



The Nonmotorized Transportation Pilot Program

Overview

For 2005, Statistics Canada determined that 86% of Canadians traveled to work in cars as drivers or passengers. Despite the known health, environmental and cost advantages of nonmotorized travel, habits, attitudes, lack of suitable infrastructure and climate are barriers to lowered reliance on personal automobiles.

In support of efforts to increase nonmotorized travel, this issue paper describes progress to date for the U.S. Nonmotorized Transportation Pilot Program (NTPP), which is providing 25 million dollars each to four communities to demonstrate how targeted efforts can increase rates of walking and bicycling.

Organization

U.S. Department of Transportation, Federal Highway Administration and the pilot communities of Columbia, Missouri, Marin County, California, Minneapolis, Minnesota, and Sheboygan County, Wisconsin.

Status

Ongoing - the U.S. Nonmotorized Transportation Pilot Program (NTPP) was initiated in 2005 and final reporting is expected in the fall of 2011. An interim report was issued in January 2008 that provided a description of the pilot communities, their strategies and baseline data. As of fall 2009, pilot communities are in the process of implementing education and infrastructure projects intended to increase nonmotorized transportation.

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http://www.co.sheboygan.wi.us/html/d_planning_nonmotorized_project.htm

Selected Resources

1. U.S. Department of Transportation, Federal Highway Administration
<http://www.fhwa.dot.gov/environment/bikeped/nntp.htm>
2. Program Updates and Factsheets:
<http://www.fhwa.dot.gov/environment/bikeped/nntp.htm>

Community Context

The pilot communities were selected to represent a range of population sizes, climates and urban/rural compositions to have a wide range of applicability to other communities and

cities. They cover population sizes ranging from 100,000 to 400,000, a broad range of demographic characteristics and variance in terms of existing nonmotorized networks.

Of the four communities, Minneapolis, Minnesota, and Sheboygan County, Wisconsin, have winter climates closest to those of most of southern Canada. However, it is certainly possible that even the projects in the warmer climates of Columbia, Missouri, and Marin County, California, can generate planning, education or infrastructure findings that can be adapted to improve nonmotorized transportation in Canada.

Columbia, Missouri

Columbia is a university and professional centre located in the central part of Missouri between

Kansas City and St. Louis. With a population of less than 100,000 residents, it is the smallest of the four pilot communities. The median age in this community is the youngest of all four pilots, around 27 years old.

Like the other three pilot communities, more than 85 percent of the city's 45,000-person workforce commutes by vehicle (either alone or in carpools). However, of the four pilots, Columbia has the highest share of workers who commute by walking (7 %). Columbia's existing network of trails, well-organized bicycle and pedestrian advocacy group, and dense downtown make the city a good candidate for innovative nonmotorized infrastructure and educational activities.

Columbia, Missouri Characteristics

Geographic Area	53.0 square miles
Population	84,531
Persons per square mile	1,590
Enrolled in college or grad school	26.2%
Population 25 and older	55%
Residents with high school education	17.8%
Residents with college education	30.8%
Number of households	33,819
Median household income (2006 US\$)	\$63,273
Average commute time (minutes)	15
Number of public transit buses	24
Off-road lanes or pathways (miles)	25
Marked or striped bike lanes (miles)	28
Sidewalks (miles)	350
Roads with sidewalks on at least one side	61%

Share of total person trips by mode and average daily mileage per person by mode (baseline)

Auto			Walk		Bicycle		Transit	
Vehicle %	Rideshare %	Average Miles	%	Average Miles	%	Average Miles	%	Average Miles
86	2.2	15.1	8.6	0.30	1.5	0.10	2.2	0.21

Columbia's desired outcome of implementing the NTPP program is to spark behaviour change. The infrastructure aspects of the project will complement promotion and educational programming to motivate individuals to move from automobile use to walking and bicycling for recreation, and then to walking and bicycling for utilitarian travel, enhancing skills and competency in the process.

Marin County, California

Marin County, in the San Francisco Bay Area, is the second largest pilot in terms of land area. Approximately three-fourths of Marin's 126,000-person workforce commutes by car, van, or carpool. The County boasts many miles of bicycle lanes, multi-use trails, and signed routes and benefits from a temperate climate, making it possible for residents to bike or walk year-round.

Marin County Characteristics

Geographic Area	121.4 square miles
Population	233,132
Persons per square mile	1,920
Enrolled in college or grad school	5.9%
Population 25 and older	78.8%
Residents with high school education	12.4%
Residents with college education	37.0%
Number of households	100,736
Median household income (2006 US\$)	\$86,268
Average commute time (minutes)	32
Number of public transit buses	26
Off-road lanes or pathways (miles)	33.7
Marked or striped bike lanes (miles)	35.8
Sidewalks (miles)	unavailable
Roads with sidewalks on at least one side	unavailable

Share of total person trips by mode and average daily mileage per person by mode (baseline)

Auto			Walk		Bicycle		Transit	
Vehicle %	Rideshare %	Average Miles	%	Average Miles	%	Average Miles	%	Average Miles
82	1.4	23.6	11.8	0.40	1.8	0.22	3.2	1.37

Marin County and its eleven incorporated communities have adopted bicycle and/or pedestrian plans that recommend new bicycle facilities and infrastructure development, along with promotion and education about bicycling and walking options. Marin County is funding NTPP projects it believes will result in shifts to nonmotorized modes of transportation, and increases in public transit. It is committed to the program's core themes: safety, health and physical activity, connections to transit and

community facilities, improved planning process and policies, and public awareness.

Minneapolis, Minnesota

The City of Minneapolis is the most densely populated of the four pilot communities. Most NTPP projects are located in Minneapolis, though projects will also be considered along corridors leading into Minneapolis in 14 adjacent urban and suburban municipalities, the metropolitan airport, and a state park. Of the

four pilot communities, Minneapolis experiences the highest share of non-vehicular

commuting, with 17 % of trips on foot and bicycle and 4% via public transit.

Minneapolis Characteristics

Geographic Area	55.0 square miles
Population	382,618
Persons per square mile	6,970
Enrolled in college or grad school	11.3%
Population 25 and older	64%
Residents with high school education	20.1%
Residents with college education	29.9%
Number of households	163,382
Median household income (2006 US\$)	\$45,952
Average commute time (minutes)	22
Number of public transit buses	84
Off-road lanes or pathways (miles)	57
Marked or striped bike lanes (miles)	38
Sidewalks (miles)	1,841
Roads with sidewalks on at least one side	91%

Share of total person trips by mode and average daily mileage per person by mode (baseline)

Auto			Walk		Bicycle		Transit	
Vehicle %	Rideshare %	Average Miles	%	Average Miles	%	Average Miles	%	Average Miles
69	2.2	20.7	17.6	0.55	2.0	0.23	9.7	2.23

The objective of the Minneapolis pilot "Bike/Walk Twin Cities" is to test how infrastructure improvements, combined with planning, public education, and promotion, can increase walking and biking, and reduce driving. More broadly, the community is focused on health and physical activity, safety, connections to transit, shifts in planning process and policy, and public awareness.

Sheboygan County, Wisconsin

Sheboygan County, Wisconsin, located on the western shores of Lake Michigan, is the largest pilot community in terms of land area. It is comprised of 15 townships, 10 villages and 3 cities - the largest of which is the City of Sheboygan, with a population of 60,000.

Sheboygan County Characteristics

Geographic Area	514.0 square miles
Population	112,646
Persons per square mile	220
Enrolled in college or grad school	4.2%
Population 25 and older	66%
Residents with high school education	39.9%
Residents with college education	19.7%
Number of households	43,595

Median household income (2006 US\$)	\$55,951
Average commute time (minutes)	17
Number of public transit buses	41
Off-road lanes or pathways (miles)	35.5
Marked or striped bike lanes (miles)	1.75
Sidewalks (miles)	414
Roads with sidewalks on at least one side	unavailable

Share of total person trips by mode and average daily mileage per person by mode (baseline)

Auto			Walk		Bicycle		Transit	
Vehicle %	Rideshare %	Average Miles	%	Average Miles	%	Average Miles	%	Average Miles
89	2.4	22.3	6.6	0.16	0.7	0.06	1.2	0.11

Program implementation in Sheboygan is motivated by the belief that a complementary set of infrastructure projects and public education projects can change attitudes and behaviours, and result in mode shift. The County's stated goals for the program center on the NTPP's themes: safety, accessibility and connections to community and public facilities, and policy shifts. Other critical themes adopted by pilot communities include health and physical activity, and raising public awareness of nonmotorized transportation.

Policy Context

The U.S. Department of Transportation, Federal Highway Administration initiated the Nonmotorized Transportation Pilot Program (NTPP) to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution. It was created in 2005 in the United States as part of a six-year transportation bill called "the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The legislation provides \$25 million in contract authority for each of the NTPP's four pilot communities:

The legislation for the pilot program requires the reporting of results to Congress through an Interim Report that was made in 2008 and a

final report in 2010. (It is likely the final report will be submitted in 2011 to allow more time for assessing results.) Outcome measures in the Final Report will include information concerning changes in: 1) vehicle and transit use; 2) rates of walking and bicycling; and 3) health and environmental measures.

The Federal Highways Administration (FHWA) and the pilot communities created a Working Group comprised of representatives from the implementing agencies in each of the communities, FHWA, the U.S. Department of Transportation's (DOT) Volpe National Transportation Systems Center, the Rails-to-Trails Conservancy (RTC), the Marin County Bicycle Coalition, and the Center for Disease Control and Prevention. Working Group members from each community provide technical support, manage NTPP funds, and guide implementation of projects. Within each community, staff members and advisory groups work together to update planning documents, develop and apply project selection criteria, and build a framework for carrying out infrastructure and non-infrastructure projects. The Working Group established a phased implementation plan as follows:

Phase 1 – Develop a baseline, community-wide, travel behaviour survey and implement it in

each community prior to project implementation to:

- Measure changes in motor vehicle, nonmotorized transportation, and public transportation use in the pilot communities and assess how such changes decrease congestion and energy usage, increase the frequency of bicycling and walking, and promote better health and a cleaner environment.
- Develop a profile of behaviour and attitudes in the individual communities that can use for planning walking and cycling infrastructure.

Phase 2 – Collect “before” and “after” data for at least five infrastructure projects and the educational projects in each pilot community to identify increases in bicycling and walking, along with related safety, environmental, and health benefits.

Phase 3 – Repeat the same community-wide travel behaviour survey implemented in Phase 1.

Phase 4 – Synthesize and analyze the data collected and determine results for a final report to Congress in 2010.

Columbia, Missouri

City Council's NTPP Committee receives advice from the “PedNet” Citizens Advisory Committee, representing a cross-section of stakeholders, including bicycle and pedestrian advocates, transportation decision-makers, and community activists. There are three subcommittees (Outreach and Programming; Roadways and Sidewalks; and Trails). In addition to producing two planning documents to generate ideas for infrastructure and educational programs and projects, the PedNet Project has incorporated program evaluation into its management approach. While the city

will take part in the larger, four-community NTPP evaluation activities, it has opted to lead its own manual and automated counts of users on bicycle and pedestrian facilities.

Marin County, California

The NTPP in Marin County is branded as “Walk Bike Marin” and is directed by an appointed 19-member Advisory Committee comprised of transportation, business, and health professionals, bicycle and pedestrian advocates, public works and planning staff, senior and disabled advocates, education and environmental advocates, a city manager, and others.

Minneapolis, Minnesota

In Minneapolis, the NTPP is administered by Transit for Livable Communities (TLC), a non-profit and non-partisan organization dedicated to realizing a balanced transportation system that encourages transit, walking, biking, and transit-oriented development. It works closely with public-sector partners, including FHWA, the Minnesota Department of Transportation, the City of Minneapolis, and the Metropolitan Council. The TLC Board has established a 26-member Bike-Walk Advisory Committee comprised of representatives from neighborhood organizations, non-profits, businesses, public officials, citizen activists, and agency partners to advise it on implementation of the program.

Sheboygan County, Wisconsin

Sheboygan County designated the Joint Committee on Resources and Transportation to oversee the NTPP. In addition, the County hired two full-time employees and dedicated an additional staff person at 30% time to administer the grant for the County. The Committee appointed a Citizens Advisory and Technical Committee (CATC) comprised of 30 members from a variety of backgrounds and interests including transportation, education, health care, local businesses, chambers of commerce/tourism, local units of government,

bicycle enthusiasts, and the general public. CATC members and staff review project applications, and the CATC makes project funding recommendations to the committee.

Rationale and Objectives

The pilot program is intended to demonstrate that focused community investments in active transportation infrastructure, supported by public awareness programs, can increase the share of trips taken by cycling or walking. The desired outcomes are to decrease congestion and improve the health and environment of communities by providing new choices to people for everyday travel decisions. The pilot communities will also study how these investments will impact traffic congestion, energy use, health, and the environment.

Baseline Monitoring

A baseline survey was executed in fall 2006 to gauge demographic, economic and travel behaviour in relation to age, income, education, commuting distances, race, and household characteristics (own/rent, number of cars etc.). The survey was designed to provide baseline data against which the frequencies, distances, purposes, attitudes, and barriers to walking and cycling could be compared at the end of the pilot program. The baseline survey results were contained in the Interim Report² submitted to Congress in January 2008.

Mid-Project Results (as of April 2009)

Each of the four pilot areas has activities and projects suited to its needs and comprise the following elements:

- **Planning:** new planning studies and data collection funded through NTPP, pre-existing local and regional bicycle, and pedestrian and multimodal transportation plans.

- **Infrastructure (off-street):** signage, multi-use paths, pedestrian overpass, bicycle rental stations, bicycle racks, shelters, and lockers.
- **Infrastructure (on-street):** sidewalks, bike lanes, sharrows, markings, bike boulevards, traffic signals, intersection reconstruction, traffic calming, bike racks on buses, and trail connections.
- **Education, Outreach and Marketing:** personal travel planning, booths at community events, safety campaigns, street skills or repair classes, walking maps, bike/walk to work events, school coordination, law enforcement training, police presence and speed signs, workshops evaluating the bike or walk “friendliness” of communities, guaranteed ride home programs, and bicycle incentive programs.

Columbia, Missouri

Planning: In 2007, planning effort resulted in the formulation of an Infrastructure Plan and a Promotion/Education plan. From the Infrastructure Plan, City Council established 15 priority projects.

Design: Detailed design is progressing on priority projects. Nine sidewalk improvement and eight trail extension projects are in the design stage.

Construction and Implementation:

Infrastructure projects underway or ready for tender include bicycle boulevards, intersection improvements at six locations, and connector improvements at five locations. The first major construction project - \$1.2 million of intersection work – is progressing. On-street striping is well underway, with 26.5 miles of streets now having bike lanes or shared lane markings. The design of an additional 69 miles of on-street bikeways is underway, with 90% planned completion in 2009. An additional 460 bike parking spaces added in 2008. An

innovative cost share program has resulted in business installing 39 racks for public use.

Promotion and Education: This program area is receiving 15% of the funding and has been ongoing for 15 months. Four stages are being implemented:

1. *Awareness:* The Awareness campaign was a multi-media approach to marketing the program to residents.
2. *Understanding* (motivation and education) is promoted through the *Get About Columbia* web site as well as through multi-media marketing, maps and publicity, and is ongoing.
3. *Try It!:* Numerous events, loaner bike programs, *Personal Travel Planning*, and recreational rides comprise the Try It! aspect of the initiative.
4. *Encouraging Walking and Bicycling* is accomplished thru a very successful and nationally recognized Walking School Bus program as well as classes and workshops.

The project website (<http://www.getaboutcolumbia.com/>) has a number of walking and biking tips for making these activities easier and safer.

Interim Measuring: Interim measures were made of pedestrian and bicyclist counts at eight locations that provide an annual snapshot of changes in walking and bicycling in the community. The locations were dispersed throughout the community and six of the locations were chosen for their proximity to future NTPP project sites.

The preliminary results show that, as infrastructure and education activities began to take effect, the changes between 2007 and 2008 were as follows:

- Weekdays: 34% increase in pedestrians, 108% increase in bicyclists

- Weekends: 11% decrease in pedestrians, 34% decrease in bicyclists

Marin County, California

Construction and Implementation:

Intersection or roadway improvements have been initiated at 22 locations. Two projects, the County Health and Wellness Center Access Improvements and Medway Road improvements have been completed. The Cal Park Tunnel, a rail-with-trail tunnel reconstruction project is now under construction as well as the Puerto Suello Hill pathway, which is a component of a freeway construction project. The remaining infrastructure projects are in various stages of design, with most expected to be out to bid in summer 2009 and construction completion scheduled for the end of 2009. With a few exceptions, all major gap closure projects are on track to be completed by the end of this year to enable sufficient time to educate the public about the facilities and build usage in time for the survey to be conducted in late 2010.

Education and Outreach: The largest education program, *Way to Go*, which is a personal travel planning program, was introduced in Sausalito in 2008 with favourable results. The program is being deployed in two other communities in 2009. Other programs, such as bike repair courses, safety campaigns, and riding with youth workshops are under way. The following events took place in summer 2009:

- Free bicycle repair classes
- Free *Riding with Youth* workshops to improve bicycling skills of children
- *Share the Path* events that include educational and safety literature and free water, energy bars, and flat tire repair patch kits.
- Free *Street Skills* course for bicyclists
- Share the Road Checkpoints that provide safety information to both motorists and cyclists.

Interim Measuring: Interim measures were made of pedestrian and bicyclist counts at 20 locations. The locations were dispersed throughout the community and six of the locations were chosen for their proximity to future NTPP project sites.

The preliminary results show that, as infrastructure and education activities began to take effect, the changes between 2007 and 2008 were as follows:

- Weekdays: 8% decrease in pedestrians, 17% increase in bicyclists
- Weekends: 10% decrease in pedestrians, 21% increase in bicyclists

Minneapolis, Minnesota

Planning: From a list of dozens of worthy projects, up to ten will be selected based on mode shift potential and ability to meet the NTPP timeline as well as demonstrated community benefit, ability to address cultural and economic gaps, cost effectiveness, ability to foster community ownership, and incorporation of innovation and best practices. Design innovations and enhancements may include bike boxes, 4-to-3 lane conversions, bicycle boulevards, median islands, leading pedestrian intervals, crosswalk sidewalk enhancements, green waves for pedestrians, and a possible cycle track. A connection between Minneapolis and southern suburbs will greatly increase the region's connectivity. There will be significant attention to pedestrian investments with remaining NTPP funds.

Design: Infrastructure design work is continuing on projects including a bike sharing program, employer and community-based bicycle stations, bicycle parking areas, wayfinding projects, and free bike distribution programs.

Construction and Implementation: Many infrastructure improvements are underway. A City website

(<http://www.ci.minneapolis.mn.us/bicycles/ntp-home.asp>) includes an interactive map that provides details for each project.

Promotion: A highlight of 2009 was the launch of the *Bike Walk Ambassador Program*. This grassroots education and outreach program, with the goals of increasing biking and walking and decreasing driving, has been presented at numerous large city and regional events as well as hundreds of smaller sessions. There is a strong youth component, working especially with *Safe Routes to School*. Other campaigns with employers and faith communities are part of strategic outreach across the NTPP area. The Ambassadors sponsored several safety trainings, resulting in an increase of over 300% of League Certified Instructors; these 24 new instructors will go on to conduct many safety trainings across the NTPP area.

Education: Working with several partners, *Bike Walk Twin Cities* is developing an online mapping tool that jurisdictions can use for more integrated planning of bicycle facilities. A monthly electronic newsletter for all stakeholders was launched in January 2009. Means of enabling jurisdictions to conduct more effective public participation in project development are being explored. Conversations about enforcement and awareness campaigns in 2009 and 2010 have begun.

Interim Measuring: Bike Walk Twin Cities conducts annual bicycle and pedestrian counts, and will begin monthly counts on a smaller scale. These data provide critical benchmarks and tracking not only for the NTPP program, but also for effectiveness across the region in funding, safety, and planning considerations. The measurement program will be an important legacy of the pilot. Interim counts were made for bicyclists at 17 locations and for pedestrians at 16 locations. The locations were dispersed throughout the community and eleven were

chosen for their proximity to future NTPP project sites.

The preliminary results show the following changes from 2007 to 2008 as infrastructure and education activities began to take effect:

- 6% increase in pedestrians
- 29% increase in bicyclists

Sheboygan County, Wisconsin

Planning: The County now has completed its *Comprehensive Pedestrian and Bicycle Plan* ([http://www.co.sheboygan.wi.us/html/d_planning_nonmotorized_comp_plan .htm](http://www.co.sheboygan.wi.us/html/d_planning_nonmotorized_comp_plan.htm)). Projects being considered for funding are a rail-trail conversion, multi-use paths along high-speed arterials, and bicycle lanes on busy collector streets in the city of Sheboygan. Thirteen of the County's fifteen urbanized areas have received funding and in doing so, passed resolutions supporting the respective project(s) and signed maintenance agreements to ensure long-term accessibility and use.

Implementation and Construction: 62 infrastructure improvement projects are underway or approved and several have been completed. Contracts have been awarded for: a bicycle parking program, bicycle racks on buses, bicycle lane striping, shoulder paving for bicycle lanes on important county roads and bicycle lane markings in urban areas. A new project in the City of Sheboygan Falls includes all these project types and, when finished, will provide complete network connectivity for bicycles and pedestrians throughout the community.

Education: In 2009, Sheboygan County residents, employers, and employees participated in their first-ever *Bike and Walk to*

Work Week. Many of the area's large and small employers took part. One employer of roughly 450 local people saw over 15% of its local workforce pledge to participate. Two of the area's largest employers, each with thousands of employees, had formal competitions to promote the week. And employees from the three largest public employers, the County of Sheboygan, the City of Sheboygan, and the Sheboygan Area School District sponsored a competition for most miles walked and biked.

The Sheboygan County NTPP has hosted two *Walk to School Day* events each year. The spring 2008 event realized a 50% increase in participants over the fall 2007 event and a 500% increase over the Spring 2007 event. The day of the event, one school averaged twenty cars in the staff lot compared to the typical day of fifty-five, a 65% reduction. Kohler School District, in the fall 2007, required staff that drove to park in a lot a half mile away from campus, forcing them to walk part of their trip to work.

In the last two years over forty presentations detailing Sheboygan County's NTPP have been made to area employers, several of whom have started promoting biking and walking on their own. Local community organizations such as Rotary and the Kiwanis have also embraced the NTPP and presentations were made to twenty of these groups in the last two years.

A guaranteed ride home program has been established to help walkers, cyclists and car poolers return home in the event of an emergency. Programs have been developed to encourage safe commuting to school and work.

Interim Measuring: No interim results are available at this time.

Lessons Learned

The Nonmotorized Transportation Pilot Program is an example of the establishment of community committees to administer a national program. It is supported by baseline monitoring and measuring to enable assessment of the program components. For this reason, the governance, planning, monitoring, implementation and education components and preliminary results of the program are worthwhile for Canadian planners to be aware of and track. Interim measures are indicating that early improvements and education are already beginning to increase travel by walking and cycling.

Next Steps

Although the final report is not expected until fall 2011, some interim results are being reported (see Mid-Project Results). It is expected that, as infrastructure improvements come into service and education activities reach more employers and individuals, interim results will show increasing improvement compared to the 2006 baseline monitoring.

References

1. U.S. Department of Transportation, Federal Highway Administration
<http://www.fhwa.dot.gov/environment/bikeped/ntpp.htm>
2. Interim Report to the U.S. Congress on the Nonmotorized Transportation Pilot Program
<http://www.fhwa.dot.gov/environment/bikeped/ntpp/index.htm>
3. Smart Mobility
<http://www.smartmobility.us>
4. Smart Mobility resources and reports
http://www.smartmobility.us/index.php?option=com_docman&Itemid=26
5. University of Minnesota survey data:
<http://www.cts.umn.edu/Research/ProjectDetail.html?id=2007026>

6. Program Updates and Factsheets:
<http://www.fhwa.dot.gov/environment/bikeped/ntpp.htm>