

SRTS CASE STUDY

Bozeman, Montana

Walk to School Month Supported by City and Community

EXHIBIT NO. 1

DATE 1.24.11

BILL NO. SB 177

Background

The Montana Nutrition and Physical Activity Program (MT NAPA) at Montana State University in Bozeman, in collaboration with the local Safe Routes to School (SRTS) Task Force, initiated a SRTS pilot program at the Emily Dickinson Elementary School in the hopes that the school's success would lead to the implementation of SRTS activities at all of the six elementary schools in the city.

Details

To jumpstart the program in Bozeman, MT NAPA worked with walkability consultants and helped form a local SRTS task force to work with Emily Dickinson, a kindergarten through fifth grade elementary school. The consultants performed a walkability audit and pointed out potential safety hazards to the principal. One such hazard was a road under construction that the students crossed to arrive at school. Despite the new construction resulting in a wider road, there were no plans to enhance the safety accommodations for pedestrians at the crosswalk. As a result, the principal addressed the safety issues during the public comment period at a city commission meeting, which led to the inclusion of a pedestrian refuge island in the problematic spot. The commission's responsiveness encouraged the task force to increase its SRTS efforts, and in October 2006, Emily Dickinson conducted its first Walk to School Day event.

In December 2006, the local task force, with city sponsorship, submitted a grant to the Montana Department of Transportation and received more than \$50,000 for non-infrastructure and infrastructure improvements at Emily Dickinson. On Oct. 1, 2007, the mayor of Bozeman proclaimed October as Walk to School Month, and the school board made a resolution in support of the Bozeman SRTS effort. Prior to the actual Walk to School Day event on Oct. 3, nearly 400 students and parents attended the Walk to School Day pre-party at Emily Dickinson, where a healthy meal was served and stations were set up for children to learn pedestrian safety lessons and for parents to sign up to volunteer for the walking school buses. A band played songs about walking, a local bicycle shop raffled off one of its bicycles, and the state's SRTS coordinator came to discuss the grant program. The party excited the children for Walk to School Day, in which hundreds of students and parents lined up to form a special walking school bus led by their school mascot, a dog named Carlo.

Other aspects of the Emily Dickinson SRTS program include walking school buses and bike trains, bicycle and pedestrian safety programs, the installation of speed trailers around the school to help the enforcement programs, a SRTS handbook to explain the program to parents, new bicycle racks, a change in the pick-up and drop-off procedure to increase safety and pre and post evaluations to determine if the SRTS program has led to an increase in students walking and bicycling.

Subsequently, MT NAPA members presented during the public comment session at a city commission meeting and suggested to the commission the inclusion in their annual budget of funds to conduct a SRTS assessment of the entire school district to help prioritize projects. The commission voted five to zero to allocate \$20,000 of city funds to hire a consulting firm experienced in SRTS projects to conduct this assessment. In a show of support, the city bicycle board allocated nearly \$10,000 in additional funding to augment this effort. Other fund raising efforts are being conducted in the community to support the project.

Walk to School Month Supported by City and Community

In the future, the SRTS task force, the city and the school district plan to use this baseline data to prioritize SRTS projects and secure additional funding for infrastructure and non-infrastructure projects at the six elementary schools, two middle schools and at the one elementary school slated to be built in the near future.

Results

On Nov. 1, 2007, a SRTS community workshop was held to kick-off the new SRTS projects and to educate principals, teachers, parents and the public as to the project's importance. The workshop provided an opportunity for attendees to comment on safety issues at the various elementary schools and recruited volunteers to perform the walking audits. To date, walking audits have been conducted at all six elementary schools and city and school officials have been informed of suggested revisions to the plans for the new school. Future plans to complete this phase of the city-funded project include school improvement plans for four elementary schools as well as SRTS maps delineating suggested routes. The remaining school improvement plans and maps will be finished as funding is secured.

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For more resources and information on Safe Routes to School, please visit the National Center for Safe Routes to School Web site at www.saferoutesinfo.org.

SRTS CASE STUDY:

Billings, Montana

Go Play in Billings, Montana

SafeRoutes

National Center for Safe Routes to School



GO PLAY

Introduction

“Go Play” has new meaning in Billings, Montana. In 2004, the city with a population of 100,000 and with 23 elementary schools had been designated the least safe city for pedestrians in Montana by the Mean Streets Surface Transportation Policy Project.

In September 2008, Billings received bronze level status as a bicycle-friendly city from the American League of Bicyclists, thanks to its “Go Play” community awareness campaign to encourage children and their families to walk and bicycle safely to schools.

Community health advocate and parent Kathy Aragon said that Billings is fortunate because many students live close enough to walk and bicycle to school, and some neighborhoods have nearby bike paths and trails that provide direct routes to school without crossing major roadways. The “Go Play Billings Trails” program seeks to build upon that strength.

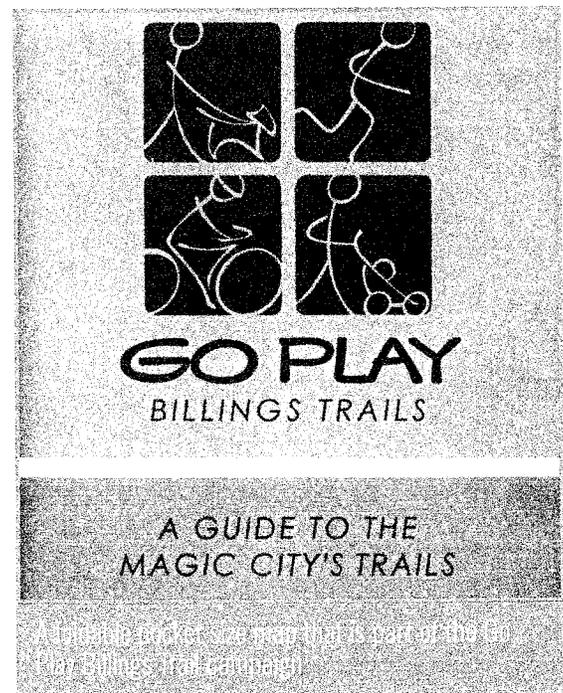
“It’s all about community awareness,” Aragon said. “We have an enormous amount of collaboration.”

Before all the pieces of the program came together, the Yellowstone City-County Health Department surveyed all the elementary schools using the SRTS Parent and Caregiver Survey on Walking and Bicycling to measure attitudes and barriers affecting walking and bicycling to school. Results indicated 804 of the 2,633 respondents walked or bicycled to school, approximately 31 percent. Surveyed parents reported concerns about motorist behavior and awareness of children walking and bicycling to school. With enhanced community education, Aragon expects the number of students walking and bicycling to school to increase, and along with it, community knowledge about safety and opportunities for walking and bicycling.

Activities

The “Go Play Billings Trails” program is a non-infrastructure program that began when St. Vincent Healthcare donated \$5,000 in 2006, which enabled students from Montana State University-Billings to develop a brochure of information to encourage safe walking and bicycling in Billings. Sarah Keller, assistant professor in the Communication and Theater Department at MSU-B, co-directed the effort with Aragon, who is Health and Safety Chairperson for the Highland Elementary School PTA. The “Go Play Billings Trails” campaign delineates trails and bike paths throughout the city and highlights economic, safety and health aspects of walking and bicycling.

In March 2007, Aragon and Yellowstone County received a \$10,000 SRTS grant from the Montana Department of Transportation (MDT) to fund events, as well as billboards that are located near schools. Billings held the 6-mile-long Magic City Trail Trek, in late spring 2007, and in the fall Aragon organized Saturday Live Fun Run/Walk, which is a two-mile long School District fundraiser. At each event, volunteers distributed information about safe walking and bicycling to



Go Play in Billings, Montana

children and parents.

This non-infrastructure program complements a \$25,000 SRTS infrastructure grant that Billings received from the MDT's state SRTS program in 2007 for the Chandelier Crossing for children going to Arrowhead Elementary School. The crossing was built as part of the Big Ditch Trail, Phase 2, according to Darlene Tussing, Alternate Modes Coordinator for the City-County Planning Office. The sidewalk connected a residential area to a bike trail, which provided direct access to Arrowhead Elementary for students.

Many of Billings' community leaders and organizations share a desire to promote healthy, safe alternatives to vehicles when possible. For example, Billings Public Schools created a School Health Advisory Committee that has included SRTS programs in its physical activity recommendations for Billings public schools. Yellowstone City-County Health Department is working on a "Healthy Places" initiative and partnering with two hospitals and the city to promote the Trail Trek event in cooperation with MSU-B. In addition, the trail advocacy organization BikeNet (www.bikenet.org) is a partner in the Trail Trek event and a community supporter of "Go Play." Aragon is a member of Billings Action for Healthy Kids, a group with a longstanding commitment to helping Billings improve health through nutrition and fitness. Team members include a variety of health and education advocates. Two of the members write weekly columns for the local newspaper. They help promote International Walk to School Day in the fall, and they promote bicycling and walking safety through their own programs, such as Big Sky State Games, which has a three-month fitness program in which many school staff and students participate.

The Billings Clinic donated \$200 to help with the Trail Trek, and for years, area physicians have donated money to provide helmets for school-based helmet programs. The Think First program is a joint hospital collaborative that provides low cost helmets at both the Trail Trek and Saturday Live Fun Run. The Highland Elementary School librarian held a two-month long unit on bicycle safety, complete with "celebrities" such as the mayor and a bicycle-riding law enforcement officer reading bicycle-related books. Aragon makes sure that SRTS information is available at the spring Child Safety Fair, YMCA's Healthy Kids Day and various PTA gatherings including the statewide PTA gathering that was held in Billings in fall 2007.

Milestones

Aragon estimated that in the first year, 300 participants enjoyed the Trail Trek and approximately 200 people participated in the fall Fun Run/Walk. Volunteers from Highland Elementary as well as local running, bicycling and trail groups work to make the events operate smoothly.

The two annual "Go Play" events doubled participation in two years, and during International Walk to School week, one class at Highland Elementary School reported a walk/bike rate of 84 percent. Twenty-three percent of children in Yellowstone County walk or bicycle to school. International Walk to School was celebrated by 100 percent of neighborhood schools in the city core.

Future planned projects include a \$25,000 SRTS infrastructure grant from MDT that will make the sidewalks

"It's all about community awareness. We have an enormous amount of collaboration."

Kathy Aragon, Health and Safety Chairperson, Highland Elementary School PTA



Go Play in Billings, Montana

at Highland Elementary contiguous, connecting a rear pedestrian-only entrance to the school. In addition, a \$49,495 grant from MDT was awarded to McKinley Elementary for "bulb outs" and other safety improvements at intersections. Aragon also plans to seek funds that will provide mini-grants to enable all 23 elementary schools in Billings to hold International Walk to School Day events. Additionally, the city of Billings has applied for a SRTS grant to create a district-wide safety plan.

Aragon believes that by educating students, parents and other community members and increasing their participation in walking and bicycling, they will be more aware of pedestrians and bicyclists, and that awareness will increase safety for everyone.

Contact

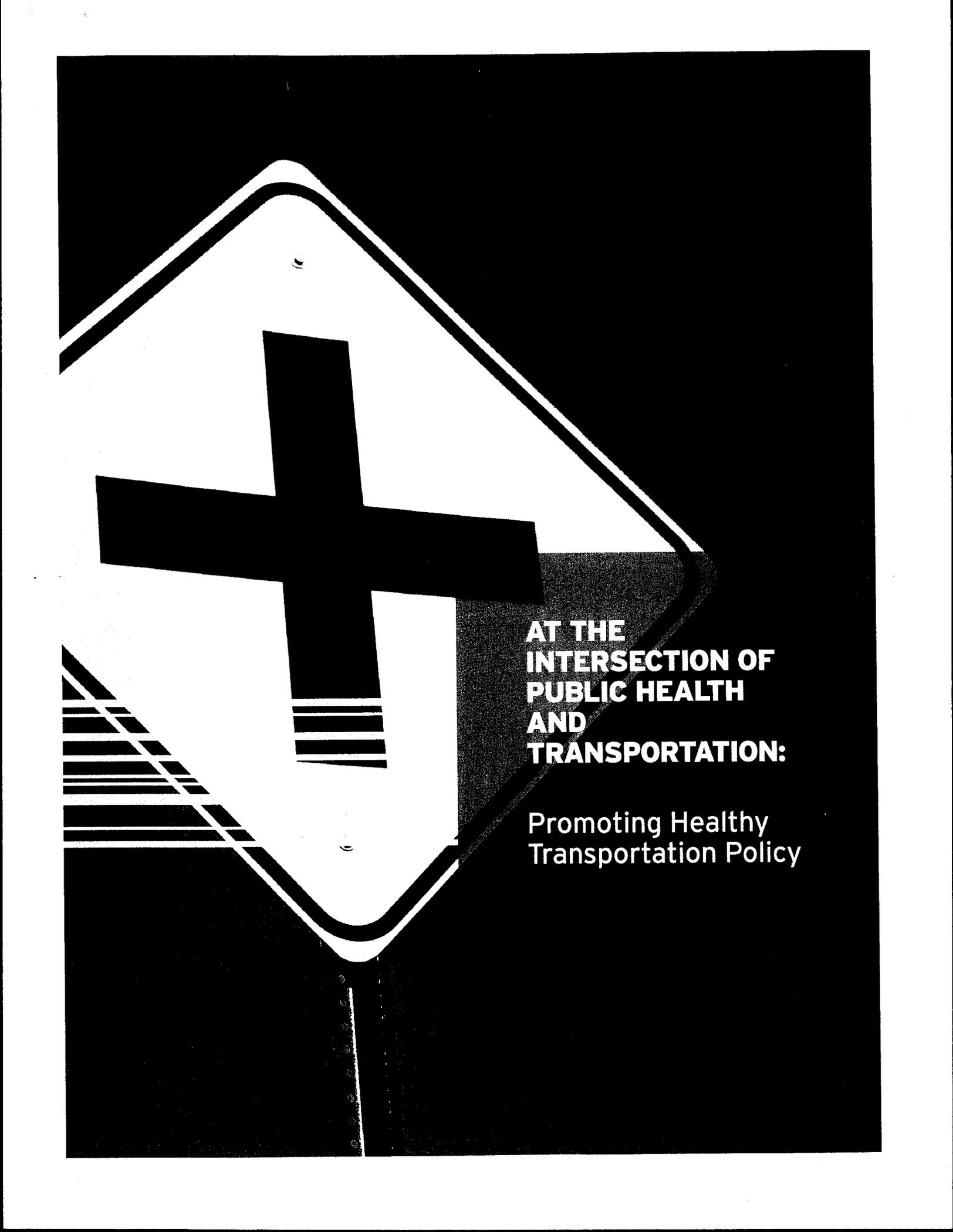
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**AT THE
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PUBLIC HEALTH
AND
TRANSPORTATION:**

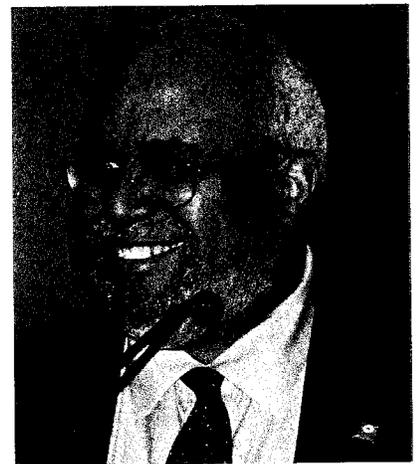
**Promoting Healthy
Transportation Policy**

In many neighborhoods, kids are bused to school because the main route to school is not safe for walking. In others, the community is designed so the only way to get to essential services like health care is to drive a car, if you have one. Likewise, in some communities, the nearby supermarket sits across a busy, 4-lane road with little attention concerning the needs of pedestrians to get there. This lack of attention to how we build our supporting community structures often translates into neighborhoods that lack bike paths and parks; that are too far from offices, schools, and shopping centers to walk; and that are inaccessible by public transportation. We also know that the health of people in many of our nation's communities is suffering, with many US residents growing more sedentary and at greater risk for preventable diseases such as heart disease, stroke, and diabetes. The convergence of these 2 problems—poor community design and a rising rate of preventable diseases—creates an important opportunity to improve our health as we redesign our communities for the next century.

A healthy community is one that promotes healthy people by ensuring access to safe and nutritious foods; safe places to walk, run, or bike; clean air and water; adequate and accessible health care systems; and other healthy enablers. One of these healthy enablers is our transportation system. Current research demonstrates that how we build our transportation systems, how and on what modality we use them, and how we get people and things from one place to another affects our health. Enduring a long, tedious commute causes stress, which can exacerbate heart disease and our mental state and increases our risk of experiencing a traffic incident. In neighborhoods without a grocery store nearby, residents do not have access to nutritious foods, and people lacking access to preventive health services put themselves at risk by missing critical screening exams because of poor access to medical care services. Living near a superhighway, port, or a bus or train depot exposes people to increased levels of toxic air pollutants, and many of these same vehicle emissions contribute to global warming.

What's the fix? We need a comprehensive commitment to build transportation networks that serve our need to get from one place to another in a way that enhances our health while optimizing the trade-offs from our transportation and development needs. Our communities would benefit from a system that enables all residents access to affordable and secure housing, nutritious food, clean air and water, mass transportation, safe sidewalks, streets, and playgrounds, health services and opportunities for social networking.

The federal transportation bill, the Safe, Accountable, Flexible, Efficient, Transportation Equity: A Legacy for Users (SAFETEA-LU), a nearly \$300 billion federal investment in transportation infrastructure, is due to be reauthorized in 2009. Its reauthorization presents an opportunity to promote health as a critical consideration in transportation policies, to enforce and expand on existing provisions that promote health and safety, and to reform the US transportation system to meet today's demands. Let's work together as a public health community to ensure that we take this opportunity and run with it.



Georges C. Benjamin, MD, FACP, FACEP (E), is executive director of the American Public Health Association.

INTRODUCTION

The US transportation system consists of a complex array of roads, highways, bridges, ferries, ports, public transit, and bike and walking paths that allow people and goods to get from one place to another. These systems, along with their design and construction, help shape communities and affect the health of the people who live, work, and play in them.

The front pages of newspapers across the country regularly feature stories about gas prices, traffic jams, truck and car crashes, long commutes, congestion, the rise of asthma and obesity, and climate change. Most people—young and old, parents and grandparents, factory workers and CEOs, mayors and senators—are worried and thinking, “What needs to be done to alleviate the stress of today and prepare for the generations to come?”

Transportation and Community Design Affect Human Health

For the past 50 years, roadways and communities have been designed and built to favor automobile use. In the beginning, the combustion engine and the creation of the highway system had a significant positive impact on public health. They allowed for the movement of waste away from the population centers and connected communities. Over the years, however, the transportation system has changed. The use of rail to move goods has diminished. Communities began to be developed away from town centers and public transit. As a result, suburbia and sprawl were created. Sprawling communities are characterized by dispersed populations, a rigid disconnect between homes and services, lack of a town or city center, and a network of roads that lack access and connectivity.¹

Research shows that land-use planning, including transportation decisions, directly and indirectly affects human health by influencing a wide range of environmental factors, physical factors, and social factors. These types of factors are often described as the social determinants of health.^{2,3} Although the positive effects of mobility on health are substantial, the negative effects are also profound and costly. How transportation looks and is shaped in suburbia compared with rural communities and urban centers varies across the country; however, they are all affected by federal and local transportation policy.

Transforming Transportation Policy to Promote Public Health and Safety

The current federal surface transportation bill—the Safe, Accountable, Flexible, Efficient, Transportation Equity: A Legacy for Users (SAFETEA-LU)—will come before Congress for reauthorization in 2009. The reauthorization

Everyday Ways that Transportation Affects Health

Living in a suburban, sprawling community limits the opportunities to incorporate physical activity into daily life. Residents must drive to work, school, and services. Lack of physical activity is a risk factor for obesity, which can lead to a host of chronic diseases.

City dwellers get adequate exercise because walking is generally how they get to and from places, including public transportation.

Highways and transportation depots such as ports and bus stations are often located near lower-income communities. Residents living in these communities are exposed to air pollutants and often suffer from higher rates of lung cancer, asthma, and other respiratory illness.

The transit disadvantaged, those without access to transportation, sometimes go without needed health care simply because they have no way of getting to and from a health care facility.

Children who live where they can walk or bike safely to school are generally happier and healthier.

Traffic safety laws, such as safety belts, speeding, and drunk driving enforcement, have helped a great deal to decrease traffic incidents.

provides a tremendous opportunity to promote transportation policies that improve human health and safety (referred to throughout this report as *healthy transportation policy*), to enforce and expand on existing provisions that promote health, and to reform the US transportation system to meet 21ST century demands.

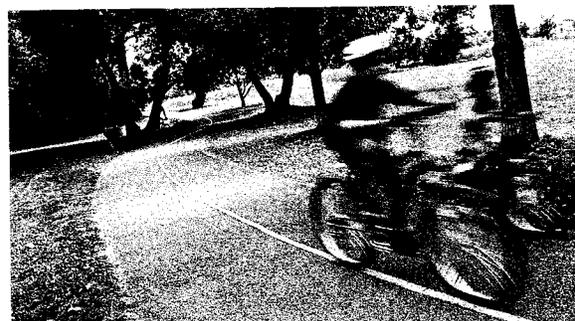
Transforming the current system to achieve transportation policy that helps to improve public health and safety will require a convergence of many disciplines, such as public health, planning, engineering, and environmental studies. Because of the significant effect of the built environment on health and the direct effect that transportation decisions have on land-use and community design, public health practitioners have a critical role to play to achieve this transformation. This report, *At the Intersection of Public Health and Transportation: Promoting Healthy Transportation Policy*, is intended for the public health community. It provides evidence-based information about how transportation policy and practice affect public health. It describes federal transportation policy and how to smartly use our transportation dollars to move commerce and people from place to place while building healthier communities. Finally, it introduces Transportation for America (T4America), a national grassroots coalition working to transform national transportation policy.



The built environment—defined as the human-made features of our communities such as buildings, public resources (libraries, clinics, and schools), land-use patterns and the transportation system—has a direct impact on human health.⁴⁻⁷ In many ways, it has improved our quality of life, but it can also contribute to unhealthy, harmful outcomes. Current transportation and related land-use policies favor a society that is auto dependent. Such a dependency is costly not only to the pocketbook but also to the safety and well-being of all residents.

Studies show that communities designed with dense residential areas, mixed use neighborhoods (residential combined with commercial use), and connected streets and paths enjoy better health.¹ Residents living in these communities are more physically active, enjoy more social interaction, develop social capital, and have improved mental health. Many existing transportation and related land-use decisions affect the health and safety of our citizens in a harmful way, specifically by reducing opportunities for physical activity, polluting the air (which also contributes to the climate crisis), increasing likelihood of traffic incidents, and exacerbating poverty and inequity.^{4,5,8-10}

Mental health, noise pollution, and water quality are also affected by transportation and land-use decisions.¹¹ Negative health outcomes can be associated with the stress of living near a major roadway and with dangerous road crossings. Motor vehicles are a major source of noise pollution. Runoff from roadways contains many pollutants—sediment, bacteria, heavy metals, and petroleum hydrocarbons—that then find their way into ponds, lakes, and streams, and eventually the drinking water system. Further, as a result of sprawl and the movement of many families to the suburbs (for more space and affordable housing), many people have long



commutes to work. Long driving commutes are associated with stress-related health effects and physical ailments such as back pain and heart disease.

Physical Activity

Obesity in the United States is climbing at alarming rates. In fact, obesity is the nation's fastest rising public health problem. According to the Centers for Disease Control and Prevention, 16% of children are obese (12 million are overweight) and the majority of adults (66%) are overweight or obese.¹² Overweight children are more likely to become obese adults. Obesity rates are highest among blacks, Hispanics, and low-income households.¹² Obesity and inactivity lead to many other chronic diseases as well as high blood pressure, heart disease, osteoarthritis, cancer, stroke, and diabetes.¹²

Unfortunately, the opportunity to be physically active is being essentially engineered out of daily life. Communities are spread out with limited connectivity to other communities or services; there is often no walking/biking or public transit that allows people to get to home, school, work, or play safely.¹ Auto-oriented communities are directly linked to low rates of physical activity.⁷

The cost of obesity and inactivity to society is enormous and growing. In 2004, the total cost (including health care and loss of wages) of being obese or overweight was estimated at \$117 billion,¹⁴ and physical inactivity's health care tab runs up to \$76 billion per year.¹⁵

Safety

Traffic injuries and fatalities (from motor crashes as well as bike and pedestrian accidents) are also an enormous public health problem. In 2005, they were the leading cause of death for people ages 5 to 34 in the United States and the leading cause of injury-related death among all ages.¹⁶ Over the past 2 decades, US traffic fatalities have averaged approximately 43,000 annually, with approximately 2.5 million people injured on our roads every year.¹⁷ In addition to loss of life, traffic crashes costs about \$164 billion annually in property damage and injuries.¹⁸

The amount of time people spend on the road, and the number of drivers, has increased dramatically over the years. People drive longer distances in 1 trip (e.g., longer commutes), which increases the likelihood of a traffic incident simply because more people are on the roads.¹⁷ The way that roads and highways have been designed and built for the past 60 years also contributes to traffic safety. Roads and highways are often designed and built to increase and accommodate the demand for transport; they are designed for fast and easy travel with multiple lanes, no sidewalks, and distant and minimal crosswalks. Safety is of particular concern to pedestrians and bicyclists in sprawling neighborhoods where there is a lack of safe routes to walk and bike.¹⁹

Improvements in Motor Vehicle and Passenger Safety Have Come a Long Way

Despite an increasing number of traffic incidents, tremendous improvements in traffic safety have been made. Public health has worked to introduce drinking and driving prevention programs and young driver safety programs and interventions, to ensure the passage of safety belt laws, to improve child passenger safety, and to promote the design of safer vehicles. The public health community, along with its many partners, including the National Highway Traffic and Safety Administration, will continue to work to improve traffic safety into the 21ST century.

Motorcycle safety is also a growing issue. The number of motorcycles on US roads has grown rapidly over the past decade, and deaths from crashes have grown even faster.²⁰ Motorcycles account for 13% of crash fatalities.²⁰

Air Quality

Air pollution is associated with several health issues, including asthma and respiratory illness, heart disease, and cancer. Like obesity, asthma is a major public health problem in the United States.²¹ More than 32 million people in the United States have been diagnosed with asthma at some time. Of the 22 million people who currently have asthma, 12 million have had an asthma episode or attack in the past year.²² Four thousand people die each year from asthma-related causes, and asthma is a contributing factor for another 7,000 deaths every year.²² Asthma prevalence among children increased an average 4.3% per year from 1980–1996.²¹ Each year, asthma accounts for 14 million days of missed school days by children.²³ Asthma is seen more often among children, women and girls, African Americans, Puerto Ricans, people in the Northeast, and those living below the federal poverty level, and those with particular work-related exposures.²³ The US cost of health issues associated with poor air quality from transportation is between \$40 billion and \$64 billion per year.²⁴

Living, working, going to school, or playing near major roadways increases the risk of asthma as well as other health conditions, such as cancer, respiratory illness, and heart disease.²⁵⁻²⁷ Communities located near heavily traveled highways have a disproportionately higher rate of lung cancer.²⁷ Air pollutants, including carbon monoxide, nitrogen oxides, and particulate matter (which is found primarily in diesel exhaust), are found along high traffic roads.²⁷ According to the US Census Bureau, 36 million people live within 300 feet of a 4-lane highway, railroad, or airport.²⁸

Moreover, carbon dioxide is a greenhouse gas and the biggest human activity-related contributor to global climate change.²⁹ In addition to the obesity epidemic, climate change is one of the most important public health issues of the 21st century. Transportation is one of the largest contributors to greenhouse gas emissions in the United States, and emissions from transportation make up one third of carbon dioxide emissions.³⁰ The US transportation sector accounts for 10% of the energy-producing greenhouse gas emissions worldwide. If left unchecked, these emissions could increase to 80% above current levels by 2060.³¹

Social and Health Inequities

At the core of public health service is the goal of achieving equal health for all—a goal that is particularly important for those most vulnerable: the poor, the elderly, children, disabled individuals, and underserved minorities. In the United States, for the leading health indicators, the burden of disease and premature death is highest among these vulnerable populations.³³ The reasons for these health disparities are frequently attributed to by their lower socioeconomic status. Often they are the result of life-long exposures to meager, and sometimes toxic and

A Community Group Takes Action Against Air Pollution "The Dirty Diesel Campaign"

In 2000, a West Harlem environmental activist group called WEACT and several northern Manhattan residents filed a complaint with the US Department of Transportation (DOT) against the Metropolitan Transit Authority (MTA) because six of seven diesel bus depots are located in northern Manhattan. Diesel exhaust is a harmful air pollutant that is associated with lung cancer. A study by the US Environmental Protection Agency found air pollutant levels as much as 200% greater than allowable standards. Back in May 1997, WEACT launched a public awareness campaign urging MTA to use natural gas and clean fuel buses.

US DOT responded to the complaint by charging the MTA with "violating civil rights of residents" and concluded MTA must consider environmental justice principals in locating depots. Today, WEACT is working to make MTA accountable and adhere to DOTs mandate through the use of natural gas and clean fuel buses.²⁰

unsafe, living conditions. Many of the health concerns caused by these living conditions are exacerbated by a decreased capacity to improve health, such as poor access to safe recreational areas, high-quality education, and gainful employment. Inadequate or poorly planned transportation systems further exacerbate the problem.

Increased access to health care reduces health disparities. However, health care alone cannot eliminate the burden of poor health and health disparities—improving and preventing unhealthy living conditions in the community environment will result in greater health equity. The World Health Organization refers to conditions that can be reasonably improved as social determinants of health.² At the basic level, social determinants of health are the social and economic conditions under which people live. Policies and programs that promote equal and just health are imperative, including social determinants such as land-use and community design, of which transportation is a large part, and high-quality living conditions.



Transportation and Health Inequity

Nearly one third of the US population is transportation disadvantaged.³³ Many of these individuals and families are vulnerable. They cannot easily access basic needs such as healthy food choices, medical care, gainful employment, and educational opportunities. Many low-income families have been forced to live outside city centers where housing is more affordable and access to public transportation is limited. These families often spend more on driving than health care, education, or food. The poorest fifth of US families, earning less than \$13,060 per year, pay 42% of their income to own and drive a vehicle.³⁴ Those families earning \$20,000 to \$50,000 spend as much as 30% of their budget on transportation.³⁵ In addition, lower-income neighborhoods often lack safe places to walk, bike, or play and access to healthy and affordable foods.⁷

Transportation and housing are the 2 biggest household costs for most families.³³ Often, affordable housing and employment are not accessible to lower income families who want to use public transportation.³⁴ Some family members may take multiple bus or other public transit routes to obtain employment. These families may be forced to purchase a car, which if affordable, still constitutes a huge financial drain.

In urban settings, busy roads and transit facilities (e.g., bus and train stations) are often located in low-income neighborhoods and in communities of color. As discussed earlier, living near a transit station or a busy road, is linked to poor air quality and increased respiratory illness.

Achieving Positive Health Outcomes Through Transportation Policy

Fifty percent of the leading causes of death and illness in the United States—traffic injuries, heart disease, cancer, diabetes, and respiratory illness—are preventable. These diseases have several risk factors that can be mitigated by transportation policies—policies that promote the design and development of healthy communities. Because the transportation system touches most aspects of daily life, optimizing transportation and community design can play an important role in improving health.

Improving the health of US residents and helping to prevent disease through reformed transportation policy can be achieved through a variety of means:

- Offering balanced and affordable modes of transportation (including driving, biking, walking, and public transit) and, where possible, helping to decrease reliance on automobiles;
- Building communities and improving connectivity so that residents can safely walk or bike to work, school, home, play, public transit, and services;
- Ensuring public transit can be reached safely without needing to drive;
- Increasing opportunities for residents in sprawling communities to be physically active;
- Improving injury prevention and installing safety and protective measures where needed;
- Sustaining and improving motor vehicle safety;
- Increasing US energy independence and investing in identification of alternative fuels sources;
- Educating US residents about the health benefits of walking, biking, and safe transportation behaviors; and
- Assessing the potential health impact* of all major transportation, land-use decision, or planning activities.

Health Impact Assessment: A Useful Tool

A group of investigators at UCLA recently conducted a health impact assessment (HIA) of possibly redirecting of "spillover" funds for transit (budget cuts to transit) to the general state fund. The HIA found that state transit budget cuts would primarily affect smaller transit agencies and those they serve—the poor, children, seniors, and the mobility impaired. Cutting back on these services could have considerable impacts on the health of these populations. Other findings from the HIA confirmed the health benefits of providing balanced transit options and helping to decrease reliance on driving. Benefits included improved air quality, increased physical activity, improved mental health, and a boost in social capital.³⁶



Federal transportation dollars have been used to improve public health and safety; however, the amount of these dollars is minimal. The US Federal Department of Transportation (DOT), specifically the Federal Highway Transit, Federal Highway Administration, and National Traffic Highway Safety Administration, is the administrator of funds under the federal transportation bill. Money flows from DOT primarily to the state transportation departments. The Highway Trust Fund (HTF) is the primary funding source for transportation. HTF money comes from an 18¢ per gallon federal gas tax. Money is distributed from the HTF to states largely based on how much money the state has contributed.

States are responsible for making sure cooperative transportation planning and decisionmaking happens. Metropolitan planning organizations (MPOs) are policymaking organizations composed of representatives

*A health impact assessment (HIA) is a useful tool for planners, public health practitioners, officials, and those responsible for making decisions about development projects, including roadways, transit, commercial, and the like.³⁶ HIAs help determine the potential effect of a development on public health and are especially helpful in identifying effects on vulnerable populations.³⁶ HIAs are widely used in Europe, and their use is increasing in the United States.³⁶

from local government and transportation authorities. They exist in urban areas with a population of more than 50,000 people.³⁸ Currently, there are 385 MPOs, which are funded through federal transportation dollars at \$300 million annually. MPOs work with state transportation agencies and regional officials to develop transportation plans at the regional level.³⁸ In addition to MPOs, the US secretary of transportation can designate transportation management areas (TMAs) for metropolitan areas with a population greater than 200,000.

Historically, rural communities and their needs have been somewhat overlooked in the transportation planning and decisionmaking process. Rural planning organizations (RPO), typically a network of local planners and officials, do exist in smaller communities. However, it is up to state transportation officials to engage RPOs in transportation planning and decisionmaking. Because of the way in which transportation dollars are allocated from HTF, in general, rural states often receive less money than more densely populated states, so transportation dollars can be limited in more rural areas.

Transportation and planning officials have successfully worked together to improve traffic safety. However, other public health programs and parts of the public health system have not typically overlapped with the transportation system. In practical ways, this means that the transportation agencies and the transportation community do not typically work or consult with the public health agencies and the public health community, especially at the state level. At the local and community levels, the connection is better but not complete or widespread. There are good examples of community pockets where public health and planning are working together to build and design healthier places to live, work, and play. Some programs and grants mandated at the federal level are being used to benefit public health at the community level.

Federal Transportation Dollars and Health and Safety Programs

SAFETEA-LU is the biggest federal surface transportation bill to date. It was signed into law in 2005. The purpose of the law is to provide funding and direction for the maintenance and development of the US transportation system. The 2009 reauthorization of SAFETEA-LU provides an opportunity to change the blueprint for transportation policy and to set priorities for how federal transportation funds should be spent. Congress authorized \$244.1 billion for federal transportation over a 5-year period from 2005–2009.^{39,40}

At a broad national level, there are 3 primary categories of federal transportation funds: federal aid to highways, public transportation, and highway and motor vehicle safety. Public transportation and highway and motor vehicle safety is less than 21% of the total budget. Of the \$244.1 billion, \$192.1 billion goes to highways, \$45.2 billion to public transportation, and \$5.8 billion to highway and motor vehicle safety.⁴⁰

Of the many programs within the federal transportation bill, 6 core programs account for approximately half the total funding (\$123.5 billion). The core programs and (authorized) funding levels are for 5 years, unless stated otherwise:

- Surface Transportation Program: \$32.5 billion
- National Highway System: \$30.5 billion
- Interstate Maintenance Program: \$25.2 billion
- Bridge Program: \$21.6 billion
- Congestion Mitigation and Air Quality Improvement Program (CMAQ): \$8.6 billion
- Highway Safety Improvement Program (HSIP, 4 years, authorized in 2006): \$5.1 billion

Dollars for Public Health and Safety Are Minimal

The federal transportation bill provides minimal dollars to programs that affect public health and safety. The 2 core programs that help to improve health and safety, HSIP and CMAQ, account for just a little more than 11% of the core funding. Table 1 shows a list of federal transportation programs—big or small—that help improve health and safety, and the type of public health issues they help to improve. These programs are effective, but more is needed.

Highway and Motor Vehicle Safety
 Federal-Aid Highways
 Public Transportation



HSIP was authorized in 2006 to provide funds to states to reduce traffic fatalities and serious injuries on public roads. HSIP gives states that have a strategic highway safety plan greater flexibility in how they can use HSIP funds. States with plans can use funds for safety enhancement projects on any public road or railway.

A notable and very beneficial public health and safety program in the transportation law funded through the HSIP program is Safe Routes to Schools. Safe Routes to Schools provides funds to states and localities to enable and encourage children to walk and bike to school. The program facilitates planning and development of projects that improve safety; increase physical activity; and reduce traffic, fuel consumption, and air pollution in and around schools.

Several smaller-scale safety programs include improving bike and pedestrian safety; enhancing traffic signs and pavement for older drivers and walkers; and supporting tollbooth worker safety, motorcycle safety, and work zone safety. The federal law also provides funds for nonprofit organizations to collect data and to conduct public awareness campaigns to improve public safety such as the Street Smart Pedestrian and Bicycle Safety campaign (in the District of Columbia, Maryland, and Virginia), and community maps programs—in which communities collect and map road and crash data using Google Earth.

The CMAQ program provides funds to states (on the basis of population and severity of pollution) for projects and programs that improve air quality for ozone, carbon monoxide, and particulate matter in areas that do not or have not met clean air standards—these areas are called nonattainment areas. These air pollutants compromise lung function and cause respiratory problems and are harmful to public health. The main culprit for particulate matter is diesel. Programs that provide diesel retrofits—devices and options that reduce exhaust emissions, which result in cost-effective improvements in air quality and decrease harmful emissions—are given priority.

TABLE 1: Federal Transportation Programs and The Public Health and Safety Issues They Help to Improve

Highway Safety and Improvements Program (HSIP)	Physical Activity/Obesity
Safe Routes to School	
Road Safety	Safety
Transportation Enhancement Program	Air Quality
Congestion Mitigation and Air Quality (CMAQ)	
Recreational Trails, Scenic Byways and Non-motorized Transport	Equity
Formula Grants for Urban and Non-urban Areas	Connectivity
Formula Programs for Elderly and Disabled	
New and Small Starts Program	Access
New Freedom Program	

Additional programs that promote health and safety under CMAQ support recreational trails, scenic byways, and nonmotorized transportation pilot studies. The pilot studies are designed to demonstrate how walking and biking can help solve transportation problems. Programs that increase opportunities for residents to walk and bike through programs, such as Rails to Trails and nonmotorized pilots, have been shown to increase physical activity and lead to improvements in health.⁴¹

Several formula grant programs exist to provide funding for improved public transportation and capital investment projects. They focus on improving and enhancing transit in urban areas, for the disabled (e.g., the New Freedom Program) and the elderly, and for rural services and fostering the development of local capital investment transportation projects (new starts and small starts program). These programs help to improve transit systems such as heavy and light rail, buses, streetcars, and ferries.

The research and training components in the federal transportation bill that focus on public health and safety are limited.

The funding (authorized and appropriated) for all of the public health and safety programs from 2005–2009 is shown in a table on page 12 of this report. The money spent on public health and safety programs is minimal. In addition, spending on programs that improve public health has received limited increases in funding from year to year and even decreases in some programs. The actual funds that are appropriated for public health programs are generally lower than authorized, which is not surprising given the deficits in the overall economy and within the federal transportation budget.

Marin County Safe Routes to School Program—A Promising Example

Since 2002, Marin County has significantly increased the number of kids who walk (by 64%), bike (by 114%), or are carpooled (41,000) to school. The Safe Routes to Schools program offers a number of best practices and ways to get involved on its Web site at www.saferoutesinfo.org.

Given that many of the emerging issues and extreme challenges faced by the nation today are linked in one way or another to transportation, including obesity, air quality and climate change, congestion, energy independence, and sprawl, the US transportation system is in critical need of reform. The coming reauthorization of the federal transportation bill provides a crucial opportunity to help shape how the transportation sector is reformed. Along with many other partners, public health has a critical role to play.

What needs to be done to alleviate the stresses of today and prepare for the generations to come? The US government and the general public must be committed to creating a balanced and equitable transportation system that promotes health.

A model concept in thinking about transportation systems and making connections between people and places is Complete the Streets. Complete streets are "designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able



to safely move along and across a complete street.”⁴² A national complete the streets bill has been proposed in Congress.

Currently, of the federal transportation bill, about 80% of the funding goes toward building highways and improving road infrastructures, and approximately 20% goes toward public transit programs. As a start, a more equitable balance of funding is required. Programs in the transportation bill that help to improve traffic safety; increase availability of public transit ridership; connect people with work, home, and services in an affordable and accessible way; benefit health by increasing opportunities for physical activity; and protect the environment as well as health should continue and the funding should be increased. Specific favorable programs include the following: HSIP, CMAQ, Safe Routes to School, recreational trails, and all public transit improvement projects. Most importantly, health considerations should not be sidelined as an add-on in a number of small program areas. All our transportation policies, programs and decisions should begin with the understanding that the health of the general public is a national priority. Health and well-being should be a critical consideration in overall transportation policy.



To be successful, these policies and programs must have positive measurable health outcomes, which will result in medical cost savings. Positive societal outcomes, such as helping to decrease the burden of climate change and societies dependence on fossil fuels, should also be considered. The elements of achieving positive health through transportation policy outlined earlier are good basic principles and offer a good place for public health professionals to start.

The Power of the Public Health Community

As demonstrated by the antitobacco campaign, safety belt laws, and lead poisoning prevention, public health can be a powerful advocate. The public health system is vast, with public health professionals working at national, state, and local levels in every community throughout the United States. Every public health professional has a part to play:

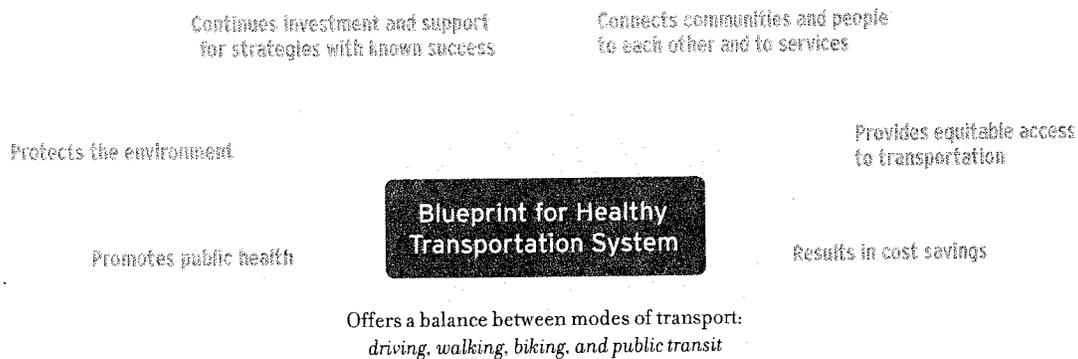
- Become knowledgeable about the connections between transportation, land-use decisions, and community health.
- Learn about transportation policies and how they relate to and affect public health.
- Engage with the transportation and planning community.
- Insert health into the transportation and land-use planning and decision-making process by informing colleagues about the connections between transportation and health.
- Ensure that the public health impacts of any transportation and land-use projects are properly assessed.
- Advocate for transportation and land-use policies and practices that promote good health.

- Help build a strong foundation—including knowledge base, capacity, and training—for the next generation of public health professionals.
- Ensure health is prominent in the national debate around the reauthorization.
- Represent health interests in the T4America national campaign to reform federal transportation policy.

Right now, an advocacy campaign to reform transportation policy via the reauthorization of the federal surface transportation bill (SAFETEA-LU) is under way called Transportation for America (T4America). T4America has developed a platform for advocacy and hopes to encourage more health and public health organizations to join the campaign. The American Public Health Association (APHA) is a leader in T4America and is working to reach out and engage the public health community. APHA is working to:

- Engage in a conversation with public health professionals to learn how they see these issues and what is needed to resolve them.
- Educate public health professionals about the connections between transportation and health and the current efforts to reform transportation policy in the United States.
- Encourage public health professionals to join the T4America campaign.
- Provide opportunities and actions that public health advocates can take to do their part in promoting healthy transportation policy and practice.

The information provided in this report is intended to provide background information about the intersection between transportation policy and public health and to serve as a tool to help bring the voice of public health into the transportation fold. Together with those in the T4American campaign and the many public health professionals across the country, healthy transportation policy reform is possible.



Health and Safety Related Programs in SAFETEA-LU^a

PROGRAM		FY2005	FY2006	FY2007	FY2008	FY2009
Safe Routes to School	Authorized	\$54 M	\$100 M	\$125 M	\$150 M	\$183 M
	Appropriated	\$51 M	\$96 M	\$122 M	\$147 M	N/A
Road Safety	Authorized	0	\$500 K	\$500 K	\$500 K	\$500 K
	Appropriated		N/A	N/A	N/A	N/A
Highway Safety Improvements Program	Authorized	0	\$1,236 M	\$1,256 M	\$1,276 M	\$1,296 M
	Appropriated		\$1,005 M	\$1,255 M	\$1,053 M	N/A
CMAQ	Authorized	\$1,667 M	\$1,694 M	\$1,721 M	\$1,749 M	\$1,777 M
	Appropriated	\$1,578 M	\$1,616	\$1,693	\$1,723 M	N/A
Recreational Trails Program	Authorized	\$60 M	\$70 M	\$75 M	\$80M	\$85M
	Appropriated	\$59.1 M	\$68.4 M	\$74.1 M	\$79.1 M	N/A
Urbanized Area Formula Grants	Authorized	\$3,593 M	\$3,794 M	\$3,947 M	\$4,281 M	\$4,553 M
	Appropriated	N/A	\$3756 M	N/A	N/A	N/A
Formula Program for Elderly Persons and Person with Disabilities	Authorized	\$95 M	\$112 M	\$117 M	\$127 M	\$133 M
	Appropriated	N/A	\$110 M	\$117 M	N/A	N/A
Other than Urban Area Formula Program	Authorized	\$251 M	\$448 M	\$467 M	\$506 M	\$537 M
	Appropriated	N/A	\$444 M	\$466 M	N/A	N/A
New Starts	Authorized	\$1,438 M	\$1,503 M	\$1,366 M	\$1,500 M	\$1,609 M
	Appropriated	N/A	\$1,487 M	N/A	N/A	N/A
Small Starts	Authorized	0	0	\$200 M	\$200M	\$200 M
	Appropriated			N/A	N/A	N/A
New Freedom Program	Authorized	0	\$78 M	\$81 M	\$87.5 M	\$92.5 M
	Appropriated		\$77.2 M	\$81 M	N/A	N/A

a. Funding amounts were provided by the Congressional Research Center.

NOTE: All amounts in millions of US dollars. N/A indicates information not available.

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Protect, Prevent, Live Well

About APHA

The American Public Health Association is the oldest and most diverse organization of public health professionals in the world and has been working to improve public health since 1872. The Association aims to protect all Americans and their communities from preventable, serious health threats and strives to assure community-based health promotion and disease prevention activities and preventive health services are universally accessible in the United States. APHA is committed to health equity and a healthy global society. The Association's broad array of public health professionals are champions of and advocate for healthy people and communities.

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Lewis & Clark's Students Participate in Weekly Walking School Buses

Results

In the future, the SRTS steering group plans to involve more schools in the district in SRTS activities and to create a radio-based media campaign to promote SRTS and pedestrian safety awareness. Ultimately, the steering group wants to maximize its effectiveness as a community-wide SRTS advocate and resource for school-based initiatives and to continue to raise community awareness of the social and health benefits of walking and bicycling.

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For more resources and information on Safe Routes to School, please visit the National Center for Safe Routes to School Web site at www.saferoutesinfo.org.

SRTS CASE STUDY:

Missoula, Montana

Students Participate in Weekly Walking School Buses

SafeRoutes

National Center for Safe Routes to School



MISSOULA MONTANA

Background

In summer 2006, the Bicycle Pedestrian Advisory Board of Missoula, Mont., engaged school and community organizations in the creation of a city-wide Safe Routes to School (SRTS) steering group with the goal of increasing the number of students that walked or bicycled to school and the awareness of the benefits of walking and bicycling to school.

PROJECT NO. 1

DATE 1-24-11

CALL NO. SB177

Details

The steering group received a grant in 2006 through the Montana Department of Transportation totaling \$82,500 in federal SRTS funds. Part of this grant (\$37,500) will go toward infrastructure improvements such as the installation of a median island and corner bulb-outs along walking routes. The rest of the grant (\$45,000) will be directed toward district-wide non-infrastructure efforts in education, encouragement, enforcement and mapping.

To identify and communicate route information, the town of Missoula is working with the University of Montana to develop a mapping system using Geographic Information System (GIS) technology. The use of GIS mapping will allow schools in the district to create customized maps that provide administrators and SRTS teams with information such as the number and location of students living in the attendance area, vehicle traffic counts on arterial roads, accident histories, and the registered addresses of violent and sexual offenders. The system also will provide a means for producing high-quality route maps for distribution.

In addition to the district-wide improvements, each school will receive \$2,400 directly to put toward encouragement activities of their choosing. For example, Lewis & Clark Elementary School, a kindergarten through fifth grade school in Missoula, is using part of its funds to continue and enhance their Footloose Fridays program, a weekly Walking School Bus activity that began four years ago. International Walk to School Day in October marks the annual kick-off for the event. Every Friday thereafter, provided that the temperature is above freezing, four walking school buses led by parent volunteers lead children along one of four routes to the school.

With its non-infrastructure grant, Lewis & Clark Elementary's SRTS team also wants to purchase bicycle trailers to be pushed or pulled along the walking school bus routes by the volunteers. The trailers will carry students' backpacks, as well as snacks, extra clothing and entertaining supplies such as instruments and funny hats. The money also will go toward purchasing a "Footloose Fridays" banner for the schoolyard, laminated punch-cards attached to key chains to be hung from the students' backpacks and portable life-size signs of children walking to be placed by the side of the road to slow traffic and increase safety awareness.

As a complement to the SRTS activities, the physical education teacher at Lewis & Clark Elementary incorporates bicycle safety lessons and activities into his lesson plans and organizes a Bicycle Rodeo in the spring. The rodeo is an after school event organized with the help of parent volunteers who set up different stations that students visit to learn about bicycle safety issues, practice bicycle safety techniques and maneuver through a bicycle obstacle course.