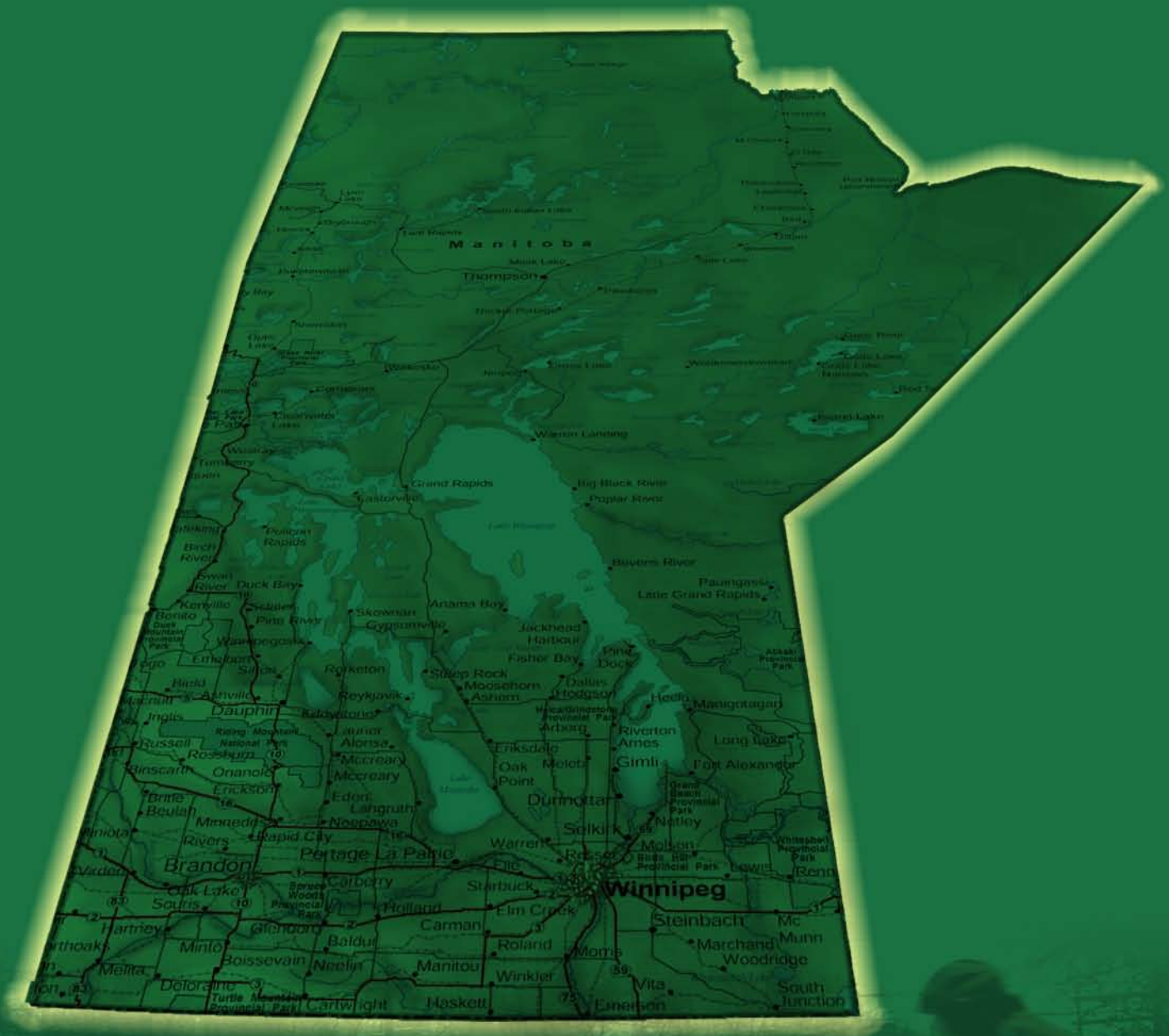
Cycling and the Future of Manitoba

How infrastructure funding and policy changes increase our likelihood of choosing cycling as a form of transportation



BIKE TO THE FUTURE

APPENDICES

Presented by Bike to the Future on behalf of the people of Manitoba

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Figure 1. Strength and Participation in Numbers (S.P.I.N.) Ride, Winnipeg 2006

(photo: Don English)

Appendix I. Cycling Infrastructure Investment in Winnipeg and Other Jurisdictions

Winnipeg

We have a lot of catching up to do. In spite of the clear benefits of cycling, and the urgent need to address the many problems that increased cycling can help fix, Manitoba's provincial and municipal governments continue to provide little support for the development of cycling facilities.

There are, however, signs that things are about to change. Winnipeg is now ensuring that cycling infrastructure is at least *considered* in the more than $500,000,000.00 worth of new roads and rehabilitation projects already budgeted. The City of Winnipeg recently increased its "recreational bike paths and walkways" budget by 600%, and lately there has been a focus on funding trails projects which will also be useful to cyclists. Crucially, the City of Winnipeg has also created a funding category, the "Active Transportation corridor" budget, which sets aside money to do cycling retrofits to existing roads.

Aware that major North American cities are beginning to recognize the benefits of cycling and are actively working to make it an attractive option, Winnipeg, with less than 1 km of existing on-road cycling infrastructure, will begin by allocating $600,000 toward the "Active Transportation corridors" budget in 2008. Bridge retrofits & curb-lane widening are just two examples of the type of funding-intensive projects that need to be undertaken immediately. Winnipeg *needs* provincial support and leadership.

Although slowly increasing, the amount of funds in the "Active Transportation corridors" budget still represents a tiny fraction of the entire budget for roads and bridges. Copenhagen, for example, which already has an extensive network of cycling infrastructure, is set to spend over $10,000,000.00 on cycling-specific infrastructure improvements in 2008 alone. It is important to note that, unlike worldwide bicycle commuting leaders such as Copenhagen, Winnipeg has experienced nearly two generations of city planning and roadway design focused almost exclusively on the automobile. While we are starting to move forward, current funding commitments still stand in stark contrast to what cycling friendly cities around the world are already doing.

The percentage of all infrastructure spending going towards cycling improvements speaks for itself (see figure 12, opposite).

Without stronger leadership, permanent policy changes and serious funding commitments, the overall result of the transportation budget will continue to display a preference for travel by private motor vehicle. Increasing the targeted A.T. budgets is one necessary step towards ensuring that the needs of Active Transportation can be planned for and addressed in a proactive manner, rather than being afterthoughts appended to transportation plans focused on expediting travel by motor vehicle.

Figure 12. Provincial and City Commitments to Trails and Cycling Infrastructure Government Commitment	
City of Winnipeg 5 Year Capital Budget Forecast for Multi-use Trails	$5,500,000
City of Winnipeg 5-Year Budget for Active Transportation Corridors (on-road cycling infrastructure improvements)	**$1,000,000***
Provincial Promise	$1,800,000
Funding to the Manitoba Recreational Trails Association	$1,000,000
Total, Recreational Trails and On-Road Cycling	$9,300,000
Total 5-Year Provincial Budget for Highways and Bridges	$2,000,000,000
Manitoba-wide Commitments Toward Cycling Projects as a Percentage of the Proposed 5-Year Provincial Infrastructure Budget**	**0.46%**
* City of Winnipeg Adopted 2008 Capital Budget **cycling infrastructure figures for Brandon and smaller municipalities are not included.	

Other cities, provinces and states have begun to see the problem that exists and have taken the initiative, albeit in varying degrees, to address it. The level of commitment can reasonably be expected to have a corresponding level of results. Some cities have begun to "accommodate" cyclists in new projects. Some have set hard targets. Others, like Winnipeg, have seen the need to provide "retrofit" funding allowing Active Transportation planners to set an agenda of their own.

Edmonton

" . . . in Edmonton, our current Bicycle Transportation Plan dictates that cyclists be accommodated in wide curb lanes along all arterial roadways . . . Additionally, it is City policy that along all arterial roadways, a 1.5m concrete sidewalk (pedestrians only) be built along one side of the roadway and a 2.5m multi-use trail (bikes allowed) be built along the other side. Again, this is a requirement as per City standards." (Sustainable Transportation, The City of Edmonton)

Calgary

Calgary has created an on-street bicycle route retrofit program funded with a capital budget of $1.25 million per year for the next four years. All roads with a 'major' classification (arterial road) are built with 4.3m wide curb lanes (right-most lane) instead of the standard lane width of 3.7m.

Toronto

-"[One of] the primary goals of the Toronto Bike Plan [is]: to double the number of bicycle trips made in the city of Toronto, as a percentage of total trip, by 2011 . . ." (City of Toronto – Toronto Bike Plan – Executive Summary (http://www.toronto.ca/cycling/bikeplan/pdf/ack_toc_execsumm.pdf))

Figure 13. An Expanding Bikeway Network - Toronto Bike Plan

(source: City of Toronto)

Montreal

- "Montreal wants to encourage cycling as a viable transportation mode. The current network of bicycle paths and lanes encompasses close to 400 km. It will be extended to 800km within the next 7 years, thus doubling in size. Implementation of this ambitious, but relatively inexpensive project will enable Montreal to become the cycling city "par excellence". As early as 2007, the new cycling path on boulevard de Maisonneuve from east to west will affirm cycling as an essential component of the public transportation network. And, as of winter 2007, Montreal also plans to make part of its bicycle network available year-round. In the short term, Montreal plans to contribute to the development of a commercial self-service bicycle rental system and, at the same time, increase the number of bicycle parking spaces. By-laws will also be reviewed to require developers and parking lot operators to have a minimum number of spaces for bicycles. Montreal will also, year by year, upgrade the current bicycle network." (Source: 2007 Transportation Plan Ville de Montreal, Services des infrastructures, transports et environnement (https://servicesenligne2.ville.montreal.qc.ca/sel/publications/PorteAccesTelechargement?lng=En&systemName=9455581&client=Serv_corp)

The Province of Quebec

Manitoba may consider adopting some of the lessons learned by Quebec's provincial bike program. Consider the following summary of Quebec's 1995 Bicycle Policy:

Quebec's policy considered both the role of the ministry of transportation (Ministère des Transports) and the provincial insurance corporation (Société de l'assurance automobile du Québec – SAAQ). The roles of the two bodies were identified as follows.

The Ministère des Transports is responsible for:
- standardization of cycling infrastructure and signs;
- addition of cycling infrastructure to major roads;
- coordination of activities of all stakeholders regarding cycling infrastructure.

SAAQ is responsible for
- controlling access to roads;
- preventing accidents and injury;
- providing compensation to traffic accident victims.

The objectives of the policy are to:
1. Promote traffic safety among cyclists and others using the road;
2. Improve the transportation system for cyclists;
3. Gradually promote the bicycle as a means of transportation.

The policy consists of 13 components, from Cycling Infrastructure, to the Highway Safety Code to Research & Training.

When carried through, the aims of the bike plan, such as increased infrastructure investment, resulted in an increase in bicycle ridership and improvements to safety:

- "For the period 1987 to 2000, for example, total number of bicycles in Quebec more than doubled, and the number of regular cyclists increased by 50%, while cycling fatalities fell by 42%, serious injuries fell by 56%, and minor injuries fell by 38%. . . . Clearly, one reason for both the growth in cycling levels and its increasing safety is the enormous expansion of both off-road and on-road cycling facilities throughout the province of Quebec. From 1992 to 2000—during Quebec's cycling boom—there were 4,000 km of additional bikeways built throughout the province, bringing the total to almost 7,000 km." (Source: Cycling Trends and Policies in Canadian Cities by John Pucher and Ralph Buehler, Rutgers University Bloustein School of Planning and Public Policy)

The Province of British Columbia

Provincial Advisory Cycling Committee
(www.th.gov.bc.ca/popular-topics/cycling/PACC/PACC.htm)

The Provincial Advisory Cycling Committee (PACC) brings together public and private sectors through the participation of government ministries, local government, cycling coalitions, and other groups interested in addressing the concerns of cyclists in the

Province of British Columbia. The Committee's purpose is to provide advice to the Minister of Transportation. This will be done through reporting to the Minister via the Assistant Deputy Minister for Highway Planning and Major Projects, and the Deputy Minister of Transportation.

The goals and objectives of P.A.C.C. are to provide a central review / vetting function for cycling issues that are provincial in scope. These would include issues such as:

1. Monitoring and updating the Ministry of Transportation's cycling policy and guide book;
2. Design standards;
3. Construction and maintenance practices;
4. Provide advice on priorities for provincial highways cycling route evaluations;
5. Encourage dialogue between Ministry staff at the District/Region (local) level and cycling groups in regards to local cycling issues. The committee can pro vide advice on specific projects that have not been addressed at the local level;
6. Provide advice on methods to encourage and educate cyclists within the Province of British Columbia;
7. Provide advice on other cycling issues that may arise; and
8. Facilitate dialogue between all levels of government and committee members in respect to cycling and the overall transportation network.

TransLink
(www.translink.bc.ca)

Translink, the Greater Vancouver Transportation Authority, is a joint venture of the provincial government and Greater Vancouver Regional District. They plan, fund, and build Greater Vancouver's road and transit network. As part of their mandate, they plan and build the region's cycling network. Translink is funded in part from gasoline taxes (30.5% or $257.5 million/year) and PST paid on off-street paid parking (2.4% or $20 million/year).

Major Expansion Highlights 2005 – 2007
TransLink will invest $15 million in cycling, and in most cases this funding will be matched with investment from the municipalities. Cycling investment overview:

- Funding and building new cycling infrastructure in partnership with municipalities.
- Improving bicycle access to TransLink owned infrastructure such as: SkyTrain, Knight Street Bridge, Pattullo Bridge, Westham Island Bridges
- Providing access for bicycles on future capital projects, such as the Golden Ears Bridge and Canada Line.
- Funding construction of over 150 kilometres of new cycling facilities (in addition to the existing 2700 lane kilometres of designated routes).
- Planning and funding for construction of the Central Valley Greenway, through Vancouver, Burnaby and New Westminster, with a link to Coquitlam.
- More bike and transit priority programs.

- Making the entire bus fleet bicycle friendly - The arrival of new trolleys will result in the bus fleet being 100% bicycle rack accessible by 2008.
- Providing more information and education to encourage more people to cycle.
- Developing a long range plan and more research into the future needs of cyclists.

Cycling Infrastructure Partnership Program (CIPP)
(www.th.gov.bc.ca/popular-topics/cycling/cipp.htm)

The Cycling Infrastructure Partnership Program (CIPP) is a cost-shared program where the Government of British Columbia will partner with local governments in the construction of new transportation cycling infrastructure. The goal of the program is to promote transportation cycling (cycling to work, school, or errands) as a means of reducing traffic congestion and green house gas (GHG) emissions. It provides $2 million/year in funding. Municipalities are required to have a comprehensive cycling network plan in place to qualify for the program. The Ministry of Transportation encourages municipalities to go beyond the requirement for an adopted bicycle network plan and develop a more comprehensive bike plan that considers design guidelines, maintenance, end-of-trip facilities, a capital expenditure plan, supporting programs and on-going monitoring. To facilitate the creation of comprehensive bicycle plans, the ministry has developed a set of guidelines for the creation of a comprehensive bicycle plan.

Local Motion Program
(http://www.localmotion.gov.bc.ca)

Localmotion maximizes the options for healthy, active living in communities throughout British Columbia. This program gives local governments extra resources to improve traffic, safety, reduce energy consumption, and encourage all British Columbians to get out and be more active in their communities.

The Province is providing $40 million for investment in capital projects including bike paths, walkways, greenways, and improved accessibility for people with disabilities. LocalMotion funds are also available for projects that support community playgrounds and children's parks activities.

The State of Oregon

Bike Bill and Highway Funds
(http://www.oregon.gov/ODOT/HWY/BIKEPED/bike_bill.shtml)

ORS 366.514, aka the bike bill, was passed by the Oregon Legislature in 1971. It requires the inclusion of facilities for pedestrians and bicyclists wherever a road, street or highway is built or rebuilt. It applies to ODOT, cities and counties. It also requires ODOT, cities and counties to spend reasonable amounts of their share of the state highway fund on facilities for pedestrians and bicyclists. These facilities must be located within the right-of-way of public roads, streets or highways open to motor vehicle traffic. The funds cannot be spent on trails in parks or other areas outside of a

road, street or highway right-of-way. Highlights of the bill include:

• The law requires the Department of Transportation, counties and cities to provide walkways and bikeways on all roadway construction, reconstruction or relocation projects. The funding source or amount are not the determining factors; what is important is that pedestrian and bicycle facilities be provided as part of road improvements.

• ODOT develops standards and designs for bikeways and walkways. ODOT staff is available to assist cities and counties with technical problems, as well as with planning and policy issues.

• The law provides for reasonable exemptions. The determination that one or more exemption is met should be well-documented. The decision should allow opportunities for public review and input by interested parties. Exemptions (b) and (c) refer back to the need. The burden is on the governing jurisdiction to show the lack of need to provide facilities; the need is legislatively presumed but can be rebutted.

State Bicycle Plan
(www.oregon.gov/ODOT/HWY/BIKEPED/planproc.shtml)

This document is the planning and design manual for pedestrian and bicycle transportation in Oregon. It is published by the Oregon Bicycle and Pedestrian Program and was adopted by the Oregon Transportation Commission on June 14, 1995. The standards and designs shown in the plan are ODOT standards used on State Highway projects. These standards meet or exceed national standards as outlined in AASHTO (American Association of State Highway Transportation Officials) documents, the ADAAG (Americans with Disabilities Act Accessibility Guidelines) and other documents.

Bicyclist Safety Programs
www.oregon.gov/ODOT/HWY/BIKEPED/Safety.shtml

Oregon encourages bicyclist safety through:
* Public information program;
* Law enforcement;
* Information and education programs for targeted audiences;
* Law enforcement training; and
* School presentations.

Overview
While there are lessons to be learned and best practices to be emulated, a brief look at bicycle planning in some of the leading North American jurisdictions shows that there is room for improvement and innovation. With a strong commitment to cycling, Manitoba and its major cities are poised to take a leadership role. The province must address the cycling infrastructure deficit now, and work with all stakeholders to develop much needed programs and policies.

Appendix II. How Bicycle Infrastructure Encourages Cycling

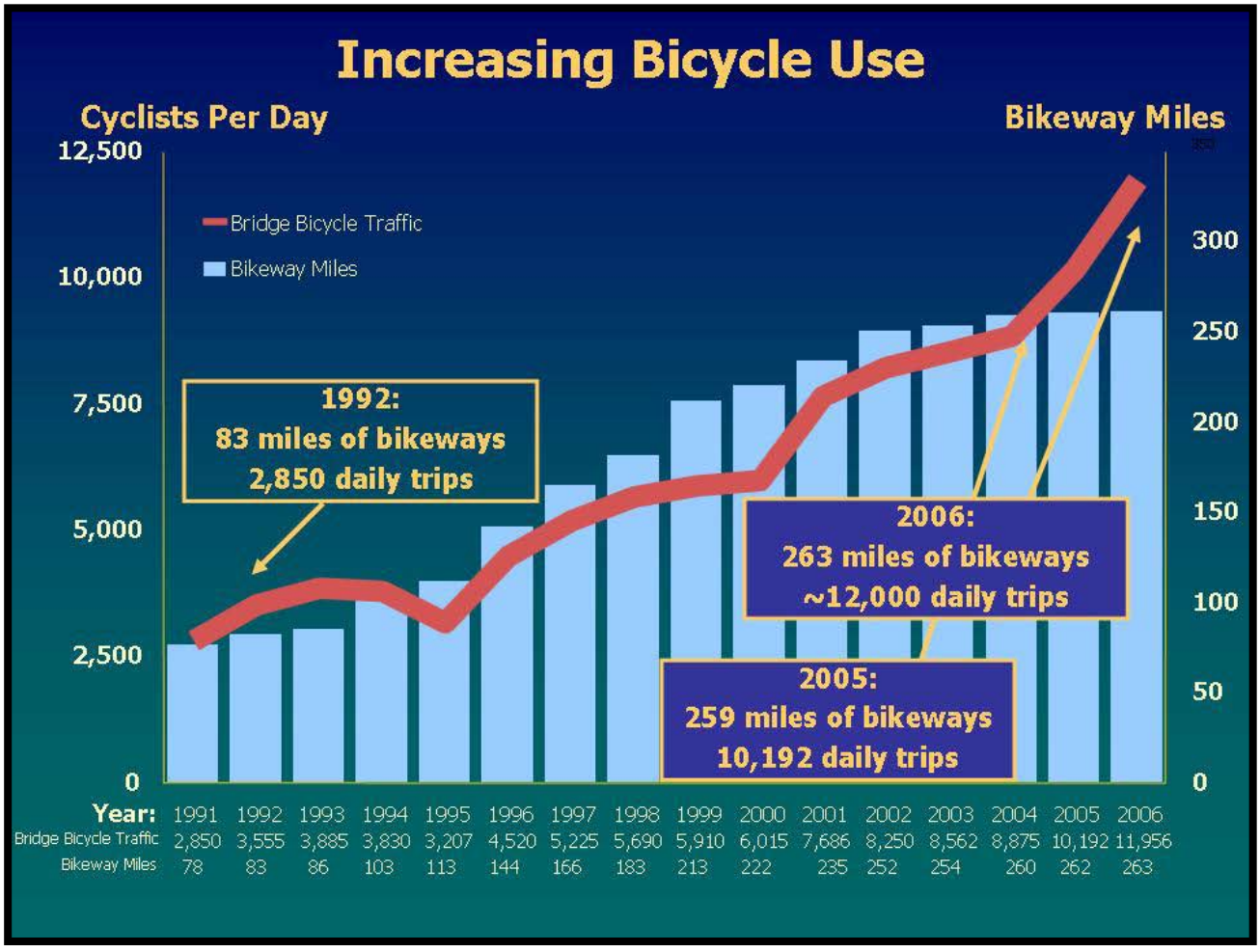
Throughout the world, there are numerous examples of jurisdictions with effective bicycle programs which clearly demonstrate the results of investing in cycling infrastructure.

Portland

Portland, with help from the Oregon Department of Transportation, embarked on a forward thinking quest to increase its bicycle ridership. Portland now has a bicycle mode share of 3.6%, the highest in the U.S.

- Bicycle traffic in Portland has more than doubled since 2001. (2007 Portland Bicycle Counts)
- Bicycles represent 11% to 18% of all vehicles on the four bicycle-friendly bridges (2007 Portland Bicycle Counts)

Figure 2. Increasing Bicycle Use (with Increase in Bikeway Network Length)



Source: "On-Street Bikeways and Off-Street Trails: An Integrated Approach: Overview".Mia Birk & Roger Geller, Initiative for Bicycle and Pedestrian Innovation, Portland State University

Minneapolis

-Construction of new bicycle lanes and paths resulted in an increased modal share for bicycle traffic of about 2% in the area of Minneapolis where these facilities were built, while there was no change in other parts of the city. (Barnes, Thompson & Krizek 2005)

Figure 3. Bike Lanes in Minneapolis

Source: City of Minneapolis

Copenhagen

-"Bicycle traffic increased by 18% following the construction of new bicycle lanes and tracks."
-"The individual cyclist's risk of being injured in traffic has consequently been reduced by 20% since 2002 . . ."
- Copenhagen's 2004 cycling mode-share of all trips was 36%.

(Source: "Copenhagen: City of Cyclists: Bicycle Account 2004)

- City officials now want to increase cyclists to make up half of all commuters by 2015, as well as increase cyclists' speeds by 10 percent while reducing the risk of injury. How will they do it? Partly by investing more - they added about 25 million Danish crowns (US$ 3.7 million) in 2007 to the yearly budget of 75 million crowns (U.S.$11.4 million). ("In Copenhagen Bicycles Overtake Cars" http://www.treehugger.com/files/2007/11/in_copenhagens.php)

Figure 4. Year-round Cycling in one of the World's Most Bicycle-Friendly Cities: Copenhagen

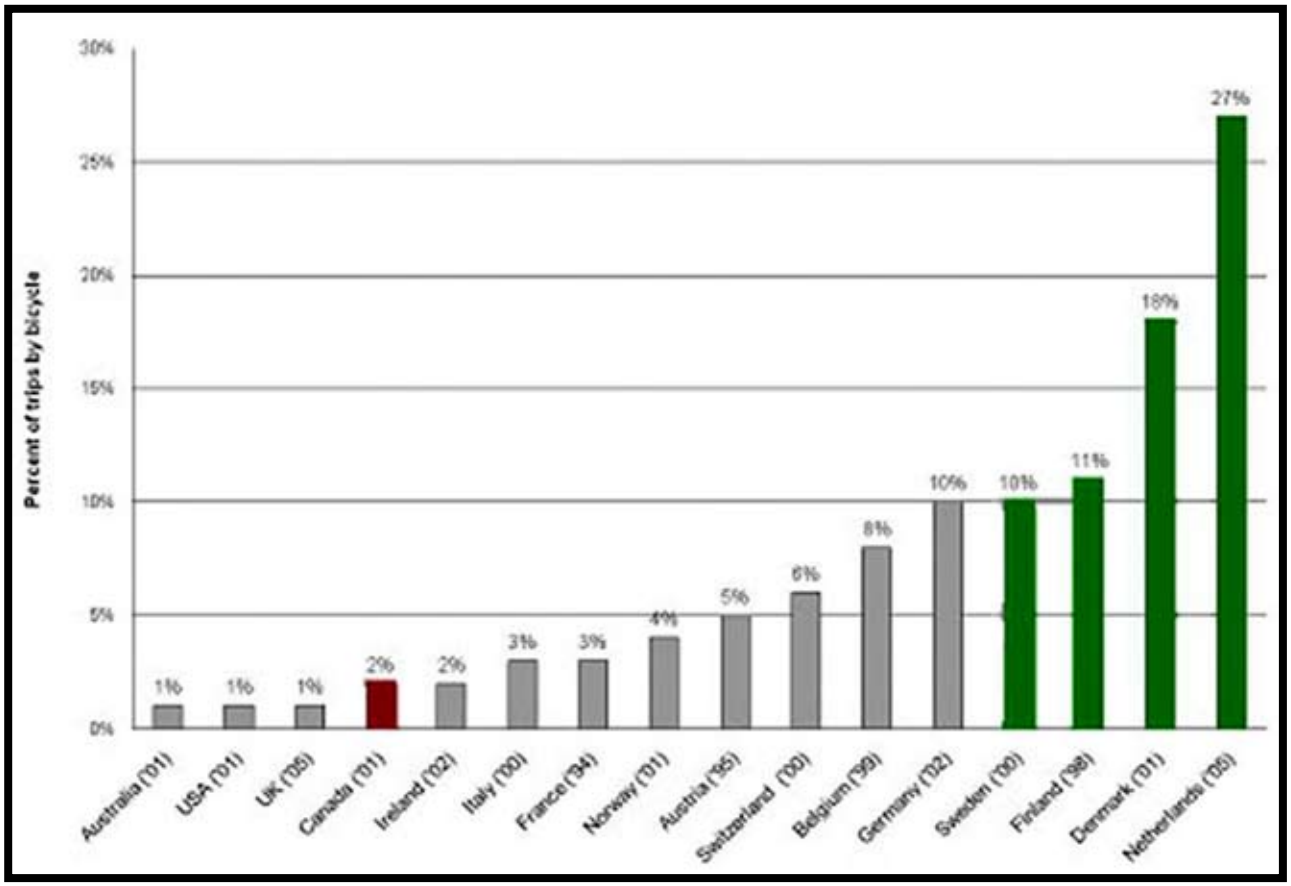
(source: www.streetsblog.org)

(source: sfucity.wordpress.com)

Bicycle Mode Share around the World

Investment in cycling infrastructure ultimately affects the likelihood that a citizen will choose the bicycle over any other mode of transportation. In the following table, note the percentage of trips by bicycle in cold-climate countries like Holland, Denmark, Finland and Sweden, countries where investment in bicycle infrastructure has been seen as a priority for years.

Figure 5. Percent of Trips by Travel Mode



John Pucher and Ralph Buehler, "Making Cycling Irresistible" Transport Reviews, Vol. 28, 2008 - Original Sources: Australian Bureau of Statistics (2007); Netherlands Ministry of Transport (2006); Department for Transport (2005); OECD (2005); European Conference of the Ministers of Transport (2004); European Union (2003); U.S. Department of Transportation (2003); German Federal Ministry of Transport (2003)

Figure 6: Intersection Improvement, Before and After -- Example from Vancouver

(source: City of Vancouver)

Figure 7. Rails with Trails – Example from Waterloo, ON

(source: Rails with Trails in Canada, Anne Robinson)

Figure 8. Bike Boulevards - Examples from Berkeley, CA and Portland, OR

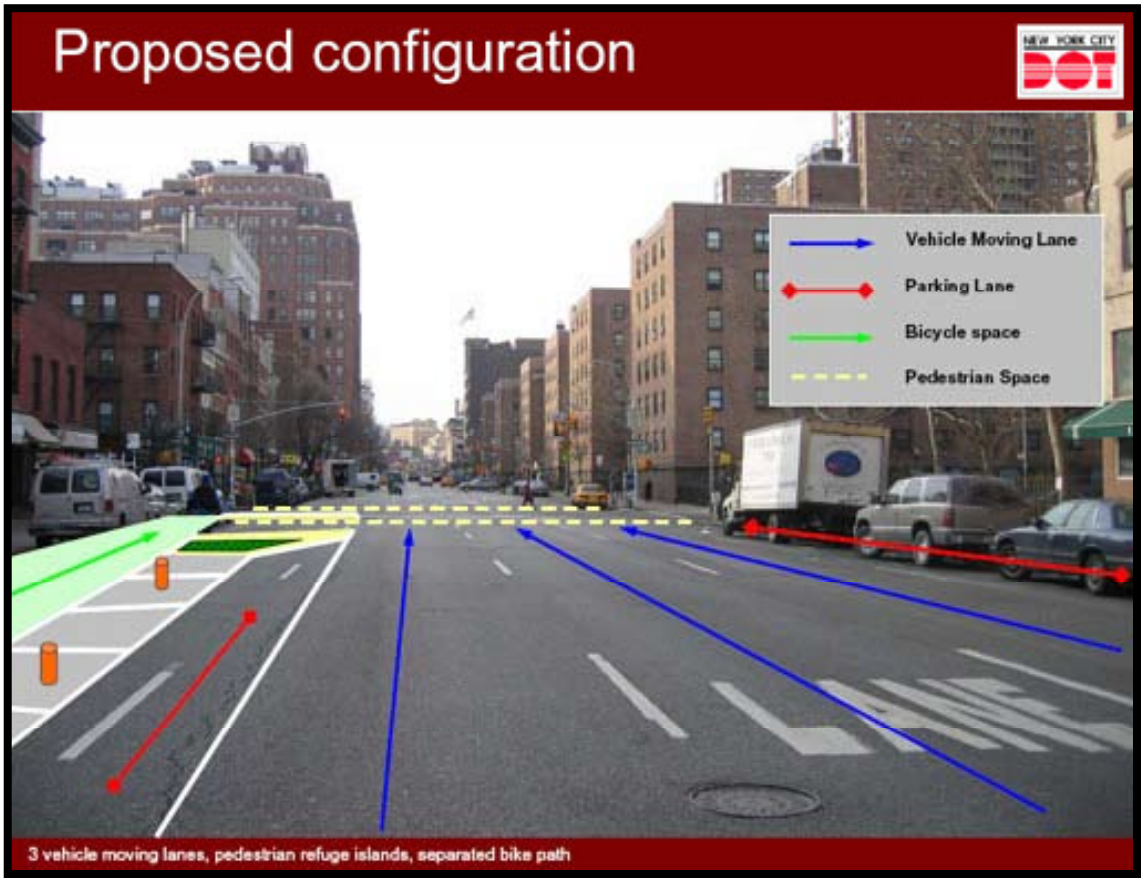
(source: www.streetsblog.org)

(source: www.bikeportland.org)

Figure 9. Curbside Parking Protected Bike Lane – Example from Copenhagen

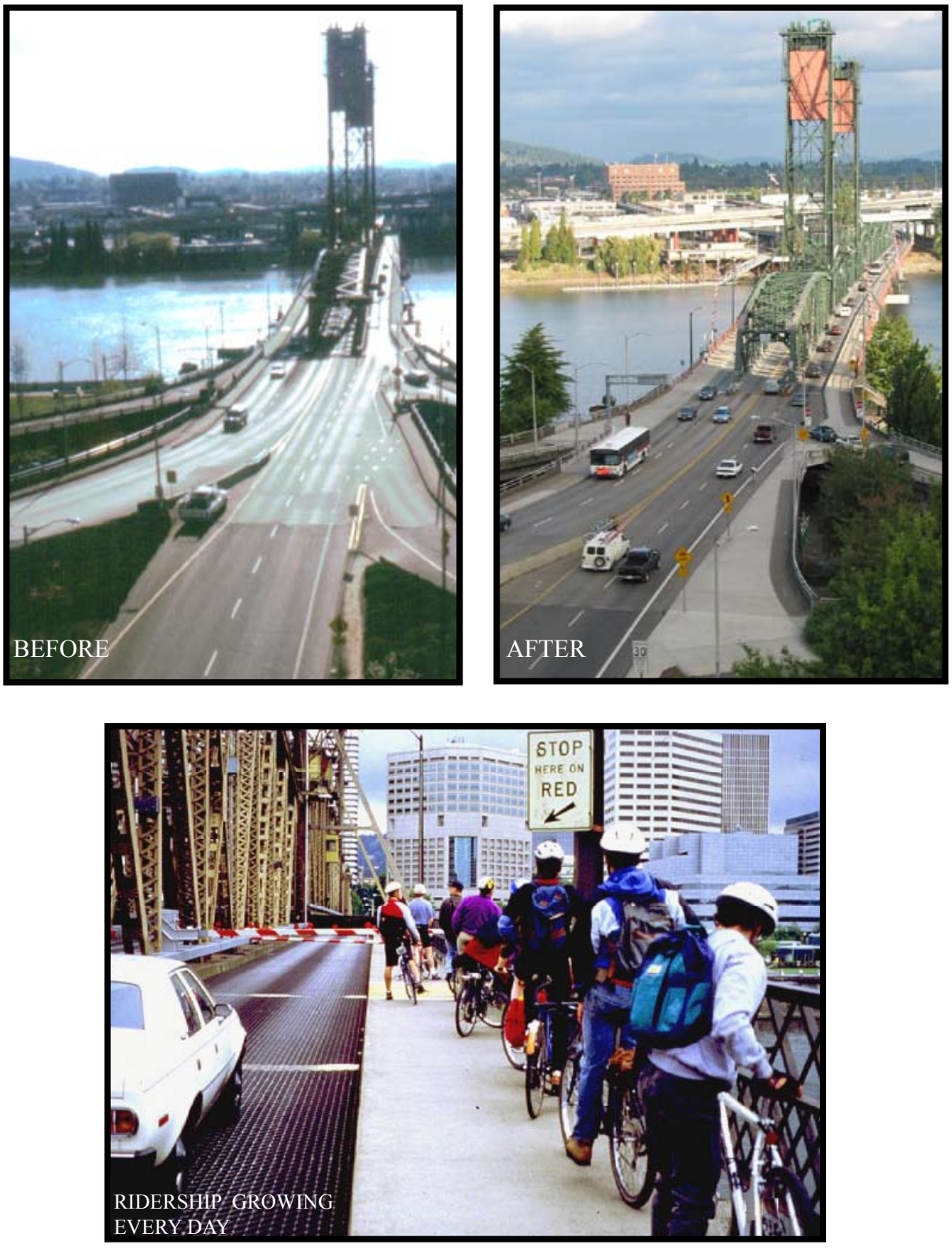
(source: www.bikecommutetips.blogspot.com)

Figure 10. Road Retrofit -- Example from New York City



(source: New York City Department of Transportation)

Figure 11. Bridge Rehabilitation – Example from Portland (Before, After, Increased Ridership)



(source: IPBI Bikeways Course - Mia Birk & Roger Geller, Initiative for Bicycle and Pedestrian Innovation, Portland State University)

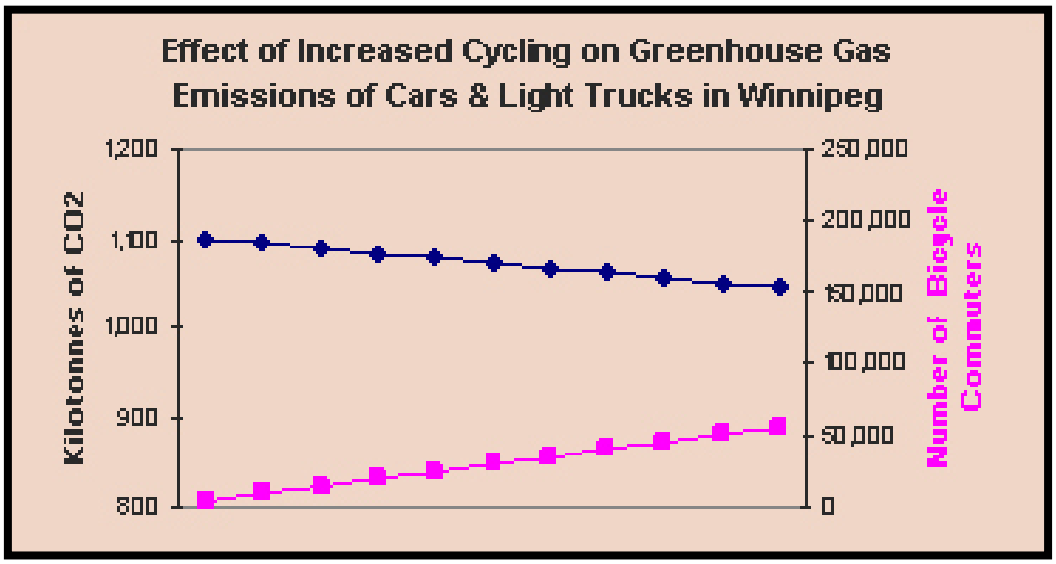
Appendix III. Cycling and GHG emissions

To date, provincial funding for Active Transportation in general, and cycling in particular, has not considered the role that cycling can play in helping to meet climate change objectives.

This is despite the fact that, **according to the Government of Manitoba's Climate and Green Initiatives website**, **"In Manitoba, the transportation sector is one of the largest sources of greenhouse gas emissions. Fossil-fuel-burning vehicles generate more than one-third of the province's climate-changing pollutants. For every litre of gas used, 2.3 kilograms of carbon dioxide is released from the exhaust. If you drive 25 kilometers a day, your car will produce up to 3.8 tonnes of greenhouse gas annually."** (http://www.gov.mb.ca/est/climate/what_you_can_do/car.html)

When we look at the provincial budget we see a mismatch between the current and potential benefits of cycling and the allocation of resources. For example, in support of its climate change commitments, the province has allocated $140 million in subsidies to ethanol producers over the next 8 years. This is expected to reduce CO2 emissions by 140 kilotonnes. The province has also identified the need to reduce the use of private vehicles as the highest priority within its climate change strategy. Cycling reduces CO2 emissions. Right now, because 3% of Winnipeg residents use bicycles for transportation, Manitoba's CO2 emissions are 11 kilotonnes lower than they would be if all these people used cars. There is the potential for much more reduction through increased levels of cycling.

Figure 14. Effect of increasing Cycling on Greenhouse Gas Emissions of Cars and Light Trucks in Winnipeg



(source: Bike to the Future Calculations)

For example, using conservative estimates based on the habits of current cyclists, (see Figures 15 – 19), doubling cycling as a mode of transportation in Winnipeg to about 6% of traffic would reduce CO2 emissions by an estimated 11 kilotonnes. Increasing the share to 10% would reduce CO2 emissions by about 28 kilotonnes.

Calculating GHG reduction - Methodology

The 2001 Census found that 1.4% of Winnipeg commuters usually cycle to work. Three years later, in 2004, a survey done by the City of Winnipeg Public Works department found that the proportion was 2.8%. These figures and other Census data can be used to estimate the number of bicycle commuters in Winnipeg in 2006.

"Commuters" as defined in the 2001 Census were those traveling to work outside the home. The number of people in Winnipeg working outside their homes in 2001 was 327,740, according to the Census. This number was estimated to have increased to 362,312 by 2006, based on the overall growth of the Winnipeg's employed population between 2001 and 2006. This results in an estimated number of bicycle commuters of 2.8% (from the 2004 Winnipeg Public Works survey) x 362,312 = 10,145.

Another reference point is the traffic survey conducted by volunteers from Bike to the Future in the spring of 2007. This survey was carried out monthly for three months and focused on bicycle commuters traveling into and out of the downtown area. Based on these counts it was estimated that about 5,000 cyclists commute in and out of downtown (= 10,000 trips) on a daily basis during good weather in May and June. Since the downtown is only a part of the city total, this number is only a part of the total commuter traffic for the city.

However, commuter traffic is only a part of the travel that is done by bicycle. People also cycle to school, for shopping trips and other errands, or for other purposes. Data concerning these other types of cycling travel are difficult to come by, but some information is available from a survey carried out by Prairie Research Associates for the City of Winnipeg Active Transportation Study in 2002. This was a telephone survey of about 600 people using standard sampling and statistical estimation procedures. It included questions on travel for shopping, travel for errands while at work, and travel to school. Some of the results were shown separately for cyclists, while in other cases cycling was included along with other forms of Active Transportation, such as walking. More detailed information was available for summer travel than for winter travel.

By using the rates of travel and average distances as provided in the survey report, and by applying them to the appropriate population groups, it was possible to make estimates of the amount of travel by bicycle in Winnipeg in several categories.

Figure 15. Estimated Bicycle Travel and Corresponding CO2 Reductions By Type of Travel, Winnipeg, 2006		
Type of Travel	Estimated Distance per Year (km)*	Estimated Reduction in CO2 Emissions (kg)**
Commuting to Work	28,695,110	6,284,229
Commuting to School	13,221,997	2,895,617
Shopping	7,859,299	1,721,187
Errands at Work	305,760	66,961
TOTAL	50,082,167	10,967,995

* The calculations of these distances are shown in the following tables.

** Based on the following rate: Reduction in emissions / cyclist = 219 grams of CO2 / passenger-kilometre / year. (Campbell and Wittgens, 2004. Note that this is based on the average number of passengers per private motor vehicle. It assumes that each km traveled by bicycle = a reduction of one km of travel by motor vehicle.)

Figure 16. Estimated CO2 Emission Reductions Under Different Scenarios			
Scenario	Bicycle Commuting Share of Traffic	Increase over current level	Estimated CO2 Additional Reduction (kilotonnes)
Current level	2.8%	0.0%	11.0
1% increase in share	3.8%	1.0%	3.9
Doubling of current levels	5.6%	2.8%	11.0
Increase to 10% share	10.0%	7.2%	28.2

Calculations and Assumptions

Figure 17. 2006 Population estimates			
Type of Travel	**Relevant Population**	**Population**	**Source notes**
Commuting to Work	Work Outside Home	362,312	Based on proportion working outside the home from the 2001 Census, applied to the total employed population from the 2006 Census, for Winnipeg.
Commuting to School	Attending College or University	75,903	Based on the proportion of students identified in the 2002 Prairie Research Associates survey, applied to the total 2006 adult population of Winnipeg.
Shopping	Adult Population	571,170	2006 Census data.
Errands while at Work	Employed Population	382,200	2006 Census data.

Figure 18. Bicycle Travel Rates and Distances – Non-winter Travel			
Type of Travel	**Percent Traveling by Bicycle**	**Average Trips per Week**	**Average Distance per Trip**
Commuting to Work	5.0%	4.8	6.0
Commuting to School	8.0%	3.7	10.7
Shopping	86.0%	0.3	1.0
Errands while at Work	5.0%	0.3	1.0

Figure 19. Estimated Bicycle Travel Distances {Population x Percent Using Bicycles x Trips per Week x Average Distance/Trip}			
Type of Travel	**Summer (25 weeks)**	**Winter (25 Weeks)**	**Total**
Commuting to Work	26,086,464	2,608,646	28,695,110
Commuting to School	12,019,998	1,202,000	13,221,997
Shopping	7,144,817	714,482	7,859,299
Errands while at Work	277,964	27,796	305,760
Total	45,529,243	4,552,924	50,082,167

Notes:

a. Average number of trips/wk both for “Errands While at Work” and “Shopping” is derived from the proportion of cyclists / others using Active Transportation for errands at work (.19) times the average number of AT shopping trips per week (1.6).

b. Winter bicycle use is arbitrarily assumed to be 10% of summer bicycle use.

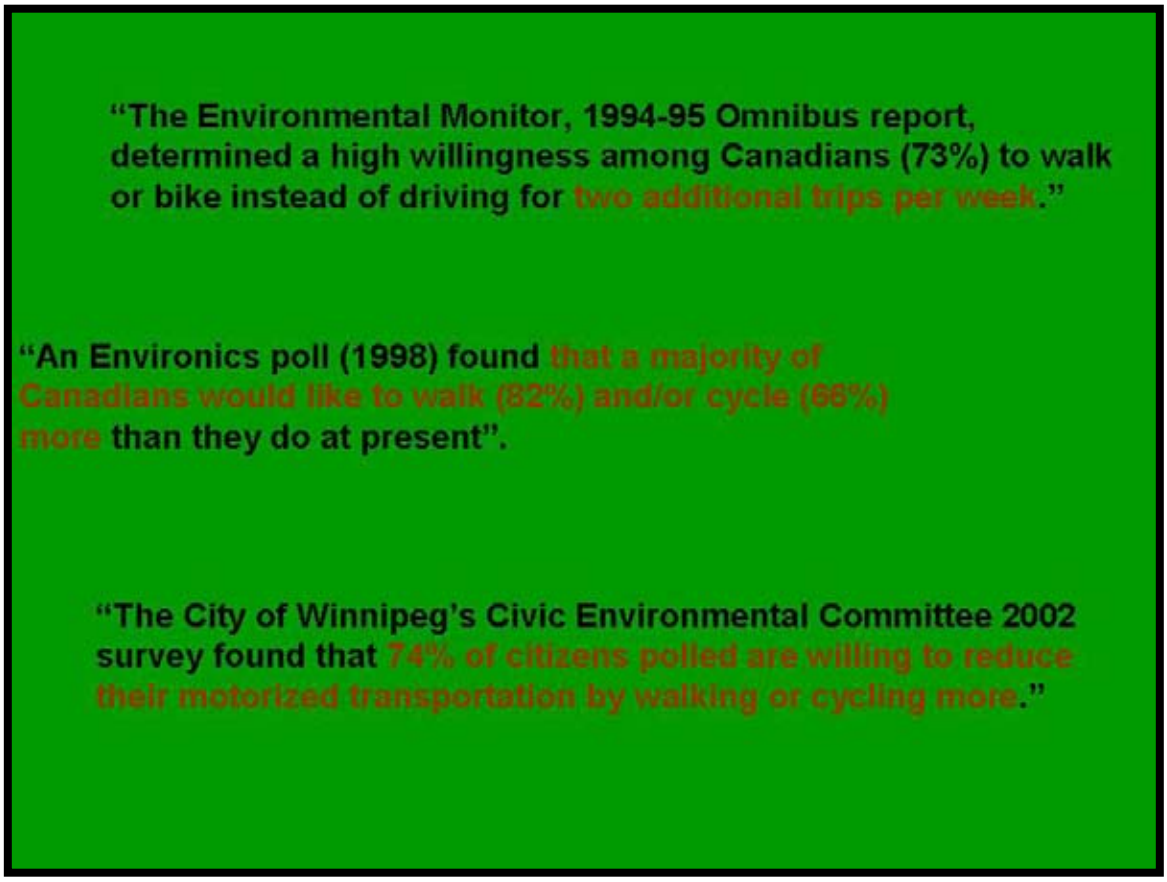
c. The average distance for shopping trips of less than 2 km was taken to be 1 km.

d. Other figures on percent shares, trips per week, and distances come directly from: Marr Consulting, “The City of Winnipeg Active Transportation Study,” 2005, Appendix F: Fall Telephone Survey Results, prepared by Prairie Research Associates, Dec. 3, 2004.

e. GHG gas reduction projected into the future is based on current habits. It can reasonably assumed, therefore, that the resulting numbers are low estimates.

Appendix IV. City of Winnipeg Readiness - Evidence that People Want Change

Figure 20. Winnipeggers, Canadians and the Willingness to Adopt Cycling as a Preferred Mode of Transportation.



(source: One Green City - Presentation to the Standing Policy Committee on Planning Property and Development.)

Increasingly, residents of Winnipeg are willing to consider cycling as a means of practical, daily transportation.

As of 2004:

* 30% of Manitobans cycle "most of the time" to at least one destination
* 30% of Manitobans cycle "sometimes" as a mode of transportation
* 65% of Manitobans would like to use bicycles more as a mode of transportation
* 83% of Manitobans would support government spending on bike lanes
* 90% of Manitobans support governments investing more money in Active Transportation

(Source: City of Winnipeg Active Transportation Study, 2004.)

And in 2007, the large demand still exists. A recently released poll by the Manitoba Medical Association found that, as of July 2007, 90% of Manitobans support governments investing more money in Active Transportation.

The City of Winnipeg and its residents have reached a point of readiness for the development of better cycling facilities. The pressing need to rebuild the city's transportation infrastructure means that this is a critical opportunity for implementing a change in approach.

Currently we see:

- Increased cycling levels in the city;

- Increased attention to cycling and trails issues in the media;

- City acceptance of the Active Transportation report recommendations;

- Appointment of an Active Transportation Coordinator and Advisory Committee;

-An upcoming city-wide Active Transportation plan, being brought forward by the department of Public Works in April of 2008;

- Successful cycling-friendly Motions carried by civic committees including as City Council, the Executive Policy Committee, the Standing Policy Committee on Downtown Development, the Standing Policy Committee on Infrastructure Renewal and Public Works, the Standing Policy Committee on Planning, Property and Development, , the Zoning By-law Advisory Committee, local community committees;

- The appointment of a cycling advocate to the Mayor's Environmental Advisory Committee;

- A 600% increase in the "recreational trails and pathways" budget;

- A new municipal capital budget line item dedicated to "Active Transportation corridors" aimed at creating on-road cycling infrastructure and the recent decision by the Executive Policy Committee to increase it's forecasted budget from $100,000 to $500,000 in 2008

- The formation of an incorporated, city-wide bicycle advocacy group (Bike to the Future) in Winnipeg, with over 300 members and growing;

- Ongoing efforts to formalize a broad-based coalition of diverse groups focused on Active Transportation;

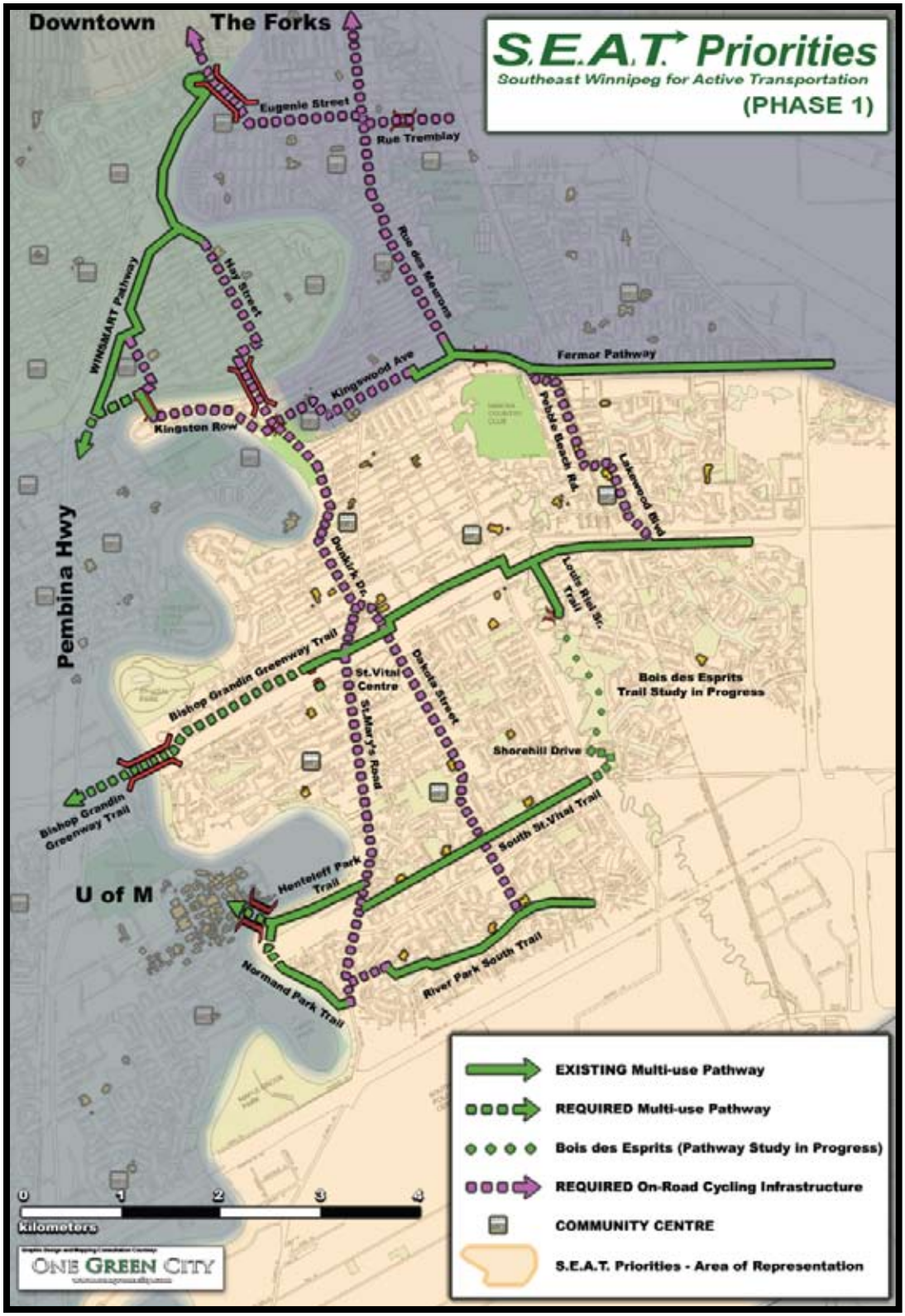
- Free, community-operated bicycle repair shops opening in the inner-city, in Winnipeg's North End, the Canadian Mennonite University and at the U of M;


North Winnipeg Commuter Cycling Infrastructure Network Map (Phase I)
prepared for community consultation by the North Winnipeg Commuter Cyclists
NWCC
N
Different Types of Bicycle Infrastructures
Map Legend
kilometers


Proposed Cycling Infrastructure Network (Phase I)
prepared for community consultation by
West Central Commuter Cyclists
(a Bike for the Future member organization)
WC3
West Central Commuter Cyclists
onegreencity.com/wc3.html

- The formation of neighbourhood cycling stewardship groups helping to engage the community in infrastructure changes and helping the municipal government and planners make better decisions (see figures 21-23);

Figures 21, 22 (opposite) & 23: Community Developed Active Transportation Priority Infrastructure Maps from Northwest, West Central and Southeast Winnipeg



- Monthly protests & civil disobedience (Critical Mass);

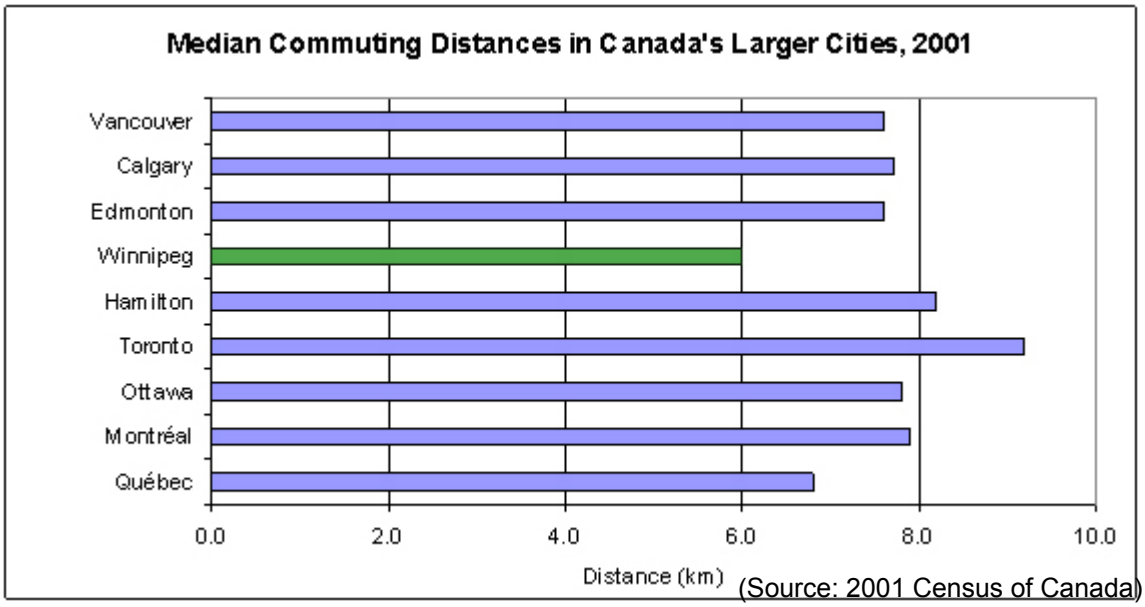
- Legal, police-sanctioned organized demonstrations like SPIN 1 & SPIN 2;

- The high profile of environmental and climate change issues;

- Record gasoline price increases

People already choose to reside in Winnipeg because it is a medium-sized city that offers the chance to spend less time commuting and more time living. What remains is to shidt those trips made by car, to trips made by bicycle. For people of average fitness and ability, trips under 10 km can *easily* become trips taken by bicycle. They simply need to feel safe and welcome on the road. Cycling infrastructure investment, Winnipeg's consistently low average journey to work distance and supportive programs would allow our city could become a Canadian leader in Active Transportation. So rather than simply trying to follow in the footsteps of other cities, our capital city should recognize the opportunity to become a nation-wide leader and seze it.

Figure 24. Median Commuting Distances in Canada's Larger Cities, 2001



(Source: 2001 Census of Canada)

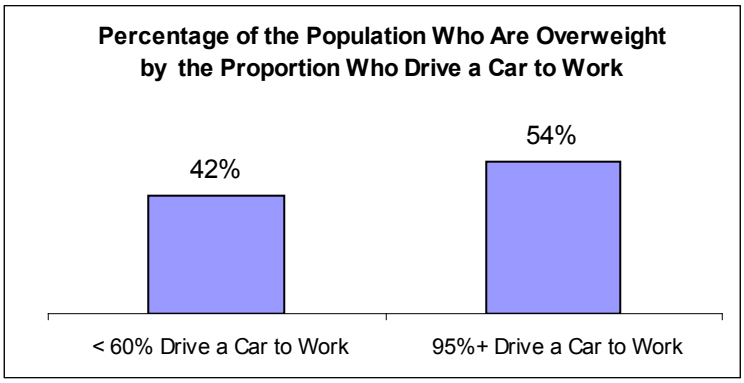
Appendix V. The Health and Economic Benefits of Cycling

Cycling improves health and fitness, saves money and saves lives.

Cycling infrastructure and program investment should be seen as a benefit, not a cost. For a government tasked with both healthcare and infrastructure, any funds directed towards Active Transportation infrastructure should always create an increase in the bottom line.

- For every hour per day spent driving, there is a 6% increase in the likelihood of obesity. (Marr Consulting, 2005)

Figure 25. Increased use of cars is correlated with increased levels of obesity.



(source: Bike to the Future, Based on data from Canadian Institute for Health Information. 2006)

- It was estimated that obesity-related illnesses cost the Manitoba health care system $140 million annually or 7.3% of total direct health care costs in the province. (Colman, 2000)

- The total cost of obesity to the Manitoba economy is estimated at between $270 million and $305 million per year, equal to 1% of the province's GDP. (Colman, 2000)

- In Toronto, air pollution from traffic gives rise to about 440 premature deaths and 1,700 hospitalizations per year, especially affecting the health of the elderly and children. (McKeown, 2007)

- Across Canada, the predicted benefit of each 1% increase in the rate of physical activity is $625 million per year.

- Asthma, a 20th century disease that is strongly linked to air pollution in urban areas, costs the Canadian economy over 1 Billion dollars annually. (The Canadian Lung Association)

Cycling reduces transportation costs for individuals.

- Annual ownership and operating costs associated with driving an average minivan were estimated at $10,227.30 in 2005. (Canadian Automobile Association)

- A 1997 survey of North American bicycle commuters determined the average cost of bike purchase and annual operating expenses at $714.00. (Moritz)

- Economic leakage from Manitoba due to purchase of gasoline and diesel fuels is estimated at $1.4 billion per year. (Loney, 2007)

Cycling reduces traffic congestion, and road construction costs.

- Congestion can be reduced by providing paved shoulders for cyclists at a cost of $50,000 to $100,000 per km or paved pathways at a cost of $250,000 per km rather than by widening a two lane urban arterial road to four car lanes, which costs approximately $1.3 million per km. (Campbell & Wittgens, 2004)

- The cost of constructing a parking space for a bicycle is approximately 5% of the cost of a parking space for an automobile. This relative cost applies to both outdoor indoor parking options. (Campbell & Wittgens, 2004)

Cycling infrastructure is key to creating a liveable, prosperous city, and to providing citizens with the healthy lifestyle choices they want.

Extensive bicycle facilities would strongly influencing the public's opinion of Winnipeg. A strong commitment to bicycle infrastructure would strongly affect their decision to stay here, work here, raise a family here and pay taxes here:

" . . . Winnipeggers are not particularly satisfied with the current Active Transportation facilities in the city . . . Winnipeggers are also more than twice as likely to think that the city's bicycle facilities are worse (30%) not better (13%) than those of most major Canadian cities. (This) makes many Winnipeggers feel less positive about their city. Indeed, almost 8 out of 10 say that good Active Transportation facilities would make them feel more positive about their city.." (City of Winnipeg AT Study 2004)

Cycling is a pleasant and eco-friendly way of traveling. In a bicycle-friendly province, the cyclist becomes a tremendous stimulant to the economy.

- “Cyclists spend over $95 million CAD ($64.6 million USD) annually along the Route verte”. (Source http://www.velo.qc.ca/english/index.lasso?page=pressroom&id=20030508171603)

- 30% of Ontario tourists cycled at least once on their trip. Touring cyclists spent at least $150 a day. (Regional Niagara.)

- In 2002, Québec hosted 190,000 bicycle tourists. They spent an average of $112 per day as opposed to other tourists who spend $52 per day. (Vélo Québec, 2002.)

- In British Columbia, 12% of non-resident tourists and 9% of BC residents cycled at least once during their trip. (Tourism British Columbia)

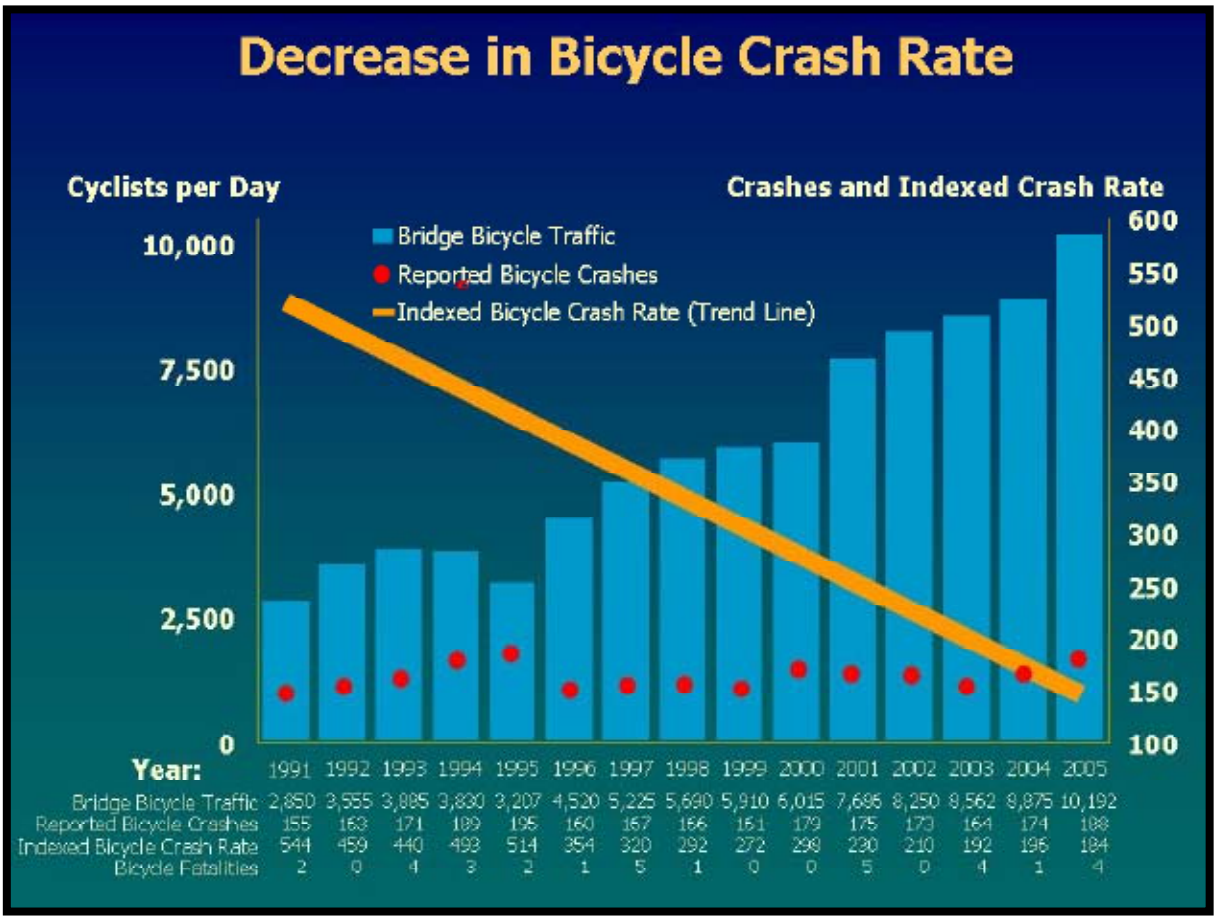
Figure 26. From Winnipeg to Whiteshell Provincial Park: Cycle Touring - A Great Way to Travel

(photo: Anders Swanson)

Appendix VI. Investing in Cycling Infrastructure Makes Cycling Safer

Around the world, transportation planners are beginning to realize that the overall safety of cyclists increases dramatically as the available kilometers of bikeways increase and the number of cyclists increases.

Figure 27. Portland – A Decrease in Bicycle Accidents Comes with Infrastructure Investment



(source: IPBI Bikeways Course - Mia Birk & Roger Geller, Initiative for Bicycle and Pedestrian Innovation, Portland State University)

- Between 1978 and 1992 the Netherlands doubled its bicycle network and found fatality rates dropped by one third, while kilometres traveled increased by one third. (Gardener 1998)

Figure 28. Bicycle Kilometres and Killed Cyclists per Kilometer

Bicycle Kilometres and Killed Cyclists per kilometre	Cycling kilometres per person per day	Killed cyclists per 100 million kilometres
GREAT BRITAIN	0.1	6.0
ITALY	0.2	11.0
AUSTRIA	0.4	6.8
NORWAY	0.4	3.0
SWITZERLAND	0.5	3.7
FINLAND	0.7	5.0
GERMANY	0.8	3.6
SWEDEN	0.9	1.8
DENMARK	1.7	2.3
THE NETHERLANDS	3.0	1.6

(source: Wittink, Roelof; I-ce Interface for Cycling Expertise: Planning for cycling supports road safety; In: Sustainable Transport, Planning for walking and cycling in urban environments, ed. Rodney Tolley; Woodhead publishing in Environmental management, ISBN 1 85573 614 4; 2003)

- "For the period 1987 to 2000, for example, total number of bicycles in Quebec more than doubled, and the number of regular cyclists increased by 50%, while cycling fatalities fell by 42%, serious injuries fell by 56%, and minor injuries fell by 38%. . . . Clearly, one reason for both the growth in cycling levels and its increasing safety is the enormous expansion of both off-road and on-road cycling facilities throughout the province of Quebec. From 1992 to 2000—during Quebec's cycling boom—there were 4,000 km of additional bikeways built throughout the province, bringing the total to almost 7,000 km." (Source: Cycling Trends and Policies in Canadian Cities by John Pucher and Ralph Buehler, Rutgers University Bloustein School of Planning and Public Policy)

Appendix VII. Cycling and Winter Cities

The myth that cycling is not feasible in winter climates is occasionally used to defer funding responsibilities. However:

- “Perhaps most remarkable is the extraordinarily high level of cycling even in the far north. Indeed, Yukon ties British Columbia for the highest bike share of work trips (2.0%), and the Northern Territories (1.6%) far exceed both Ontario (1.0%) and Quebec (1.2%). So much for the myth that cycling is only possible in warm, sunny climates!” (Source: Cycling Trends and Policies in Canadian Cities by John Pucher and Ralph Buehler, Rutgers University Bloustein School of Planning and Public Policy)

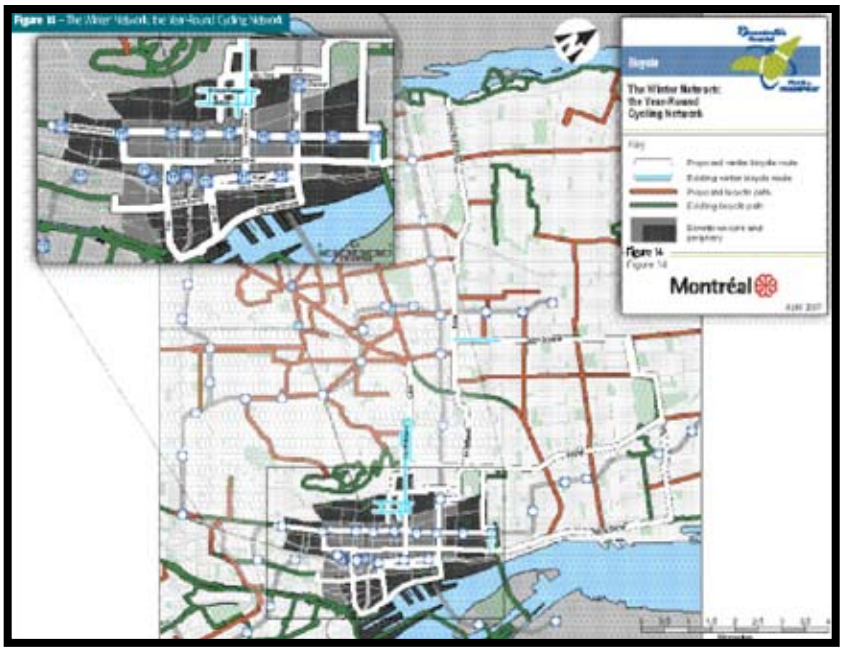
- In recent article about the “11 most Bicycle-Friendly cities in the World”, 5 out of 11 can be described as winter cities: Copenhagen, Denmark; Trondheim, Norway; Sandes, Norway; Basel, Switzerland; & Boulder, Colorado. (Source: http://www.virgin-vacations.com/site_vv/11-most-bike-friendly-cities.asp)

Figure 29. Cycling in Copenhagen

(source: http://sfucity.files.wordpress.com/2007/03/copenhagen-winter-cyclists.jpg)

Winter cycling underscores the need to implement cycling infrastructure that goes beyond just painted lines (which are covered with snow for much of the winter). Physically separated cycling infrastructure options fulfill the need to separate cyclists from dangerous motor vehicle traffic during periods of adverse conditions.

Figure 29. Montreal's Map of its Winter Cycling Network: ". . . as of winter 2007, Montreal also plans to make part of its bicycle network available year-round."



(source: Ville de Montreal, 2007 Transportation Plan.)

Regardless of the challenges posed to cycling in the winter, the existence of winter must not be used an excuse to put off funding. For example, consider our dedication to parks and open spaces. Parks are used much less frequently in the winter, besides the occasional cross-country skier or toboggan ride. The fact that their "usefulness" is somewhat limited during the winter months is never cited as an excuse to eliminate community access to green spaces and the valuable facilities they provide.

Cycling is a viable transportation choice year-round. While conditions certainly change throughout the year, winter cyclists will tell you that, not only is it *possible* to cycle for transportation in the winter, it is also dependable and a great deal of fun. With preparation, it can be as comfortable as cycling in the summer and is a sure cure for cabin fever. With more maintenance, snow clearing, and intelligent infrastructure design, the possibility of cycling year-round opens up to many more people.

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