The National Bicycling and Walking Study:
15–Year Status Report

May 2010

U.S. Department of Transportation
Federal Highway Administration

Pedestrian and Bicycle Information Center

NATIONAL BICYCLING AND WALKING STUDY

15–YEAR STATUS REPORT

This report is about expanding options for personal transportation. In particular, it is about making the changes needed in America's transportation system to encourage greater use of human-powered travel modes. It is about two of the oldest and simplest—and in many ways most intelligent—means of transportation available. It is about bicycling and walking.

—National Bicycling and Walking Study, 1994

Summary

This report is the third status update to the National Bicycling and Walking Study, originally published in 1994 as an assessment of bicycling and walking as transportation modes in the United States. Following the 5-year status report (1999) and 10-year status report (2004), the 15-year update measures the progress made toward the original goals of lowering the number of fatalities while increasing the percentage of trips made by bicycling and walking. Injury and fatality statistics are presented to measure this progress, as well as results from surveys related to travel habits. The 15-year report, unlike its two predecessors, examines a range of efforts to increase bicycling and walking in the United States. Programs at the Federal, State, and local levels are included, as well as case studies on best practices. Finally, the report makes recommendations for research, policy, and other measures that can be taken to meet the goals of the original study.

Background

In 1990, bicycling and walking were described as "the forgotten modes" of transportation by the Federal Highway Administration (FHWA). These nonmotorized options had been overlooked by many Federal, State, and local agencies for years, even as others acknowledged their importance. Sources of funding were limited, with $6 million in federal funds spent on pedestrian and bicycle projects in 1990. Fewer than 4.4 percent of commuting trips in 1990 were made by bicycling and walking, down from 6.7 percent in 1980[1]. Though these modes comprised only a small share of trips, bicycle and pedestrian crashes accounted for more than 15 percent of traffic fatalities (4 and 11 percent, respectively).

Recognizing the decline in walking and bicycling, and the rise in fatalities, the US Department of Transportation (USDOT) adopted the first national transportation policy in 1994 to "increase use of bicycling, and encourage planners and engineers to accommodate bicycle and pedestrian needs in designing transportation facilities for urban and suburban areas, and increase pedestrian safety through public information and improved crosswalk design, signaling, school crossings, and sidewalks." These priorities represented a significant shift in the attention given to bicycling and walking.

Benefits of Bicycling and Walking

The reasoning behind this new support for bicycling and walking was based on the numerous benefits associated with these modes. Officials recognized the following benefits and sought to use bicycling and walking to reach environmental, health, and transportation goals. These benefits are as important now as they were fifteen years ago.

Health Benefits

The health benefits of regular physical activity are far-reaching: reduced risk of coronary heart disease, stroke, diabetes, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages. Even small increases in light to moderate activity, such as daily bike rides or 30-minute walks, can produce measurable benefits among those who are least active.

Transportation Benefits

Many trips are less than three miles in length, yet 72 percent of these short trips are made in vehicles. Bicyclists and walkers can often bypass congestion and gridlock traffic, and in some instances may even arrive at their destinations faster than if they had driven a car. Accommodating bicyclists and pedestrians also ensures that individuals have transportation choices aside from driving.

Environmental/Energy Benefits

In 2007, the transportation sector accounted for nearly 30 percent of all energy consumed in the US, according to the Department of Energy. Transportation is also responsible for nearly one third of carbon dioxide emissions, and 80 percent of carbon monoxide emissions. Replacing short trips with walking or bicycling can help reduce this level of energy consumption, while also decreasing emissions from cold starts caused by short car trips.

Economic Benefits

The cost of owning and operating a car, currently estimated at $9,055 per year[2], can account for almost 18 percent of a typical household's income. Compare that with the $120 yearly operating cost of owning a bicycle[3], or essentially free travel by foot, and it is clear that walking and bicycling can provide options for those who would like to save money. Many communities are even using bicycle and walking facilities to revitalize businesses and bring new economic life to downtown areas.

Quality of Life Benefits

Numerous intangible benefits are associated with bicycling and walking. Providing more travel options can increase a sense of independence in seniors, young people, and others who cannot or choose not to drive. Increased levels of bicycling and walking can have a great impact on an area's sense of livability by creating safe and friendly places for people to live and work.

1. The National Bicycling and Walking Study—Transportation Choices for a Changing America. 1994. Federal Highway Administration. FHWA-PD-94-023. www.walkinginfo.org/library/details.cfm?id=4311
2. Your Driving Costs 2009. AAA Exchange. www.aaaexchange.com/Assets/Files/200948913570.DrivingCosts2009.pdf
3. League of American Bicyclists. www.bikeleague.org

Objectives of the Original Study

In order to gain an understanding of how USDOT would increase bicycling and walking trips while also improving safety, Congress appropriated $1 million in 1991 to complete the National Bicycling and Walking Study. The legislation outlined five specific tasks:

1. Determine current levels of bicycling and walking and identify reasons why they are not better used as a means of transportation;
2. Develop a plan for increased use and enhanced safety of these modes and identify the resources necessary to implement and achieve this plan;
3. Determine the full costs and benefits of promoting bicycling and walking in urban and suburban areas;
4. Review and evaluate the success of promotion programs around the world to determine their applicability to the role required of the USDOT to implement a successful program; and
5. Develop an action plan, including timetable and budget, for implementation of such Federal transportation policy.

Over the next three years, a comprehensive examination of bicycling and walking was conducted. Using census data and traffic safety figures, a snapshot of these nonmotorized modes was developed. A series of 24 case studies explored best practices in bicycle and pedestrian engineering, planning, and promotion. The studies also highlighted information gaps, identified common obstacles and challenges to improving conditions for the nonmotorized traveler, and suggested possible activities and a leadership role for the USDOT.

In 1994, the Federal Highway Administrator and National Highway Traffic Safety Administrator (NHTSA) walked the final report of the National Bicycling and Walking Study to the US Congress. The Study set two overall goals:

- Double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips; and
- Simultaneously reduce the number of bicyclists and pedestrians killed or injured in traffic crashes by 10 percent.

The purpose of this report is to document what progress has been made with respect to these goals since the original report was released. Additionally, this report will outline Federal, State, and local programs that are promoting bicycling and walking travel and safety within transportation systems across the United States.

Assessing National Trends in Bicycling and Walking

Since the publication of the National Bicycling and Walking Study, there has been measurable progress in improving conditions for bicycling and walking. Far from being "forgotten," bicycling and walking have received a growing amount of attention and funding. There have also been decreases in fatalities, coupled with some evidence of an increase in the overall number of trips taken by bike or foot.

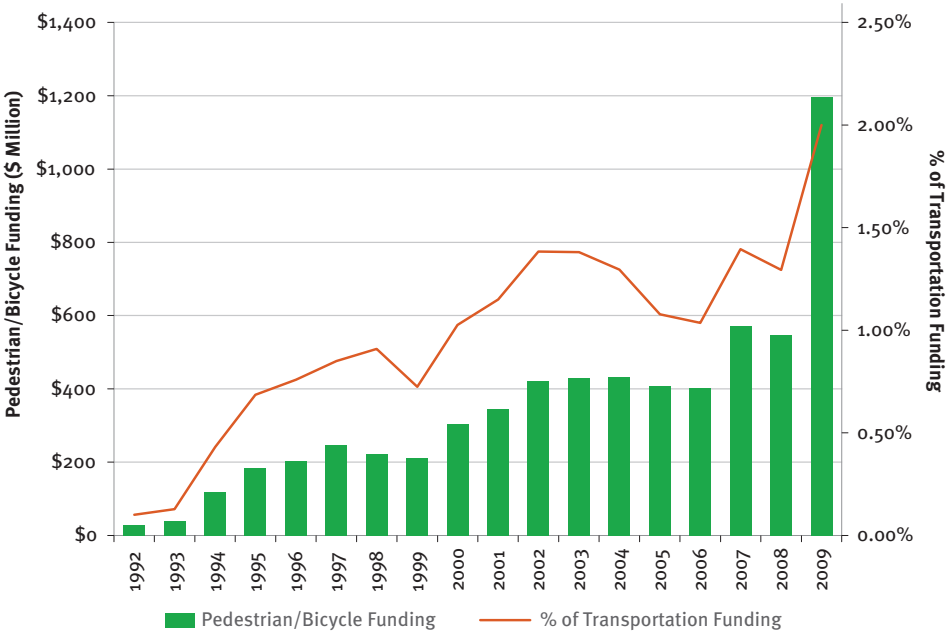
FUNDING

The National Bicycling and Walking Study was commissioned by Congress through the Department of Transportation and Related Agencies Appropriations Act in 1991. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 also authorized billions of dollars of transportation funds. These funds could be used for a range of transportation projects, including bicycling and walking improvements. Several programs were set up to supply this funding, including the following:

- Surface Transportation Program (STP), including Transportation Enhancement Activities and Highway Safety funds;
- Congestion Mitigation and Air Quality (CMAQ) Improvement Program;
- National Highway System funds; and
- Federal Lands Highway Program funds.

As a result of this legislation, Federal-aid spending on pedestrian and bicycle improvements increased from $6 million in 1990 to over $238 million in 1997. About three-fourths of this funding came from the Transportation Enhancements (TE) Activities. In 1998, Congress passed the Transportation Equity Act for the 21st Century (TEA-21), a reauthorization of the ISTEA legislation. Covering the period of 1999 through 2004, TEA-21 brought about another increase in pedestrian and bicycle funding. Federal spending on these modes increased from $204 million in 1999 to over $427 million in 2004, with about two-thirds from TE Activities. The TEA-21 legislation also established sustained funding for the Recreational Trails Program, which provides funding to the States to develop and maintain recreational trails.

Federal Pedestrian and Bicycle Funding, 1992–2009



The next reauthorization of Federal transportation legislation came in 2005 with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Intended to cover the period of 2005 to 2009, SAFETEA-LU again increased funding for pedestrian and bicycle program improvements. Though funding obligations declined slightly in its first year, obligations for fiscal year 2009 were nearly $1.2 billion. This sudden increase in funding was due in part to the 2009 American Recovery and Reinvestment Act (ARRA), which added more than $400 million in supplemental funds for bicycle and pedestrian projects and programs.[4] (FY 2009 bicycle and pedestrian obligations would have reached an all-time high of $783 million without the ARRA funds. The TE Activities provided about 37 percent of the non-ARRA funds for pedestrian and bicycle projects, as increasingly larger shares have come from a wider variety of Federal-aid funding sources.)

SAFETEA-LU also set up two new programs intended to support nonmotorized transportation: the Safe Routes to School Program and the Nonmotorized Transportation Pilot Program. Both programs sought to address growing needs within the bicycle and pedestrian communities and are covered later in this report.

Though the increase in funding between 1992 and 2009 has been substantial, pedestrian and bicycle obligations still account for only a small percentage of the overall Federal transportation budget. In 2009, about 2.0 percent of Federal-aid surface transportation funds were used for pedestrian and bicycle programs and projects. However, those two modes are estimated to account for almost 12 percent of all trips and represent more than 13 percent of all traffic fatalities.

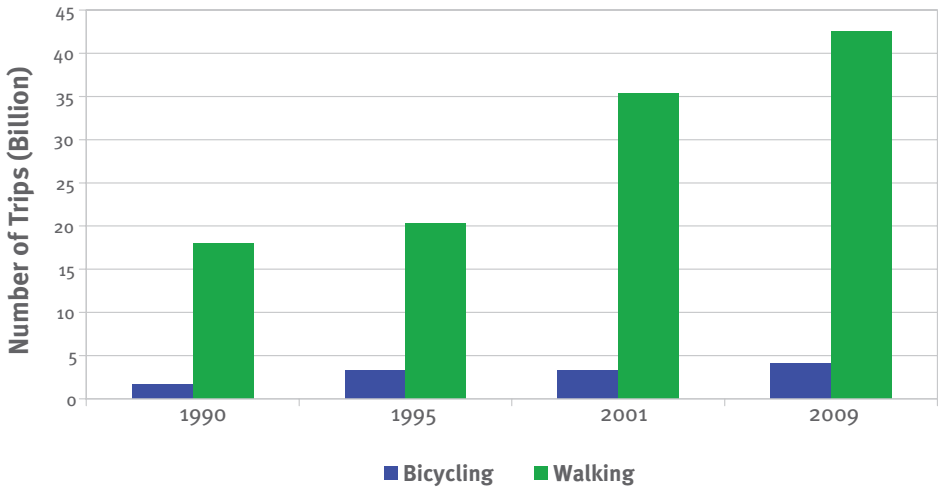
4. Federal-Aid Highway Program Funding for Pedestrian and Bicycle Facilities and Programs: FY 1992 to 2009. Federal Highway Administration (FHWA). www.fhwa.dot.gov/environment/bikeped/bipedfund.htm

MODE SHARE

The first overall goal of the National Bicycling and Walking Study was to double the percentage of trips made by bicycling and walking. At the time of the original study's publication, results from the 1990 Nationwide Personal Transportation Survey (NPTS) showed that only 7.9 percent of all reported trips were taken by foot (7.2 percent) or bike (0.7 percent). Thus, the goal was set to reach the point where 15.8 percent of all reported trips were taken by at least one of these two modes.

According to the 2009 National Household Travel Survey (NHTS), walking trips accounted for 10.9 percent of all trips reported, while one percent of all trips reported were taken by bike. Together, the two modes account for 11.9 percent of all reported trips. While those percentages do not meet the National goal, they do reflect some progress toward meeting it. Both reported bicycling and walking trips have increased by 25 percent since the 2001 NHTS. The number of reported walking trips has more than doubled since the first survey, from 18 billion in 1990 to 42.5 billion in 2009. Bicycling trips saw a similar increase, from 1.7 billion to 4 billion reported trips during the same time period. However, due to an increase in population, and therefore an increase in the overall number of trips, the percentages of trips by walking and bicycling have not met the original goals.

Number of Trips Taken by Bicycling and Walking, 1990–2009



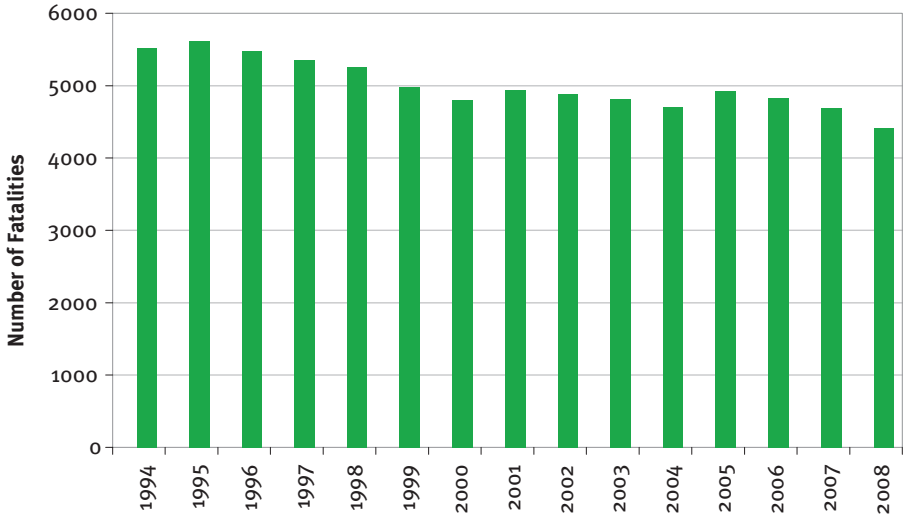
It should be noted that, though the original goal of increasing the percentage of bicycling and walking trips reported was based on the 1990 National Personal Travel Survey data, the survey methodology has changed over time. Between the 1990 and 1995 surveys, the phone interviews were replaced by individual travel logs, which could have resulted in an increase in the number of reported walking and bicycling trips. Also, some questions were added between 1995 and 2001 that may have affected the number of reported bicycling and walking trips. Clifton and Krizek, in a report prepared for the National Household Travel Survey Conference, examined the strengths and weaknesses of the data provided by the NHTS.[5] While the change in trip reporting in the 2001 NHTS included methods for accounting for non-commute and other trips that might have been obscured, there are still limitations in the methods of gathering bicycling and walking trip data.

The National Household Travel Survey included another metric for assessing how many people walk or ride a bicycle. The Survey asked people how many walking and bicycling trips they had made in the past week. According to the survey results, over 63 percent of the respondents had made at least one walking trip in the past week and almost 12 percent had ridden a bicycle in the past week. While the National Household Travel Survey is the primary data source for measuring progress made toward the goal of doubling the percentage of bicycling and walking trips, there are other surveys and studies that can provide insights into mode choice.

5. Clifton, K.J, and Krizek, K.J. (2004). The Utility of the NHTS in Understanding Bicycle and Pedestrian Travel. National Household Travel Survey Conference: Understanding Our Nation's Travel. onlinepubs.trb.org/onlinepubs/archive/conferences/nhts/Krizek.pdf.

Another survey that measures nonmotorized modes is the US Census' American Community Survey (ACS), which releases data each year. The survey includes data on the numbers of workers over the age of 16 who walk or ride a bicycle to work as their primary commuting method. Examining the data from the 2002–2008 national data set, there seems to be an upward trend in the number of commuters who walk and bicycle to work. Over this period of time, there was an increase from 2.48 to 2.82 percent in the percentage of individuals who identified themselves as walking commuters. Between 2005 and 2008 there was an increase in the percentage of people who primarily commute to work by bicycle from 0.40 to 0.55 percent (i.e., at least three times per week). This survey does exclude several key populations, however, such as those who are unemployed, under the age of 16, or older individuals who are likely retired. Each of these groups may rely more on walking as an everyday travel mode; additionally, only work trips are captured in the ACS data.

Pedestrian Fatalities, 1994-2008



Bicyclist Fatalities, 1994-2008

SAFETY

In 1993, just before the release of the National Bicycling and Walking Study, there were 5,638 pedestrians and 814 bicyclists killed in motor vehicle crashes. According to the most recent figures released by the NHTSA, these numbers have fallen over the past 15 years. There were 4,378 pedestrians[6] and 716 bicyclists[7] killed in 2008, representing decreases of 22.3 percent and 12.0 percent, respectively. Pedestrian and bicyclist fatalities as a percentage of all traffic fatalities has declined from 15.3 percent in 1995 to 13.6 percent in 2008, while the overall number of traffic fatalities has declined during the same time period (41,798 in 1995[8] and 37,261 in 2008[6]). The safety trends are not completely downward, however. Fewer bicyclists died in 2008 versus 1995, but fatalities have hovered between roughly 700 and 800 annually.

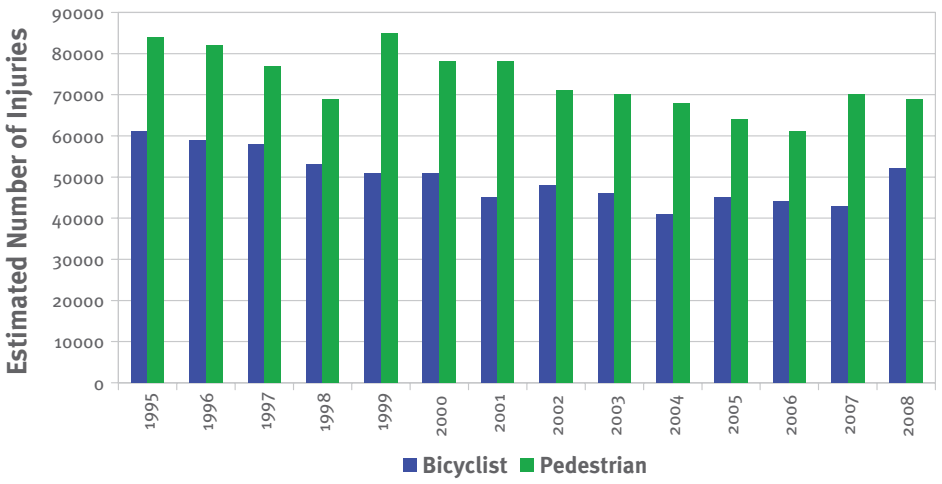
Estimates of pedestrian injuries have fallen from 84,000 in 1995 to 69,000 in 2008, representing a 17.8 percent decrease. Likewise, estimated bicyclist injuries have decreased 14.7 percent during the same time period, from 61,000 to 52,000. Bicyclist injuries did seem to increase between 2007 and 2008. This could be a result of higher gas prices, leading more people to bike, but without a reliable way to estimate exposure, it is difficult to pinpoint the cause of this spike.

It should be noted that injury numbers are only estimates, and the actual numbers may be much higher due to several factors. A landmark study by Stutts and Hunter in 1999 revealed that many pedestrian and bicyclist crashes are not captured by State data. While State crash data is mainly concerned with those crashes that involve motor vehicles on roadways, many pedestrian and bicyclist crashes occur in off-roadway locations such

as parking lots. These reporting methods fail to capture pedestrian falls due to environmental factors, especially among seniors, and miss the crashes that occur between pedestrians and bicyclists. As many as 31 percent of bicyclist injuries and 53 percent of pedestrian injuries occur in non-roadway locations, and would not be captured by State crash data[9].

More evidence of underreporting has been found by comparing hospital records with police crash reports. Studies examined in the literature review conducted by Stutts and Hunter have shown that some police reports omit pedestrian and bicyclist injuries that have resulted from crashes, whether a motor vehicle was involved or not.

Pedestrian and Bicyclist Injury Estimates, 1995-2008



6. Pedestrians. Traffic Safety Facts – 2008 Data. National Highway Traffic Safety Administration. DOT HS 811 163. www.walkinginfo.org/facts/docs/PedTSF_2008.pdf
7. Bicyclists and Other Cyclists. Traffic Safety Facts – 2008 Data. National Highway Traffic Safety Administration. DOT HS 811 156. www.bicyclinginfo.org/facts/docs/BikeTSF_2008.pdf
8. Pedestrians. Traffic Safety Facts – 1995 Data. National Highway Traffic Safety Administration. www-nrd.nhtsa.dot.gov/Pubs/95PEDESTRIAN.PDF
9. Stutts, J. & Hunter, W. (1999). Injuries to Pedestrians and Bicyclists – An Anlysis Based on Hospital Emergency Department Data. FHWA-RD-99-078. Federal Highway Administration. www.walkinginfo.org/library/details.cfm?id=2081

More recently, there have been efforts to quantify and track crashes that occur in non-roadway environments, such as driveways and other private property. The NHTSA has used the Not-in-Traffic Surveillance (NiTS) system to track these crashes. Among the findings, the analysis indicated that roughly half of 1,159 nontraffic crash fatalities and one third of the 98,000 nontraffic crash injuries in 2007 involved nonoccupants such as pedestrians and bicyclists.[10] While the data collected on nontraffic injuries and fatalities is not complete, the NiTS system does provide more accurate estimates of crashes that may not be captured through traditional data sources.

Looking at these numbers in the context of the original National Bicycling and Walking Study, it is initially apparent that the goal of decreasing pedestrian and bicyclist injuries and fatalities by 10 percent has been surpassed. The number of pedestrians and bicyclists killed has decreased from 6,414 to 5,094 since 1995, representing a 20.6 percent decline. Similarly, the 121,000 estimated pedestrian and bicyclist injuries in 2008 represents a 16.5 percent decrease from the 145,000 estimated injured in 1995.

However, there are known issues related to data accuracy and reporting methods for injury estimates. As previously discussed, injuries to pedestrians and bicyclists are not typically collected on shared use paths or parking lots. In order to accurately measure injuries, the data used must be reliable and comprehensive.

10.Not-in-Traffic Surveillance 2007 – Highlights. Traffic Safety Facts. National Highway Traffic Safety Administration. www.nhtsa.gov/DOT/NHTSA/NCSA/Content/NiTS/811085.pdf

Current Efforts to Promote Bicycling and Walking

In the 5-year[11] and 10-year[12] updates to the National Bicycling and Walking Study, there were descriptions on the progress made toward action plans set out for the Federal, State, and local levels of government. Attention was given to US Department of Transportation activities, as the original report set out to explain how the Department would make bicycling and walking a priority. This report will look broadly at some of the programs around the country that continue to support bicycling and walking as safe and viable means of transportation.

Meeting the challenging goals of increasing nonmotorized activity while also decreasing injuries and fatalities requires partnerships between agencies and organizations at all levels of government, between politicians, engineers, planners, advocates, and others. The following programs do not represent all current efforts to promote bicycling and walking, but demonstrate some of the recent and prominent activities that are paving the way for future progress toward the original study's goals.

11. National Bicycling and Walking Study Five-Year Status Report. (1999). Federal Highway Administration. www.bicyclinginfo.org/library/details.cfm?id=83

12. National Bicycling and Walking Study Ten-Year Status Report. (2004). Federal Highway Administration. www.bicyclinginfo.org/library/details.cfm?id=5

Nonmotorized Transportation Pilot Program

SAFETEA-LU authorized the Nonmotorized Transportation Pilot Program in 2005 to promote the use of bicycling and walking as viable modes of transportation in four communities. It is funded through FHWA. The legislation states that the "purpose of the program shall be 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." Each community is currently examining how investments in infrastructure and promotional efforts can result in mode shifts away from automobiles and toward bicycling and walking.

How it Works

Under the requirements laid out in the Federal legislation, four communities are required to develop, implement, and evaluate a program to increase the use of bicycling and walking as everyday modes of transportation. Each community is allocated $25 million over five years, to be used for funding everything from social marketing programs, to increased law enforcement, to walking and bicycling facility construction. Program evaluation, while not specifically funded by SAFETEA-LU, is required to document mode shift that results from investment in promotion and infrastructure. Two status reports, including the interim report submitted to Congress in January 2008, are intended to provide updates on the status of the program in each community. The final report, quantifying each community's investment and documented mode shift, will most likely be submitted in late 2011.

Pilot Communities

Capturing the diversity of geography and population densities found across the United States, the four pilot communities encompass a wide variety of geographic and demographic characteristics. Ranging from dense urban environments to rural townships, each town or county aims to make walking and bicycling safer and more convenient. The four communities are listed below, along with a link to more information about their programs:

- Columbia, Missouri — GetAbout Columbia (www.getaboutcolumbia.com/)
- Sheboygan County, Wisconsin (www.co.sheboygan.wi.us/html/d_planning_nonmotorized_project.htm)
- Marin County, California — WalkBike Marin (www.walkbikemarin.org/index.php)
- Minneapolis, Minnesota — BikeWalk Twin Cities (www.bikewalktwincities.org)

More Information

- The Nonmotorized Transportation Pilot Program (FHWA) (www.fhwa.dot.gov/environment/bikeped/ntpp.htm)
- Interim Report to Congress on the Nonmotorized Transportation Pilot Program (www.walkinginfo.org/library/details.cfm?id=4166)

Safe Routes to School

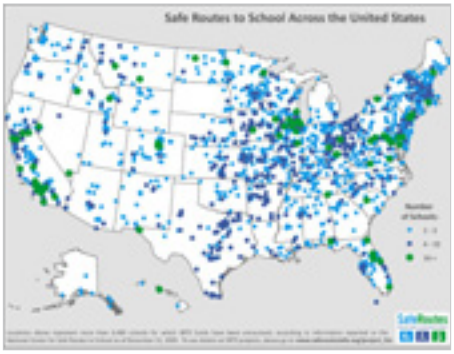
SAFETEA-LU established the Safe Routes to School Program to encourage and enable children to safely walk and bike to school. The program directs funding to State Departments of Transportation for infrastructure improvements and educational and enforcement programs that promote bicycling and walking to school and increase safety.

Background

While half of all trips to school in 1969 were taken by bike or foot, this number has rapidly decreased. According to the Travel to School section of the 2009 National Household Travel Survey, only 13 percent of all trips to school were taken by bicycling or walking. About 25 percent of morning traffic congestion is related to parents driving children to school (www.saferoutesinfo.org/task_force). With increasing health concerns related to obesity and diabetes among children, along with recognition of increased motor vehicle traffic (and associated congestion and safety risks) around schools, it was clear that a substantial effort was needed to refocus attention on these issues. The Safe Routes to School program, created as a response to these growing needs, makes it possible for communities to establish bicycling and walking as safe and viable modes for trips to school.

Funding

The Federal program was provided $612 million over the five year period covered by SAFETEA-LU to enable and encourage more children, from kindergarteners to eighth graders, to walk or ride a bicycle to school. The majority of those funds are apportioned to State DOTs, where a State Safe Routes to School coordinator oversees projects within that State. A portion of the funds were also set aside to establish the National Safe Routes to School Clearinghouse, a nonprofit organization that provides technical assistance to the State programs, as well as develops research and tools for these programs.



As of December 2009, Safe Routes to School funds have been announced for 6,489 schools across the US. Each of the locations shown on the map on the right side, courtesy of the National Center for Safe Routes to School, represents a zip code where one or more schools has been funded.

More Information

- FHWA Safe Routes to School Program (safety.fhwa.dot.gov/saferoutes/)
- National Center for Safe Routes to School (www.saferoutesinfo.org)
- Safe Routes to School: A Transportation Legacy (www.saferoutesinfo.org/task_force/)
- Safe Routes to School National Partnership (www.saferoutespartnership.org/)

Livability Initiatives

To address the growing need to provide transportation choices and integrate sustainable modes like bicycling and walking into communities around the country, the USDOT has formed an Interagency Partnership for Sustainable Communities with the US Environmental Protection Agency (EPA), and the US Department of Housing and Urban Development (HUD). Integrating transportation with environmental and housing concerns will ensure that communities are developed in such a way that maximizes mobility and accessibility, while minimizing environmental impact. This concept is the centerpiece of the USDOT's livability initiatives.

What is Livability?

According to the Interagency Partnership for Sustainable Communities, the principles of livability are intended to:

- Provide more transportation choices;
- Promote equitable, affordable housing;
- Enhance economic competitiveness;
- Support existing communities;
- Coordinate and leverage Federal policies and investment; and
- Value communities and neighborhoods.

Based on these core principles, these three agencies will work together on a variety of initiatives to promote livability and sustainability. Transportation options, including bicycling, walking, and transit, are essential components of these livability initiatives. In the words of US Secretary of Transportation Ray Lahood, "Fostering the concept of livability in transportation projects will stimulate America's neighborhoods to become safer, healthier and more vibrant."[13]

TIGER Grants

Funded through the American Recovery and Reinvestment Act (ARRA) of 2009, the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant program is intended to provide $1.5 billion to innovative transportation projects around the country. The goal of the TIGER Grant program is to not only better integrate transportation systems by providing a variety of options, but to also stimulate economic development by creating jobs in struggling communities around the country.

Of the 51 projects that received TIGER funding, 24 mention bicycle or pedestrian components, according to an analysis performed by America Bikes (www.americabikes.org/Documents/AB_B-P_TIGER_Grants.pdf). The program was overwhelmingly popular and received over 1,400 applications for a total of almost $60 billion in requests.[14]

More Information

- Interagency Partnership for Sustainable Communities (www.epa.gov/smartgrowth/partnership/index.html)
- Listing of TIGER Grant Recipients (www.dot.gov/documents/finaltigergrantinfo.pdf)

13. U.S. Transportation Secretary Announces $280 Million for Streetcars. US DOT Federal Transit Administration. www.fta.dot.gov/news/news_events_10868.html.
14. Secretary LaHood Announces Funding for Over 50 Strategic Transportation Projects through Landmark Competitive TIGER Program. www.dot.gov/affairs/2010/dot3010.htm

Complete Streets

One of the fastest-growing efforts to promote bicycling and walking is the adoption of Complete Streets policies. The overall goal of the Complete Streets effort is to provide safe and accessible design for all modes of travel, instead of focusing solely on automobiles. Pedestrian, bicycle, and transit access can have numerous benefits for a community, and Complete Streets policies offer one way for a city, region, or state to safely provide multimodal access. From 1971 through 2009, there have been 121 complete streets policies adopted by various agencies, a figure that continues to grow each month.

What are Complete Streets?

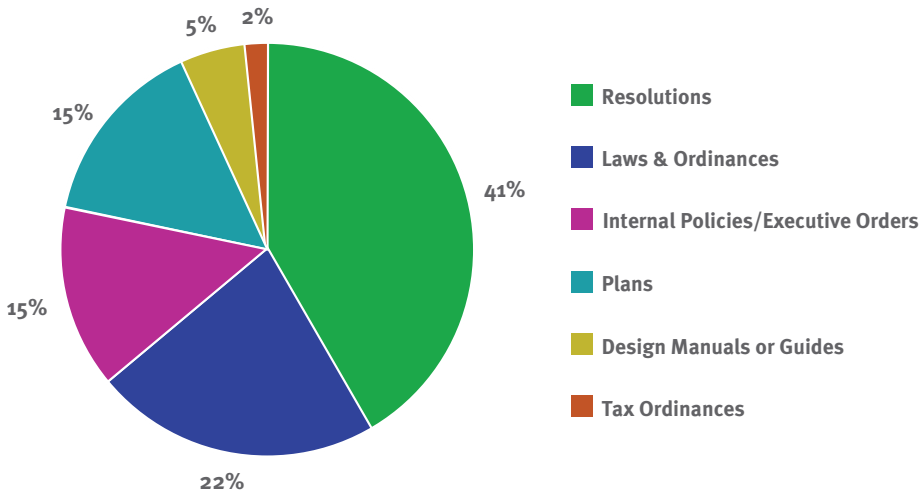
A complete street is one that provides safe and accessible options for all travel modes – foot, bike, transit, automobile – and for all ages and abilities. While many existing roadways are designed to optimize automobile travel, the complete streets movement has sought to increase the role of nonmotorized and transit options by providing continuous sidewalks, bicycle lanes, or wide shoulders. Instead of simply focusing on main streets or downtown corridors, a complete streets policy creates a safe, accessible environment throughout a transportation network. Increasing the role of the pedestrian and bicyclist in roadway design and operation standards, complete streets policies are meant to ensure that safe travel options exist for all users.

Who is Completing the Streets?

The number of complete streets policies in the United States is increasing at a rapid pace. According to the National Complete Streets Coalition, 43 jurisdictions around the country adopted their own policies in 2009. Adopted or planned policies include resolutions, tax ordinances, design manuals, plans, executive orders, and laws. The figure below shows the percentage of different types of policies that were adopted or planned through 2009. The National Complete Streets Coalition also maintains an atlas of policies around the country (www.completestreets.org/complete-streets-fundamentals/complete-streets-atlas/).

For the most recent additions to this list, and updates on communities that are pursuing their own versions of the legislation, visit www.completestreets.org.

Types of Adopted Complete Streets Policies (2009)



EXAMPLES OF COMPLETE STREETS POLICIES

California

The California Complete Streets Act of 2008 was promoted by the California Bicycle Coalition and AARP California, and is intended to make sure that individuals of all ages, abilities, and travel modes are considered in transportation design and operations. For details, visit www.calbike.org/pdfs/AB1358_Fact_Sheet.pdf.

City of Chicago

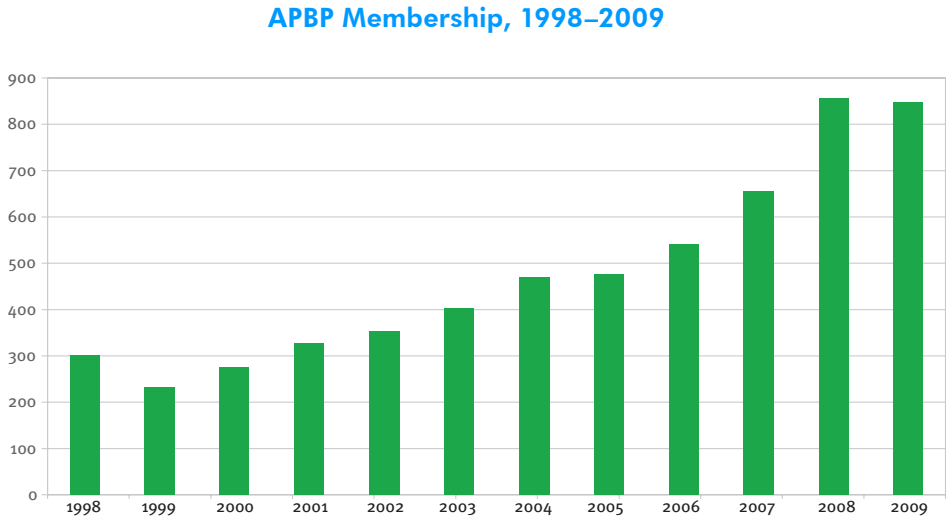
The Safe Streets for Chicago program (2007) combines complete streets goals with enforcement, infrastructure, and technology initiatives to promote safety and meet complete streets goals. More details can be found at egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/SafeStreetsforChicago_2.pdf.

More Information

- PBIC Case Study: Complete Streets Laws and Ordinances (www.walkinginfo.org/library/details.cfm?id=3968)
- National Complete Streets Coalition (www.completestreets.org/)

Pedestrian and Bicycle Professionals

One way to measure the growing commitment to the needs of pedestrians and bicyclists is to examine the professionals who study their behavior, design their environments, and advocate for their place in transportation systems. With an increasing number of pedestrians and bicyclists in the US, there have been more opportunities for professionals to expand this field.



The Association of Pedestrian and Bicycle Professionals

Since 1995, the Association of Pedestrian and Bicycle Professionals (APBP) has allowed nonmotorized transportation professionals the opportunity to network, access professional support and development, and learn about advances in research and practice. As more people have begun bicycling and walking, this group of professionals has grown considerably. While APBP only had 302 members in 1998, it grew to more than 848 in 2009.

TRAINING AND PROFESSIONAL DEVELOPMENT

To effectively integrate the needs of pedestrians and bicyclists into future designs and retrofits, it is essential that engineers, planners, and other professionals are given the tools they need. Whether they are studying in a university setting or receiving continuing education and development, individuals need to be able to receive training at a variety of levels. University programs around the country have begun to incorporate bicycle and pedestrian planning and engineering into their curricula. Several organizations offer professional training on different levels, ensuring that those who work closely with State and local officials have the information needed for decision-making, planning, and design.

University Courses

To better prepare students in these fields, many colleges and universities have increased their focus on nonmotorized modes in their planning and engineering programs. Several universities have developed courses completely devoted to pedestrian and bicycle planning and design, preparing future generations of decision-makers to meet the needs of nonmotorized travelers.

Webinars

With limited funding for travel, agencies are looking to distance learning as a way to keep up to date on pedestrian and bicycle best practices and research. To meet this demand, dozens of groups offer webinars to train these professionals. The Institute of Transportation Engineers (ITE), APBP, FHWA, and the Pedestrian and Bicycle Information Center (PBIC) are just a few examples of groups that are using these interactive web trainings to reach a wide audience of pedestrian and bicycle professionals.

Pedestrian Safety Training Courses

Since 2004, FHWA has provided training courses on pedestrian safety to communities throughout the US. Based on the guide How to Develop a Pedestrian Safety Action Plan[15], several courses were designed to address the growing need to plan for pedestrians and improve walkability. The courses were specifically intended to assist Focus Cities and Focus States — those cities and states with the highest rate and volume of pedestrian crashes — in addressing these safety concerns.

Several courses, including those developed for Focus Cities and States, are offered to communities across the country by the PBIC. Depending on their specific needs, agencies can choose from a variety of courses:

- Designing for Pedestrian Safety (2-Day)
- Developing a Pedestrian Safety Action Plan (2-Day)
- Planning and Designing for Pedestrian Safety (3-Day)
- Creating Livable Communities Through Public Involvement (1-Day)

To date, more than 140 courses have been taught to over 4,000 engineers, planners, law enforcement officers, public health professionals, advocates, and local safety officials.

More Information

- FHWA and PBIC University Course Materials (www.walkinginfo.org/training/university-courses/)
- FHWA Office of Safety Webinars (safety.fhwa.dot.gov/ped_bike/ped_focus/webinar.cfm)
- ITE Webinars and Professional Development (www.ite.org/education/clearinghouse/)
- PBIC Livable Communities Webinars (www.walkinginfo.org/webinars)
- PBIC Pedestrian Safety Training (www.walkinginfo.org/training)
- APBP Professional Development Webinars (www.apbp.org/?page=PDS)
- NHTSA Pedestrian Safety Program (www.nhtsa.gov/Pedestrians) and Bicycle Safety Program (www.nhtsa.gov/Bicycles)

15. Zegeer et al. (2008). How to Develop a Pedestrian Safety Action Plan. Federal Highway Administration, National Highway Traffic Safety Administration. www.walkinginfo.org/library/details.cfm?id=229

Lessons from Abroad

A number of countries around the world have fostered or further bolstered high rates walking and bicycling. This has been accomplished through a range of activities, from policy changes to promotional programs to innovative infrastructure treatments. The speed in which information can be shared has accelerated significantly since the National Bicycling and Walking Study was delivered to the US Congress. Transportation professionals across the country are learning from colleagues around the world about improving the safety and convenience of walking and bicycling. Two recent activities highlight the way international practices are being, or could be, adopted in the United States.

International Scan on Pedestrian and Bicyclist Safety and Mobility

In 1993, shortly before the National Study on Bicycling and Walking, FHWA conducted a study tour concerning pedestrian and bicyclist safety in the United Kingdom, Germany, and the Netherlands. This study tour identified best practices from these countries that could be implemented in the United States. In May 2009, FHWA in conjunction with the American Association of State Transportation Officials (AASHTO) conducted another International Scan to examine safety and mobility for pedestrians and bicyclists. The Scan team visited Denmark, Sweden, Germany, Switzerland, and the United Kingdom, learning valuable lessons from agencies that have given bicyclists and pedestrians a place in transportation systems. The final report from the tour, Pedestrian and Bicyclist Safety and Mobility in Europe, is available at www.walkinginfo.org/library/details.cfm?id=4504.

Cities for Cycling

In 2009, the National Association of City Transportation Officials launched the Cities for Cycling project. This project involves cities across the country, including Atlanta, Georgia; Boston, Massachusetts; Portland, Oregon; Houston, Texas; Los Angeles, California; Chicago, Illinois; Phoenix, Arizona; and Washington, D.C.; and aims to disseminate best practices in bicycling facilities. Many of these best practices, such as bicycle boxes, bicycle signals, and colored pavements have been developed or used in countries with high rates of bicycling, such as the Netherlands and Denmark.

More Information

Pedestrian and Bicyclist Safety and Mobility in Europe (www.walkinginfo.org/library/details.cfm?id=4504)

Cities for Cycling (www.nacto.org/citiesforcycling.html)

Bicycle Commuter Incentives

One method of supporting bicycling as a viable transportation mode is by creating incentives for those who choose to travel by bike. Many companies around the country have rewarded those employees who take transit or carpool to work. In recent years, there has been a push for more of these incentives by both employees and employers alike.

Businesses Promoting Bicycling

In response to the desire by both employees and customers to be able to bike to work, employers across the country have begun rewarding those who take a bicycle instead of a car. Existing programs range from reimbursing employees for every mile they take by bike, to the creation of competitions between employees to see who can ride the most miles per week. Other more obvious measures have included expanding secure bicycle parking, providing shower and locker rooms, and keeping bike maintenance equipment in the office.

Businesses can be rewarded for their efforts to accommodate bicyclists. The League of American Bicyclists, which has operated the Bicycle Friendly Community program since the mid-1990s, has more recently launched the Bicycle Friendly Business program. Any business can apply to this program: the League named 13 awards in its first round of applications. The League provides a resource page for businesses who would like to become more bicycle friendly, but do not know where to start. A listing of award winners, along with instructions for how to apply, can be found at www.bikeleague.org/programs/bicyclefriendlyamerica/bicyclefriendlybusiness/.

Bicycle Commuter Act

Leading the way for bicycle incentives on the Federal level is the Bicycle Commuter Act, which allows employers to provide a tax-free monthly reimbursement for employees who ride a bicycle to work. The benefit is limited to $20 per month; it serves as a first step toward an incentive program that can encourage employees to choose bicycling for their commutes. In 2009, the US Government Accountability Office indicated that Federal Agencies could provide this benefit to bicycle commuters, as well.

More Information

Bicycle Friendly America (www.bikeleague.org/programs/bicyclefriendlyamerica/)

Climate Action Plans

As more is learned about greenhouse gas emissions and global climate change, it has become clear that steps must be taken to mitigate this impact. Over the past several years, agencies across the country have shown their commitment to reversing these negative trends by signing on to develop climate action plans.

Outlining the ways in which a particular State or city will reduce its greenhouse gas emissions, the plans incorporate the use of different best practices, including investments in pedestrian and bicycle transportation. According to a report from the Rails to Trails Conservancy, increased investment in bicycling and walking could result in a decrease in carbon dioxide emissions from 33 to 91 million tons per year[16]. Some State and local agencies have included walking and bicycling in their Climate Change Action Plans.

State Action Plans

According to the Pew Center on Global Climate Change, there are currently 36 states that have developed, or are developing, Climate Change Action Plans. Once adopted, these plans serve as a roadmap for how reductions in greenhouse gas emissions can be implemented by all State agencies. Several of the plans, including those in Vermont, Minnesota, and Hawaii, propose increasing bicycling and walking as a way to meet these goals. Through combinations of infrastructure improvements and promotion, these States are hoping that bicycling and walking might replace trips otherwise taken by automobile, resulting in overall reductions in greenhouse gas emissions.

Local Action Plans

Playing an equally significant role in reducing carbon emissions are the cities and towns across the country that have acknowledged their impact on the environment and are committed to reversing global trends. Mayors across the country have pledged to this commitment through the US Conference of Mayors' Climate Action Agreement. To date (April 2010), more than 1,000 mayors have signed onto this agreement, representing all 50 States, the District of Columbia, and Puerto Rico, and a total of 86,652,633 residents. Like the statewide action plans, these local commitments often include specific requirements for increasing bicycling and pedestrian transportation. Programs range from increased funding for sidewalk maintenance in Boston, Massachusetts, to development requirements for bicycle facilities in Minneapolis, Minnesota. A collection of many other best practices, along with a complete list of mayors that have signed the agreement, can be found at www.usmayors.org/climateprotection/.

More Information

US Conference of Mayors Climate Protection Center (www.usmayors.org/climateprotection/)

16.Gotschi, T. and Mills, K. Active Transportation for America. Rails to Trails Conservancy. www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf

Conclusions and Recommendations

In the 15 years since the publication of the National Bicycling and Walking Study, support for bicycling and walking has increased at the local, State, and Federal levels. Many agencies have recognized the importance of active transportation in fostering livable communities, and have responded by promoting these modes through infrastructure improvements and promotional programs and policy changes.

Progress has been made toward the two national goals of increasing nonmotorized activity while also decreasing injuries and fatalities. While the percentage of bicycling and walking trips has not doubled since 1994, available data have shown that increases have occurred. Other studies have indicated that substantial increases in investment in these modes, along with more comprehensive and robust methods for data collection, will provide further support for bicycling and walking in the United States.

Though the reductions in pedestrian and bicyclist fatalities have met the goals set forth in the original study, there is always room for improvement in the area of safety. Creating environments that are safe for bicyclists and pedestrians of all abilities should continue to be a top priority. Though challenging in the short term, it is also important to improve the process for reporting and documenting pedestrian and bicyclist crashes and injuries.

In March 2010, the United States Department of Transportation reinforced the importance of this sustained commitment by issuing a Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations17. According to the Policy Statement:

> *The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.*

Support for bicycling and walking has come a long way in the years since the original study was released in 1994. The original study envisioned "a nation of travelers with new opportunities to walk or ride a bicycle as part of their everyday life." Sustained commitment to the original goals will help make this vision a reality.

17. Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations. US Department of Transportation. www.fhwa.dot.gov/environment/bikeped/policy_accom.htm