the Beauport flats.

The foundations for the second phase of development were laid during the conference *Vélo Mondiale • Pro Bike • Velo City* held in Montréal in 1992. The presentation of the *Plan du Québec cyclable de l'an 2000*, along with the announcement by the Minister of Transport that cycling consultations would be held, led in 1995 to the adoption by the Government of its first cycling policy and to the launch of the Route verte initiative. Combined with the buy-back of 1,200 km of railway right-of-ways, these two decisions

Québec cycling network – regional distribution





**Progress report on La Route verte as of October 31, 2000**

	Slated for completion in 2005	Existing	Under development
	km	km	km
Bicycle paths	1,421	1,143	279
Cycling lanes	181	83	98
Paved shoulders			
Provincial roads	1,588	705	883
Other roads	193	30	163
Designated roadways	896	454	442
<b>TOTAL</b>	<b>4,279</b>	<b>2,414</b>	<b>1,865</b>

established the framework for sustainable development. Since 1992, over 4,000 km of bikeways have been created, and the projects currently under way should ensure that the network continues to expand by several hundred kilometres per year.

Between 1978 and 2000, the Government of Québec invested over \$45 million in the development of cycling networks. In addition to contributing at least the equivalent of this amount, municipalities also assumed responsibility for maintaining the networks.

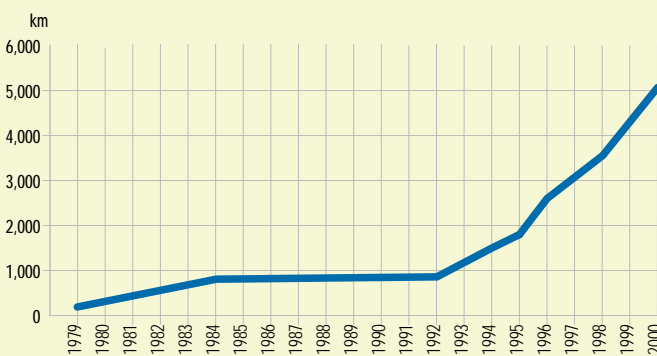
**Busy bikeways**

Bicycle paths have become very important, with cyclists opting to travel on them 37% of the time. In the summer of 2000, despite bad weather, the path on De Brébeuf street in Montréal was used by over 500,000 cyclists, while in Quebec City, over 200,000 cyclists were counted on the Corridor des Cheminots at the intersection with Boulevard Saint-Joseph and over 90,000 cyclists crossed the river via the Lévis ferry or the bridge. In the Laurentians, every summer since 1996, over 100,000 cyclists have been counted passing Mont-Rolland on the P'tit Train du Nord trail. Lastly, a projection based on the results of the main survey conducted for this report suggests that during the most recent cycling season, 800,000 people cycled on at least one of the bikeways comprising La Route verte.

The paths used mainly for recreation or by tourists (Le P'tit Train du Nord trail is a good example) generally accommodate two or three times as much traffic on weekends than on weekdays, are used almost exclusively during the day (85% of the trips on these paths are made between 10 a.m. and 5 p.m.) and experience a peak period in the early afternoon.

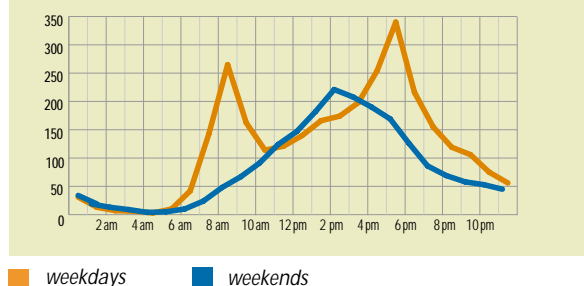
In urban areas, certain paths are used mainly for practical purposes and remain busy for a relatively long period of time (over 12 hours a day). These paths experience rush hours in the early morning and the late afternoon, and tend to be busier during the week. There is occasionally a considerable amount of traffic on these paths: for example, the path on De Brébeuf street in Montréal accommodates 2,600 bicycles per day, with usage peaking at over 5,000 per day during the summer.

**The Québec network 1979-2000**



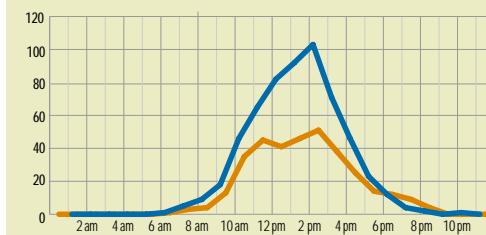
**Rate of use for urban bicycle paths**

Path on De Brébeuf street (Montréal)  
Average number of users from July 8 to November 1, 2000



**Rate of use for recreational paths**

Grandes Fourches network in Capelton (Sherbrooke)  
Average number of users from June 26 to October 1, 2000





## Parking facilities for bicycles

The availability of parking has a direct impact on the use of the bicycle as a means of transportation. This was made quite obvious in Montréal, where a program to install bicycle racks on sidewalks, launched in 1996, proved to be an immediate success. Despite the thousands of parking spaces available to cyclists, the demand outstrips the supply on numerous commercial streets, where countless bicycles are locked to various elements of the urban landscape. There are bicycle racks on the streets of several other municipalities, including Québec City and Trois-Rivières, as well as outside numerous public buildings. These include the 1,400 spaces on the campus of Université Laval (most of which are under shelter) and the 850 spaces reserved for the employees and users of the government buildings in downtown Hull.

Furthermore, the parking spaces for bicycles outside railway stations, bus terminals and metro stations have obvious strategic value. There are currently 1,100 parking spaces for bicycles outside metro stations, not including the 500 at the Longueuil terminus. The rate of use varies, but the demand at certain stations, including Mont-Royal, is greater than the supply. The total number of spaces provided for bicycles throughout the suburban train network (550) is quite small compared with the 10,000 spaces reserved for cars.

## Complementarity with public transportation

Combining cycling with various modes of public transportation is a travel option that makes the most of the resources of these networks. There are two possible types of complementarity. In the first, the cyclist bikes part of the way then completes the trip on public transportation. In this case, parking is a key factor, as described in the previous section, and must be a priority when planning the transportation mix.

The second type of complementarity involves bringing your bicycle on board public transportation then cycling the rest of the way. In this regard, there has been very little progress since 1995. In concrete terms, it is possible to transport a bicycle into the city (under certain conditions) only on the



metro, on certain suburban trains or by taxi. Inspired by the example of Denmark (where the law stipulates that taxis must be equipped with bicycle racks), a pilot project was launched in 2001; about a hundred taxis in the Montréal area will be outfitted to transport bicycles. Furthermore, a number of projects are being studied with a view to equipping buses with bicycle racks, as has been done in over 200 other cities in the United States and Canada.

There has been no change in the interurban services for the transportation of bicycles since 1995. Transporting a bicycle by bus usually involves paying a supplementary fee of between \$9 and \$12, and the bicycle must be partly disassembled. Astonishingly, it is impossible to board Via Rail trains with a bicycle along the Québec City–Windsor corridor, by far the busiest route in Canada. However, it is possible to transport your bicycle on secondary lines, provided you partly disassemble it and pay a supplementary fee of \$15.

All ferries, including the five recreational tourist shuttles in the Montréal area, accept bicycles, usually for a minimal fee. The busiest ferry, which runs between Québec City and Lévis, transported over 58,000 bicycles in 2000. There has been an overall 23% increase in the number of bicycles transported on the Québec City–Lévis, Sorel–Saint-Ignace and Île-aux-Grues–Montmagny ferries since 1995.

As for air travel, transporting a bicycle on a regular flight invariably involves paying a supplementary fee. Depending on whether the flight is continental or intercontinental, and on whether or not the bicycle is regarded as excess baggage, the fee ranges from \$50 to \$140. The bicycle generally must be disassembled and placed inside a special bag or box. For chartered flights, the policies of airlines are more varied, and bicycles are accepted on some flights free of charge.

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