



Alliance for Biking & Walking

# BICYCLING AND WALKING IN THE UNITED STATES

# 2012

## BENCHMARKING REPORT







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# PREFACE

## Alliance for Biking & Walking

Alliance for Biking & Walking is the North American coalition of grassroots bicycling and walking advocacy organizations. Our mission is to create, strengthen, and unite state/provincial and local bicycle and pedestrian advocacy organizations. Since our founding in 1996, we have grown from 12 to nearly 200 member organizations representing 48 U.S. states, four Canadian provinces, and Mexico City.

In the last 16 years, we have improved the effectiveness of our organizations through trainings and the sharing of best practice models in organizational development and bicycling and walking initiatives. We are continually improving our delivery channels through executive coaching, replicable models, trainings, our on-call support system, strategic planning, and resources like this report.

Alliance organizations inform and organize their communities to improve conditions for bicycling and walking, promoting these as healthy and enjoyable ways to travel. From advocating for bikeways and walkways to conducting safety courses, our coalition is changing attitudes and the environment in communities across North America. The Alliance connects these grassroots forces by fostering peer networking and supporting each other in our efforts to promote bicycling and walking for healthy communities, a healthy environment, and a better quality of life.

## Benchmarking Project Origins

The Alliance's Benchmarking Project began in 2003 when Alliance leaders recognized the need for advocates to measure progress of bicycling and walking and realized the lack of available data. Our staff and board jumped





on the project, recognizing the benefit of showing the impact advocacy has on increasing bicycling and walking. Without hard data to measure results, Alliance organizations were missing a key argument for their efforts.

The Benchmarking Project was also aligned with public health organizations and objectives. The process of benchmarking is designed to facilitate communities to build healthy and safe community environments. This is one of four key directions outlined by the U.S. Department of Health and Human

The process of  
benchmarking is  
designed to  
facilitate  
communities to  
build healthy and  
safe community  
environments.

Services as fundamental to bring prevention into our communities. Furthermore, it aligns with Centers for Disease Control and Prevention's (CDC) Winnable Battles to reduce motor vehicle injuries and increase physical activity. The partnerships addressed in this report among bicycle and pedestrian groups, health organizations, and transportation are necessary to address the infrastructure problems in our communities to improve public health, in the same way that municipal water systems and improved housing infrastructure helped

remove infectious disease risks in the previous century.

In 2004 the Alliance completed a pilot benchmarking report collecting data only on bicycling from just 15 cities and 15 states to test methods for the project. This first report helped pave a smoother path for the collection of more comprehensive data from all 50 states and 50 cities in 2006 and 2007. The first full report on the status of bicycling and walking in the United States was published in August 2007 (under the organization's former name: Thunderhead Alliance). The second full report was published in January 2010. This second report marked the first time we had in place a system to track usage and dissemination of report findings. To date, nearly 6,000 copies of the report have been downloaded or distributed. The 2010 report was cited or referenced in over 300 media stories, reports, plans, and articles.

This third full report builds upon our previous efforts to deliver timely data to help locals measure their progress and effectiveness, set new goals, and achieve greater results.

Through the ongoing Benchmarking Project, the Alliance for Biking & Walking will publish an updated version of this report every two years and will continuously refine methods and consider new data sets as available. As the project progresses, it will offer more precise benchmarks and recommendations for advocates and government officials so that they have the data they need to improve bicycling and walking in the United States and eventually all of North America.



Photo by Teena Widman

# EXECUTIVE SUMMARY

## What isn't counted, doesn't count.

Government officials working to promote bicycling and walking need data to evaluate their efforts. In order to improve something, there must be a means to measure it. The Alliance for Biking & Walking's Benchmarking Project is an ongoing effort to collect and analyze data on bicycling and walking in all 50 states and the 51 largest cities. This is the third biennial Benchmarking Report. The first report was published in 2007, the second in 2010, and the next report is scheduled for January 2014.

## Objectives

### (1) Promote Data Collection and Availability

The Benchmarking Project aims to collect data from secondary sources (existing databases) and to conduct surveys of city and state officials to obtain data not collected by another national source. A number of government and national data sources are collected and illustrated in this report. Through state and city biennial surveys, this project makes new data available in a standardized format that otherwise does not exist.

## (2) Measure Progress and Evaluate Results

The Benchmarking Project aims to provide data to government officials and advocates in an accessible format that helps them measure their progress toward increasing bicycling and walking and evaluate the results of their efforts. Because the Benchmarking Project is ongoing, cities and states can measure their progress over time and will see the impacts of their efforts. By providing a consistent and objective tool for evaluation, organizations, states, and cities can determine what works and what doesn't. Successful models can be emulated and failed models reevaluated.

## (3) Support Efforts to Increase Bicycling and Walking

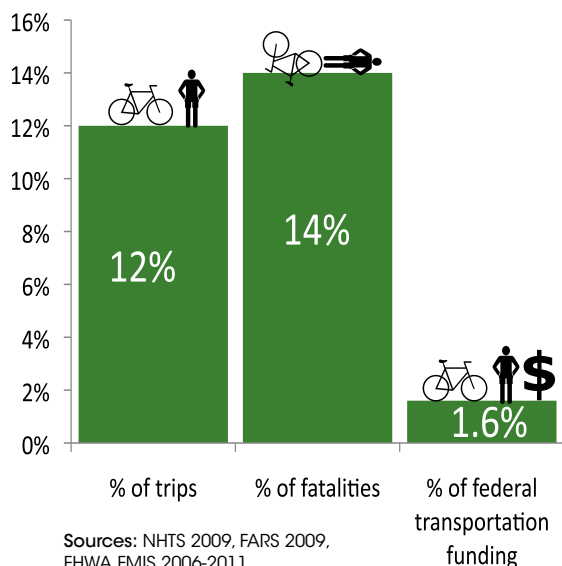
This project will ultimately support the efforts of government officials and bicycle and pedestrian advocacy organizations to increase bicycling and walking in their communities. By providing a means for cities and states

to compare themselves to one another, this report will highlight successes, encourage communities making progress, and make communities aware of areas where more effort is needed. By highlighting the top states and cities, other states and cities will gain inspiration and best practice models. This report is intended to help states and communities set goals, plan strategies, and evaluate results.

## Data Collection

This report focuses on 50 states and the 51 largest U.S. cities. Most bicycling and walking is in urban areas, and because of short trip distances, the most potential for increasing bicycling and walking is in cities. Whenever possible, the Alliance collected data for this report directly from uniform government data sources. Researchers collected data that were not readily accessible from national sources through two surveys for cities and states. In October 2010,





Levels of Bicycling and Walking,  
Bike/Ped Fatalities, and  
Bike/Ped Funding in the U.S.



**Bicyclists and pedestrians make up 12% of all trips and account for 14% of traffic fatalities, yet just 1.6% of federal transportation funds go to these modes.**



## Overview of Walking, Bicycling, Transit, and Car Mode Share

| Mode of Travel  | % of Commuters <sup>(1)</sup> |                   | % of All Trips Nation-wide <sup>(2)</sup> |
|---|-------------------------------|-------------------|---|
|   | Nation-wide                   | Major U.S. Cities |   |
|  | 2.9%                          | 4.9%              | 10.5%                                     |
|  | 0.6%                          | 0.9%              | 1.0%                                      |
|  | 5.0%                          | 17.2%             | 1.9%                                      |
|  | 91.5%                         | 77.0%             | 86.6%                                     |

Sources: (1) ACS 2009 (2) NHTS 2009 Notes: (3) This includes trips by private car and "other" means that are not public transportation, bicycling, or walking.

the Benchmarking Project team reached out to 50 states and 51 cities, utilizing the staff of cities, state departments of transportation, metropolitan planning organizations, and advocacy organizations to provide data for city and state surveys. The surveys complemented existing government data sources to create a comprehensive reserve of data that evaluates multiple factors that affect bicycling and walking in cities and states.

## Results

### Levels of Bicycling and Walking

From 1990 to 2009, the percent of commuters who bicycle to work increased from 0.4% to 0.6% while the percent of commuters who walk to work decreased from 3.9% to 2.9%. According to the 2009 American Community Survey (ACS), 3.4% of commuters nationwide are bicyclists (0.55%) or pedestrians

## Changes 2005-2010

|  | 05/06             | 07/08  | 09/10  |
|--|-------------------|--------|--------|
| <b>KEY FIGURES</b>   |                   |        |        |
| Percent of commuters who walk                                      | 2.5%              | 2.8%   | 2.9%   |
| Percent of commuters who bicycle                                   | 0.4%              | 0.5%   | 0.6%   |
| Percent of commuters who walk or bicycle                           | 2.9%              | 3.3%   | 3.4%   |
| Percent of traffic fatalities: ped                                 | 11.2%             | 11.3%  | 11.7%  |
| Percent of traffic fatalities: bicycle                             | 1.7%              | 1.8%   | 1.8%   |
| Number of ped traffic fatalities                                   | 4,892             | 4,699  | 4,092  |
| Number of bicycle traffic fatalities                               | 786               | 701    | 630    |
| Percent of fed. trans. \$ to bike/ped                              | 1.5%              | 1.2%   | 1.6%   |
| Number of states/cities responding <sup>(2)</sup>                  | 46/45             | 47/48  | 48/48  |
| <b>STATE POLICIES</b> (Number of states with)                      |                   |        |        |
| Goal to increase walking   | 16 <sup>(1)</sup> | 22     | 35     |
| Goal to increase bicycling   | 16 <sup>(1)</sup> | 21     | 35     |
| Goal to decrease ped fatalities                                    | 18 <sup>(1)</sup> | 31     | 41     |
| Goal to decrease bicycle fatalities                                | 18 <sup>(1)</sup> | 31     | 38     |
| Bicycle advisory committee   | *                 | 20     | 24     |
| Pedestrian advisory committee                                      | *                 | 18     | 22     |
| Bicycle master plan  | *                 | 27     | 27     |
| Pedestrian master plan   | *                 | 24     | 25     |
| Safe passing legislation   | *                 | 14     | 21     |
| Complete streets policy  | 10                | 17     | 24     |
| <b>CITY POLICIES</b> (Number of cities with)                       |                   |        |        |
| Goal to increase walking   | 25 <sup>(1)</sup> | 20     | 36     |
| Goal to increase bicycling   | 25 <sup>(1)</sup> | 33     | 46     |
| Goal to decrease ped fatalities                                    | 20 <sup>(1)</sup> | 19     | 31     |
| Goal to decrease bicycle fatalities                                | 20 <sup>(1)</sup> | 26     | 39     |
| Bicycle advisory committee   | *                 | 33     | 36     |
| Pedestrian advisory committee                                      | *                 | 31     | 26     |
| Bicycle master plan  | *                 | 36     | 42     |
| Pedestrian master plan   | *                 | 12     | 22     |
| Complete streets policy  | 8                 | 13     | 18     |
| <b>STATE PROVISIONS</b>  |                   |        |        |
| Per capita \$ to bike/ped  | \$2.50            | \$1.29 | \$2.17 |
| <b>CITY PROVISIONS</b>   |                   |        |        |
| Per capita \$ to bike/ped  | \$1.83            | \$1.49 | \$1.80 |
| Miles bicycle facilities/sq. mile                                  | 1.3               | 1.4    | 1.8    |
| Bike parking at transit/10K people                                 | 1.7               | 2.5    | 2.5    |
| % buses with bike racks  | 69%               | 93%    | 95%    |
| <b>STATE EDUCATION &amp; ENCOURAGEMENT</b> (Number of states with) |                   |        |        |
| Annual state bike/ped conference                                   | *                 | 15     | 25     |
| Drivers test questions on bicycling                                | *                 | 23     | 32     |
| Share the road/safety campaign                                     | *                 | 33     | 38     |
| <b>CITY EDUCATION &amp; ENCOURAGEMENT</b> (Number of cities with)  |                   |        |        |
| Youth bike ed courses  | *                 | 29     | 38     |
| Adult bike ed courses  | *                 | 33     | 41     |
| Bike to Work Day events  | *                 | 37     | 43     |
| Open street (ciclovía) initiatives                                 | *                 | 12     | 21     |
| City-sponsored bike ride   | *                 | 23     | 32     |
| <b>OTHER</b>   |                   |        |        |
| States with dedicated advocacy org                                 | 32                | 35     | 43     |
| Cities with dedicated advocacy org                                 | 32                | 34     | 36     |

(1) Walking and bicycling were combined in this survey (2) Number of states/cities who responded to the Benchmarking Report survey  
\* = Data unavailable

## High to Low Ranking of Bicycling and Walking Levels

### STATES

1. Alaska
2. Vermont
3. New York
4. Montana
5. Oregon
6. Hawaii
7. Massachusetts
8. South Dakota
9. Wyoming
10. Maine
11. North Dakota
12. Pennsylvania
13. Idaho
14. Iowa
15. Washington
16. Colorado
17. Wisconsin
18. Minnesota
19. California
20. Illinois
21. Nebraska
22. Utah
23. New Jersey
24. New Hampshire
25. Rhode Island
26. Connecticut
27. Kansas
28. New Mexico
29. Arizona
30. West Virginia
31. Nevada
32. Maryland
33. Delaware
34. Michigan
35. Indiana
36. Virginia
37. Kentucky
38. Ohio
39. Louisiana
40. Missouri
41. Oklahoma
42. Florida
43. North Carolina
44. South Carolina
45. Texas
46. Mississippi
47. Arkansas
48. Georgia
49. Tennessee
50. Alabama

### CITIES

1. Boston
2. Washington, DC
3. San Francisco
4. Seattle
5. New York
6. Portland, OR
7. Minneapolis
8. Philadelphia
9. Honolulu
10. New Orleans
11. Baltimore
12. Chicago
13. Oakland
14. Denver
15. Sacramento
16. Tucson
17. Milwaukee
18. Atlanta
19. Cleveland
20. Los Angeles
21. Miami
22. Long Beach
23. San Diego
24. Detroit
25. Columbus
26. Albuquerque
27. Austin
28. Raleigh
29. Colorado Springs
30. Mesa
31. Omaha
32. San Jose
33. Louisville
34. Fresno
35. Virginia Beach
36. Tulsa
37. Houston
38. Phoenix
39. Indianapolis
40. Las Vegas
41. Kansas City, MO
42. El Paso
43. Memphis
44. Charlotte
45. San Antonio
46. Arlington, TX
47. Nashville
48. Jacksonville
49. Dallas
50. Oklahoma City
51. Fort Worth

(2.86%). Residents of major U.S. cities are 1.7 times more likely to walk or bicycle to work than the national average. According to the 2009 National Household Travel Survey (NHTS) 1.0% of all trips are by bicycle and 10.5% of all trips are by foot nationwide. It is difficult to determine bicycling and walking mode share for all trips at the state and city levels because of small sample sizes of NHTS.

Bicycle and pedestrian commuters are generally distributed proportionately among ethnic groups in the U.S., according to the 2009 ACS. Greater disparities are found among genders. According to the 2009 NHTS, 49% of walking trips are men and 51% are female, yet among bicycle trips, 76% are male and only 24% are female. A look at age reveals that while walking is generally distributed proportionately among age groups, youth under age 16 make up 39% of bicycle trips. This age group accounts for just 21% of the population.

### Safety

In 2009, 4,092 pedestrians and 630 bicyclists were killed in traffic. This is down significantly from 2005 when 4,892 pedestrians and 786 bicyclists were traffic fatality victims. While overall numbers of bicycle and pedestrian fatalities are declining, pedestrians and bicyclists are still at a disproportionate risk for being a victim of a traffic fatality. Although just 10.5% of trips in the U.S. are by foot and 1.0% are by bicycle, 11.7% of traffic fatalities are pedestrians and 1.8% are bicyclists. In major U.S. cities, 12.7% of trips are by foot and 1.1% are by bicycle,

**Source:** 2007-2009 ACS Notes: This ranking is based on the combined bike and walk to work share from the 2007-2009 ACS. The number one position indicates the state and city with the highest share of commuters who commute by bicycle or foot. View graphs illustrating this data on pages 34 and 35 of this report.

yet 26.9% of traffic fatalities are pedestrians and 3.1% are bicyclists.

According to the 2007-2009 Fatality Analysis Reporting System (FARS) and the 2009 NHTS, seniors are the most vulnerable age group. While adults over 65 make up 10% of walking trips and 6% of bicycling trips, they account for 19% of pedestrian fatalities and 10% of bicyclist fatalities.

### Policies and Provisions

A number of policies and provisions are represented in this report including funding and staffing levels, infrastructure, written policies, and bike-transit integration. This report marks a significant increase in planning for bicycling and walking over the last two years. Many states and cities have adopted new plans and goals to increase bicycling and walking and reduce fatalities. Overall, states and cities still rank poorly for funding bicycling and walking at a rate proportionate to active transportation levels.

### Funding for Bicycling and Walking

2010 data from the Federal Highway Administration reveal that states spend just 1.6% of their federal transportation dollars on bicycling and walking. This amounts to just \$2.17 per capita for bicycling and walking. About 40% of these dedicated bicycle and pedestrian dollars are from the Transportation Enhancement (TE) program. The majority of TE funding (48%) goes toward building bicycle and pedestrian facilities and to bicycle and pedestrian education.

**Sources:** FARS 2007-2009 ACS 2007-2009 **Notes:** This ranking is based on the fatality rate which is calculated by dividing the number of annual pedestrian and bicycle fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population walking and bicycling to work). The number one position indicates the safest state or city according to the fatality rate. View these data on pages 56-62 of this report.

## Low to High Ranking of Bike/Ped Fatality Rates

### STATES

1. Vermont
2. Nebraska
3. Alaska
4. Wyoming
5. South Dakota
6. North Dakota
7. Iowa
8. Maine
9. Massachusetts
10. Minnesota

11. Idaho
12. New Hampshire
13. Oregon
14. Washington
15. Wisconsin
16. Montana
17. New York
18. Pennsylvania
19. Kansas
20. Colorado
21. Hawaii
22. Utah
23. Illinois
24. Connecticut
25. West Virginia
26. Ohio
27. Indiana
28. Rhode Island
29. Virginia
30. Kentucky
31. New Jersey
32. California
33. Michigan
34. Missouri
35. Oklahoma
36. Nevada
37. Tennessee
38. New Mexico
39. Maryland
40. Arizona
41. Arkansas
42. Delaware
43. Texas
44. North Carolina
45. Georgia
46. Mississippi
47. Alabama
48. Louisiana
49. South Carolina
50. Florida

### CITIES

1. Boston
2. Minneapolis
3. Omaha
4. Seattle
5. Portland, OR
6. Washington, DC
7. New York
8. San Francisco
9. Philadelphia
10. Honolulu

11. Colorado Springs
12. Chicago
13. Cleveland
14. Oakland
15. Baltimore
16. Milwaukee
17. Sacramento
18. Denver
19. Virginia Beach
20. Tucson
21. Mesa
22. San Diego
23. New Orleans
24. San Jose
25. Columbus
26. Los Angeles
27. Atlanta
28. Indianapolis
29. Long Beach
30. Austin
31. Arlington, TX
32. Raleigh
33. Albuquerque
34. Las Vegas
35. El Paso
36. Memphis
37. Fresno
38. San Antonio
39. Nashville
40. Detroit
41. Houston
42. Charlotte
43. Louisville
44. Miami
45. Kansas City, MO
46. Oklahoma City
47. Tulsa
48. Phoenix
49. Dallas
50. Jacksonville
51. Fort Worth



## High to Low Ranking of Per Capita Funding to Bike/Ped

### STATES

1. Alaska
2. Vermont
3. Montana
4. Wyoming
5. Delaware
6. New Mexico
7. South Dakota
8. Rhode Island
9. Kentucky
10. Iowa
11. Minnesota
12. North Dakota
13. Indiana
14. Washington
15. Pennsylvania
16. New Hampshire
17. Missouri
18. Tennessee
19. Idaho
20. Maine
21. Florida
22. Arizona
23. Georgia
24. Oregon
25. Massachusetts
26. Alabama
27. North Carolina
28. Louisiana
29. Kansas
30. Colorado
31. Utah
32. Hawaii
33. Michigan
34. California
35. Connecticut
36. Nebraska
37. New York
38. Mississippi
39. West Virginia
40. Texas
41. Ohio
42. Wisconsin
43. Arkansas
44. Nevada
45. Illinois
46. South Carolina
47. New Jersey
48. Oklahoma
49. Virginia
50. Maryland

### CITIES

1. Washington, DC
2. Minneapolis
3. Sacramento
4. Miami
5. Tucson
6. Dallas
7. New Orleans
8. Albuquerque
9. Nashville
10. Oakland
11. Atlanta
12. Kansas City, MO
13. Portland, OR
14. Omaha
15. San Diego
16. Philadelphia
17. Raleigh
18. San Francisco
19. Indianapolis
20. Houston
21. San Jose
22. San Antonio
23. Charlotte
24. Denver
25. Austin
26. Milwaukee
27. Jacksonville
28. Memphis
29. Long Beach
30. Phoenix
31. Fresno
32. El Paso
33. Seattle
34. Detroit
35. Colorado Springs
36. Louisville
37. Columbus
38. Cleveland
39. Tulsa
40. Honolulu
41. Los Angeles
42. Boston
43. Fort Worth
44. Mesa
45. Baltimore
46. Chicago
47. Virginia Beach
48. Arlington, TX
49. Las Vegas
50. New York

## Planning and Legislation

Since the 2010 Benchmarking Report, there has been a 63% increase in the number of states that have published goals to increase bicycling and walking, and a 27% increase in the number of states that have published goals to reduce bicycle and pedestrian fatalities.

2011 League of American Bicyclist data on state legislation reveal that most states have basic bicyclists' rights legislation such as allowing bicyclists to legally ride two-abreast, signal right turns with their right hand, and to take a full traffic lane in the presence of a sidepath or bike lane. Twenty-one states have 3-foot passing laws that require motorists to pass bicyclists at a safe distance of at least three feet (up from 14 as of the 2010 Benchmarking Report).

A survey of other policies found that 19 (of the 51 largest) U.S. cities and 26 states have adopted complete streets policies that require streets be built to accommodate all potential road users. Nearly half of states report having a bicycle and pedestrian advisory committee. And 38 states report having a publicly available bicycle map.

Cities were surveyed on a number of planning and policy initiatives. Forty-one cities report having a bicycle master plan, and 21 have a pedestrian master plan. Over half of cities have bicycle and pedestrian advisory committees.

(Continued page 16)

**Source:** FHWA FMIS 2006-2010 **Notes:** This ranking is based on the per capita spending of federal funds by states and cities on bicycling and walking using a 5-year average (2006-2010). Data is based on funds obligated to projects in this period and are not necessarily the amount spent in these years. The number one position indicates the state or city with the highest amount of per capita federal funding to bicycling and walking. Due to large amounts of deobligated funds in the 5-year period between 2006-2010, accurate funding estimates could not be obtained for Oklahoma City. View these data on pages 86-87 of this report.

# State Overview of Primary Benchmarking Indicators

Key: ● = Top 1/3 among states ○ = Middle 1/3 among states ○ = Bottom 1/3 among states \* = data unavailable

| State                | Mode Share | Safety | Funding | Policy (1) | Education/Encouragement (2) | Advocacy Capacity (3) |
|----------------------|------------|--------|---------|------------|-----------------------------|-----------------------|
| Alabama              | ○          | ○      | ●       | ○          | ○                           | ●                     |
| Alaska               | ●          | ●      | ●       | ●          | ○                           | ○                     |
| Arizona              | ●          | ○      | ●       | ●          | ●                           | ●                     |
| Arkansas             | ○          | ○      | ○       | ○          | ○                           | ●                     |
| California           | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Colorado             | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Connecticut          | ●          | ●      | ○       | ●          | ○                           | ●                     |
| Delaware             | ●          | ○      | ●       | ●          | ●                           | ●                     |
| Florida              | ○          | ○      | ●       | ●          | ●                           | ●                     |
| Georgia              | ○          | ○      | ●       | ●          | ○                           | ●                     |
| Hawaii               | ●          | ●      | ●       | ●          | ○                           | ●                     |
| Idaho                | ●          | ●      | ●       | ●          | ○                           | ●                     |
| Illinois             | ●          | ●      | ○       | ●          | ●                           | ●                     |
| Indiana              | ○          | ●      | ●       | ○          | ●                           | *                     |
| Iowa                 | ●          | ●      | ●       | ○          | ●                           | ●                     |
| Kansas               | ●          | ●      | ●       | ●          | ●                           | *                     |
| Kentucky             | ○          | ●      | ●       | ●          | ●                           | ○                     |
| Louisiana            | ○          | ○      | ●       | ●          | ●                           | ○                     |
| Maine                | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Maryland             | ●          | ○      | ○       | ●          | ●                           | ●                     |
| Massachusetts        | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Michigan             | ●          | ●      | ●       | ●          | ○                           | ●                     |
| Minnesota            | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Mississippi          | ○          | ○      | ○       | ○          | ●                           | ●                     |
| Missouri             | ○          | ●      | ●       | ○          | ●                           | ●                     |
| Montana              | ●          | ●      | ●       | *          | *                           | ○                     |
| Nebraska             | ●          | ●      | ○       | ○          | ○                           | ○                     |
| Nevada               | ●          | ○      | ○       | ●          | ●                           | ●                     |
| New Hampshire        | ●          | ●      | ●       | ○          | ●                           | ●                     |
| New Jersey           | ●          | ●      | ○       | ●          | ●                           | ●                     |
| New Mexico           | ●          | ○      | ●       | *          | *                           | ●                     |
| New York             | ●          | ●      | ○       | ●          | ○                           | ●                     |
| North Carolina       | ○          | ○      | ●       | ●          | ●                           | ●                     |
| North Dakota         | ●          | ●      | ●       | ○          | ○                           | ○                     |
| Ohio                 | ○          | ●      | ○       | ○          | ●                           | *                     |
| Oklahoma             | ○          | ○      | ○       | ○          | ●                           | ●                     |
| Oregon               | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Pennsylvania         | ●          | ●      | ●       | ●          | ○                           | ●                     |
| Rhode Island         | ●          | ●      | ●       | ●          | ●                           | *                     |
| South Carolina       | ○          | ○      | ○       | ○          | ●                           | ●                     |
| South Dakota         | ●          | ●      | ●       | ○          | ●                           | ●                     |
| Tennessee            | ○          | ○      | ●       | ●          | ●                           | ●                     |
| Texas                | ○          | ○      | ○       | ○          | ●                           | *                     |
| Utah                 | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Vermont              | ●          | ●      | ●       | ●          | ●                           | *                     |
| Virginia             | ○          | ●      | ○       | ●          | ●                           | ●                     |
| Washington           | ●          | ●      | ●       | ●          | ●                           | ●                     |
| West Virginia        | ●          | ●      | ○       | ○          | ○                           | ○                     |
| Wisconsin            | ●          | ●      | ○       | ●          | ●                           | ●                     |
| Wyoming              | ●          | ●      | ●       | ○          | ●                           | ○                     |
| Find the data (page) | 45-46      | 56-57  | 86      | 68, 72, 80 | 111, 113                    | 138                   |

## Interpreting the State and City Overview Tables

The tables on this page and next give an overview of how states and cities compare in six areas. Full circles indicate the best ranking; states and cities with full circles are within the top 1/3 among their peers. Half-circles represent the middle 1/3, and empty circles represent the bottom 1/3. States and cities with the most filled in circles represent those that are setting the benchmarks for bicycling and walking levels, safety, funding, policies, education/encouragement, and advocacy capacity. Below is an explanation for how the rankings on this page and next were determined.

**Mode Share:** This ranking is based on the combined share of commuters who bicycle and walk to work averaged over the most recent three years. The top 1/3 states and cities are those with the highest percentage of workers who commute by bicycle and foot. **Data source:** ACS 2007-2009.

**Safety:** This ranking is based on the bicycle and pedestrian fatality rate defined as number of annual bicycle and pedestrian deaths (using a 3-year average) divided by the population (weighted, or multiplied, by share of commuters who bicycle and walk to work). The top 1/3 states and cities are those with the lowest fatality rate, and thus the highest safety ranking. **Data Sources:** FARS 2007-2009, ACS 2009.

**Funding:** This ranking is based on the federal dollars per capita that are obligated to bicycling and walking annually. The top 1/3 states and cities are those with the highest per capita investment of federal dollars in bicycling and walking. **Data Source:** FHWA 2004-2008.

**Policies:** This ranking is based on the total number of policies promoting bicycling and walking adopted by the state/city. **Policies counted for states include:** Goals to increase walking, increase bicycling, decrease pedestrian fatalities, and decrease bicycle fatalities; Master Plan adopted for bicycling, walking, and trails; Bike/ Ped advisory committee; legal 2-abreast riding for bicycles; 3-foot/safe passing legislation; spending target; publicly available bicycle map; complete streets policy. **Policies counted for cities include:** goals to increase walking, increase bicycling, decrease pedestrian fatalities, and decrease bicycle fatalities; Master Plan adopted for bicycling and for walking; Bike/ Ped advisory committee; bicycle parking requirements in building/ garages, new buildings, and at public events; complete streets policy. **Data Sources:** State surveys, city surveys, League of American Bicyclists (1)

**Education/Encouragement:** This ranking is based on the total number of education/encouragement programs and state/city events. **Those counted for states include:**

# City Overview of Primary Benchmarking Indicators

**Key:** ● = Top 1/3 among cities ◐ = Middle 1/3 among cities ○ = Bottom 1/3 among cities \* = data unavailable

Share the road/public safety campaign; info on bicycling in driver's manual; driver's test questions on bicycling; state-sponsored ride to promote bicycling/activity; bicycling enforcement as a policy academy requirement; bicycling enforcement in police continuing education; and existence of an annual statewide bike/ped conference.

**Those counted for cities include:** Adult and youth bicycle education courses; Bike to Work Day events; open streets initiative; city-sponsored ride to promote bicycling/activity; public bike share program. **Data Source:** State and city surveys

**Advocacy Capacity:** This ranking is based on the 2010 per capita revenue of Alliance bicycling and walking advocacy organizations serving cities/states. Only statewide organizations are included for states and only organizations with a focus on serving a study area city are included for cities. Cities and states without dedicated Alliance advocacy organizations are marked by an empty circle. **Data Source:** Organization surveys (2)

**Notes:** (1) Because many states and cities have the same number of policies, policy rankings are not divided into even thirds. For states, those with more than 10 of the 14 policies considered are indicated with full circles; those with 8-10 policies are indicated with a half circle, and those with fewer than 8 policies are indicated with an empty circle. For cities, those with 10 or more of the 13 policies considered are indicated with full circles; those with 6-9 policies are indicated with a half circle, and those with 5 or fewer policies are indicated with an empty circle. (2) Because many states and cities have the same number of education and encouragement initiatives, these rankings are not divided into even thirds. For states, those with 6-7 of the 7 initiatives considered are indicated with full circles; those with 4-5 initiatives are indicated with a half circle, and those with 3 or fewer initiatives are indicated with an empty circle. For cities, those with 5-6 of the 6 initiatives considered are indicated with full circles; those with 3-4 initiatives are indicated with a half circle, and those with 2 or fewer initiatives are indicated with an empty circle. (3) These rankings are based on surveys of Alliance bicycling and walking advocacy organizations only. Because some cities and states are not served by dedicated Alliance advocacy organizations, for states, the 16 served by advocacy organizations with the greatest capacity are marked with a full circle, the 15 remaining states served by advocacy organizations are marked with half circles, and the remaining states not served by statewide Alliance advocacy organizations are indicated with empty circles. For cities the 15 served by advocacy organizations with the greatest capacity are marked with a full circle, the 14 remaining cities served by advocacy organizations are marked with half circles, and the remaining cities not served by dedicated Alliance advocacy organizations are indicated with empty circles.

| City                 | Mode Share | Safety | Funding | Policy (1) | Education/Encouragement (2) | Advocacy Capacity (3) |
|----------------------|------------|--------|---------|------------|-----------------------------|-----------------------|
| Albuquerque          | ◐          | ◐      | ●       | ●          | ◐                           | *                     |
| Arlington, TX        | ○          | ◐      | ○       | ●          | ◐                           | ○                     |
| Atlanta              | ◐          | ◐      | ●       | ◐          | ◐                           | ●                     |
| Austin               | ◐          | ◐      | ◐       | ◐          | ◐                           | ◐                     |
| Baltimore            | ●          | ●      | ○       | ◐          | ◐                           | ○                     |
| Boston               | ●          | ●      | ○       | ○          | ●                           | ●                     |
| Charlotte            | ○          | ○      | ◐       | ●          | ◐                           | ◐                     |
| Chicago              | ●          | ●      | ○       | ◐          | ●                           | ●                     |
| Cleveland            | ◐          | ●      | ○       | *          | *                           | ◐                     |
| Colorado Springs     | ◐          | ●      | ○       | ○          | ◐                           | ○                     |
| Columbus             | ◐          | ◐      | ○       | ●          | ◐                           | ●                     |
| Dallas               | ○          | ○      | ●       | ◐          | ◐                           | ◐                     |
| Denver               | ●          | ◐      | ◐       | ●          | ●                           | ◐                     |
| Detroit              | ◐          | ○      | ◐       | *          | *                           | ○                     |
| El Paso              | ○          | ○      | ◐       | ◐          | ○                           | ○                     |
| Fort Worth           | ○          | ○      | ○       | ○          | ○                           | ◐                     |
| Fresno               | ◐          | ○      | ◐       | ●          | ◐                           | ○                     |
| Honolulu             | ●          | ●      | ○       | ◐          | ●                           | ●                     |
| Houston              | ○          | ○      | ◐       | ◐          | ◐                           | ◐                     |
| Indianapolis         | ○          | ◐      | ◐       | *          | *                           | ●                     |
| Jacksonville         | ○          | ○      | ◐       | ●          | ◐                           | ○                     |
| Kansas City, MO      | ○          | ○      | ●       | ●          | ●                           | ◐                     |
| Las Vegas            | ○          | ◐      | ○       | ◐          | ○                           | *                     |
| Long Beach           | ◐          | ◐      | ◐       | ○          | ●                           | ◐                     |
| Los Angeles          | ◐          | ◐      | ○       | ◐          | ◐                           | ◐                     |
| Louisville           | ◐          | ○      | ○       | ◐          | ●                           | ◐                     |
| Memphis              | ○          | ○      | ◐       | ◐          | ◐                           | ◐                     |
| Mesa                 | ◐          | ◐      | ○       | ○          | ◐                           | ○                     |
| Miami                | ◐          | ○      | ●       | ◐          | ◐                           | ◐                     |
| Milwaukee            | ●          | ●      | ◐       | ◐          | ◐                           | ◐                     |
| Minneapolis          | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Nashville            | ○          | ○      | ●       | ●          | ◐                           | ○                     |
| New Orleans          | ●          | ◐      | ●       | ○          | ○                           | ◐                     |
| New York             | ●          | ●      | ○       | ◐          | ●                           | ●                     |
| Oakland              | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Oklahoma City        | ○          | ○      | *       | ◐          | ○                           | ○                     |
| Omaha                | ◐          | ●      | ●       | ◐          | ◐                           | *                     |
| Philadelphia         | ●          | ●      | ●       | ●          | ◐                           | ●                     |
| Phoenix              | ○          | ○      | ◐       | ◐          | ◐                           | ○                     |
| Portland, OR         | ●          | ●      | ●       | ●          | ●                           | ●                     |
| Raleigh              | ◐          | ◐      | ●       | ◐          | ○                           | ○                     |
| Sacramento           | ●          | ●      | ●       | ●          | ◐                           | ●                     |
| San Antonio          | ○          | ○      | ◐       | ○          | ◐                           | ○                     |
| San Diego            | ◐          | ◐      | ●       | ◐          | ◐                           | ◐                     |
| San Francisco        | ●          | ●      | ◐       | ●          | ●                           | ●                     |
| San Jose             | ◐          | ◐      | ◐       | ●          | ●                           | *                     |
| Seattle              | ●          | ●      | ◐       | ●          | ◐                           | ●                     |
| Tucson               | ●          | ◐      | ●       | ◐          | ◐                           | *                     |
| Tulsa                | ○          | ○      | ○       | ○          | ◐                           | ●                     |
| Virginia Beach       | ○          | ◐      | ○       | ●          | ○                           | ○                     |
| Washington, DC       | ●          | ●      | ●       | ●          | ●                           | *                     |
| Find the data (page) | 45,47      | 59,62  | 87      | 69, 73     | 114                         | 140                   |



## Infrastructure

City surveys examined current and planned bicycle and pedestrian infrastructure in order to benchmark the progress communities are making. Specifically, cities reported miles of bike lanes, bicycle routes, and multi-use paths. On average, cities have 1.8 miles of bicycle facilities (bike lanes, multi-use paths, and signed bicycle routes) per square mile—a 29% increase since the 2010 Benchmarking Report.

While implementation of innovative facilities such as bicycle boulevards and colored bike lanes is low, surveys indicated that there are new projects currently being implemented or in the process of approval. The number of cities that report having implemented innovative facilities has increased significantly in the last two years. Seventy-three percent of cities now report having implemented sharrows, or shared lane markings.

## Bike-Transit Integration

Bike-transit integration has proved to be a vital aspect of effective bicycle systems. The report analyzes responses from city and state surveys, as well as American Public Transportation Association (APTA) data, to see how well cities are integrating bicycle systems with transit. Forty-four cities report that 100% of their bus fleet have bicycle racks, a 19% increase over the past two years. Major U.S. cities report an average of 2.5 bicycle parking spaces at bus stops for every 10,000 residents.

## Education and Encouragement

Education and encouragement programs at the state and city level are effective ways to inform the public and promote bicycling and walking. Infor-

mation from state and city surveys and the National Center for Safe Routes to School illustrates the growth in bicycle and pedestrian education in communities. National Walk and Bike to School Day is a popular encouragement activity with growing school participation nationwide.

Thirty-eight cities report having youth bicycle education courses and 41 have adult courses. Youth education is a vital area of outreach because it has the potential to influence the habits of the next generation. The number of youth who participate in bicycle education courses in cities increased by 31% from two years ago. Surveys indicate a 40% increase in adult participation levels for bicycle educational courses over the last two years.

League of American Bicyclists' data indicate that almost all states (49) have information on bicycling in their state driver's manual, yet just 32 states have questions on bicycling on their state driver's exam. The majority of states (38) have a "Share the Road" or similar public safety campaign. Seventeen states report sponsoring a statewide ride to promote bicycling or physical activity.

The Alliance also collected data on professional education regarding bicycling and walking. Overall, these efforts are growing among states, but there is still great room for improvement. Only 20 states have bicycle enforcement as a police academy requirement. And, just 25 states report having hosted a statewide bicycle and pedestrian conference.

Cities were also surveyed on encouragement activities including presence of and participation levels in Bike to Work

Day events, open street/ciclovía initiatives, and city-sponsored bicycle rides. Bike to Work Day is the most common encouragement event with 43 cities participating with an average of one participant for every 286 adults. Thirty-two cities sponsor rides to promote bicycling or physical activity with an average of one participant for every 350 residents. Twenty-one cities have open street (car-free or ciclovía) initiatives with an average of one participant for every 37 residents.

### Cycling and Walking Advocacy

Advocacy organizations have the potential to influence bicycling and walking in the communities they serve

by advocating for and winning new policies, funding, infrastructure, and programs. The number of Alliance state and local bicycle and pedestrian advocacy organizations has been increasing steadily since the Alliance was founded in 1996. This report measures organization capacity of Alliance member organizations and sets standards for membership, revenue, staffing, and media exposure. Results from Alliance organization surveys vary widely because of the great variation in maturity and operations of these organizations as well as the communities they serve. Some organizations in this report are decades old while others were founded not long before these surveys were collected.

Photo by Dan Burden, Walkable and Livable Communities Institute



Surveys indicate that organizations serving cities earn significantly more per capita than their statewide counterparts. Local organizations earn an average of \$0.15 per resident served while statewide organizations earn just \$0.03 per resident. In general, organization revenue is diversified, coming from membership and donations, events, fees, grants, contracts, and the bicycle industry. Local Alliance organizations also have much higher per capita membership levels averaging one member per 1,522 residents. Statewide organizations have an average of one member per 4,975 residents. Similarly, statewide organizations operate with an average of 0.4 full-time-equivalent staff (FTE) per million residents served. Organizations serving cities average 2.2 FTE staff per million residents.

### Factors Influencing Bicycling and Walking

Analysis in this report shows several positive relationships between bicycling and walking rates and safety, advocacy capacity, density, and car ownership. While weather does not appear to be a factor that directly influences bicycling levels, density, advocacy capacity, and car ownership are a few factors that appear to influence bicycling and walking trips.

ACS and FARS data indicate a positive correlation between bicycling and walking levels and safety. In line with previous studies, an increase in walking and bicycling levels is strongly related to increased bicyclist and pedestrian safety.

### Public Health Benefits

To see how bicycling and walking influence public health, the Alliance

compared public health data to bicycling and walking levels. Data from the Behavioral Risk Factor Surveillance System (BRFSS) and ACS reflect a direct relationship between levels of bicycling and walking and several public health indicators. Data suggest that the risk for such health problems as obesity, diabetes, asthma, and hypertension will decrease with more bicycling and walking. States with lower bicycling and walking levels on average have higher levels of obesity, diabetes, hypertension, and asthma. States with higher levels of bicycling and walking also have a greater percentage of adults who meet the recommended 30-plus minutes of daily physical activity. This suggests that increasing bicycling and walking can help achieve public health goals of increasing physical activity and lowering rates of overweight and obesity.

### Economic Benefits

To see how bicycling and walking influence the economic strength of communities, the Alliance surveyed numerous studies and data sources. Evidence suggests that bicycling and walking projects create 11-14 jobs per \$1 million spent, compared to just 7 jobs created per \$1 million spent with highway projects. Surveys show that facilities for bicycling and walking attract tourists, event participants, and business. In addition bicycling and walking are affordable investments that save commuters money and in turn equate to more money available for local economies.

Studies that have performed cost/benefit analysis on bicycling and walking facilities have found that these facilities have significant benefit for public health, traffic congestion, and air quality. The cost benefit ratio of Portland, OR's bicycle investments, looking at just



health and fuel savings, ranged from 3.8-to-1 to 1.3-to-1.

## Conclusions

While many state and local communities are making sufficient efforts to promote bicycling and walking, much more work needs to be done. Barriers in staffing and funding remain a consistent limitation to promoting bicycling and walking. Bicycling and walking make up 11.5% of all trips, and 13.5% of traffic fatalities, and yet receive just 1.6% of federal transportation dollars.

The proven environmental, economic, and personal health benefits that bicycling and walking offer are evidence that increasing bicycling and walking levels are in the public good, yet a much greater investment is needed throughout the U.S. This Benchmarking

Report identifies which cities and states are leading the way and provides links to resources (Appendix 5) from these communities.

The Alliance recommends that government officials and advocates take the time to evaluate their efforts to promote bicycling and walking. This report can be used by communities to see how they measure up, to identify role models, and to set new goals. Continued benchmarking and improvements in the availability of data will strengthen the report in the coming years, and lend a better understanding of the factors that influence bicycling and walking. Ultimately, by providing a tool for communities to consistently measure progress, evaluate results, and set new targets, this report will advance efforts for a more bicycle- and pedestrian-friendly America.

Photo by Frank Chan, San Francisco Bicycle Coalition





Photo by woodleywonderworks.com

# 1: INTRODUCTION

**B**icycling and walking are good for public health, good for the environment, good for local economies, and help create vibrant communities. This report shows that bicycling and walking are prudent investments that deliver greater returns, and create more jobs, than investing in motorized transportation. Bicycling and walking are also critical components of a healthy active lifestyle that promises to improve health, help protect against various diseases, reduce stress, and improve overall quality of life. For these reasons, government officials, elected representatives, and the media are taking an increased interest in active transportation.

Since publishing the first biennial Benchmarking Report in 2007, there

have been many significant new efforts, programs, organizations, and policies promoting bicycling and walking in the United States. Since 2007, the Alliance's network has grown from 133 to nearly 200 grassroots bicycling and walking advocacy organizations.

In August 2008, the first public smart bike sharing program in the U.S. was launched in Washington, DC, and subsequent programs have sprung up in Boston, Chicago, Denver, Minneapolis, Nashville, San Antonio, and other cities.

In December 2009 the National Association of City Transportation Officials (NACTO) founded the Cities for Cycling project to document, promote, and implement the world's best bicycle transportation practices in U.S. cities.



The League of American Bicyclists has expanded its Bicycle Friendly Communities Program to make states, businesses, and universities eligible for "bicycle friendly" designation. In April 2011, the Pedestrian and Bicyclist Information Center awarded the inaugural Walk Friendly Community designations to 11 communities.

These efforts are receiving increasing support from people in the public eye. In February 2010, First Lady Michelle Obama launched her Let's Move campaign to reduce childhood obesity within one generation. Helping kids become more physically active is one of the program's main goals. In March 2010, U.S. Secretary of Transportation Ray LaHood came out as a champion of bicycling and walking and introduced a new policy that recommended "increased commitment to and investment in bicycle facilities and walking networks." In 2011, a survey of U.S. mayors revealed that they want more control of federal transportation money and 60% of mayors see bicycle and pedestrian projects as a major priority (Flusche 2011).

Public demand for bikeable and walkable places is also growing. A 2010 survey of 1,025 adults age 18 and older found that nearly half of drivers ages 18-34 are driving less. Nearly two-thirds reported they would drive less if transportation alternatives were more readily available. The cost of owning a car and concern for the environment were among the reasons younger drivers are leaving their cars parked (UPI 2010). A 2011 survey by the National Association of Realtors found that Americans favor walkable mixed-use neighborhoods with 56% of respondents selecting these neighborhoods over ones that require more driving between home, work, and

other destinations (National Association of Realtors 2011).

Momentum is growing for bicycle and walking friendly communities. This report gives a good picture of how the landscape is changing for bicycling and walking. It shows which states and cities are making strides and which are setting the benchmarks. Most importantly, it serves as a tool for officials, advocates, researchers, and the media to track and support continued efforts to increase investment in bicycling, walking, safety, and public health.



Photo courtesy of Transportation for America



# Benchmarking Bicycling and Walking

Benchmarking is the method of determining best practices or standards and who sets them. Government officials and bicycle and pedestrian advocates have all wondered at some point how their city or state compares with others. Officials and advocates need data to measure their progress and evaluate their efforts. The Alliance for Biking & Walking's Benchmarking Project collects data from government and national data sources, and through surveys to government officials and advocates. Results are published in this biennial Benchmarking Report to measure progress over time of the most-populous cities and states in regard to bicycling and walking.

Benchmarking helps to show officials and advocates where their city or state measures up and helps them to identify areas most in need of improvement. The ultimate objectives of the Benchmarking Project are to increase the number of people who bicycle and walk and to improve their safety. Through benchmarking, new goals can be set, programs evaluated, and continued progress made toward a bicycle and pedestrian friendly America.

## Objectives

### Promote Data Collection and Availability

Historically there has been little data available on bicycling and walking that can be compared across states and cit-



ies. Data that have existed are often not easily accessible to officials and advocates. One of the main objectives of the Alliance's Benchmarking Project is to promote data collection and availability. This project collects data from a number of government and national data sources and presents it in a way that is easily accessible to those who need it. Through biennial surveys of states, cities, and advocacy organizations, the Benchmarking Project makes new data available such as miles of infrastructure, staffing levels, and advocacy capacity. These data are not available from any other source, but are crucial to understanding mode share and safety outcomes.

## Measure Progress and Evaluate Results

Benchmarking is a necessary step to give communities a true picture of how they compare to other communities, what areas they are excelling in, and where they are falling behind. Most importantly, these data enable advocates and officials to evaluate the results of their efforts. Because the Benchmarking Project is ongoing, states and cities can measure their progress over time and will see the impacts of their efforts. By providing a consistent and objective tool for evaluation, this report allows states and cities to determine what works and what doesn't. Successful models can be emulated and failed models discarded.

## Support Efforts to Increase Bicycling and Walking

The ultimate objectives of the Alliance's Benchmarking Project are to support the efforts of officials and advocates to increase bicycling and walking in their communities and improve bicycle and pedestrian safety across the U.S. By comparing bicycling and walking statistics across states and cities, this report highlights and praises efforts of communities who provide models, encourages those making progress, and makes states and cities aware of areas where they need work. The Alliance hopes that this report will be used by communities to set goals for increasing bicycling and walking, plan strategies using best practice models, and evaluate results over time. The Alliance strives to make this project a service and tool for officials and advocates so that they can chart the best course toward more bikeable and walkable communities.

## Make the Health Connection

The Centers for Disease Control and Prevention (CDC) has declared obesity an epidemic, and people are now looking more closely at the lifestyle choices that may be to blame. Among the top are unhealthy diet and sedentary lifestyles. Studies demonstrate a link between the built environment and levels of physical activity (Frank et al., 2004; Goldberg 2007; Salems and Handy 2008; TRB 2005). The way communities are designed is inextricably linked to the amount of physical activity their residents average. Where environments are built with bicyclists and pedestrians in mind, more people bicycle and walk. These environments increase opportunities for physical activity and promote healthy lifestyles.

Nearly 40% of all trips are two miles or less and 27% are one mile or less (NHTS). These are trips considered an easily bikeable or walkable distance. Now that people are looking for answers to reversing the obesity epidemic, increasing bicycling and walking is an obvious solution.

Alliance for Biking & Walking has partnered with the CDC for this project in an effort to highlight the connection between healthy lifestyles and bicycling and walking. This report includes data on physical activity, obesity and overweight trends, high blood pressure rates, and diabetes, to illustrate the connection between bicycling and walking levels and these health indicators. Along with illustrating the correlation between bicycling and walking and health, the Alliance hopes to show, over time, that as bicycling and walking levels increase, the obesity epidemic begins to reverse.

# Study Area Populations

| Rank | State          | Population | Rank | City             | Population |
|------|----------------|------------|------|------------------|------------|
| 1    | California     | 36,961,664 | 1    | New York         | 8,391,881  |
| 2    | Texas          | 24,782,302 | 2    | Los Angeles      | 3,831,880  |
| 3    | New York       | 19,541,453 | 3    | Chicago          | 2,850,502  |
| 4    | Florida        | 18,537,969 | 4    | Houston          | 2,260,918  |
| 5    | Illinois       | 12,910,409 | 5    | Phoenix          | 1,593,660  |
| 6    | Pennsylvania   | 12,604,767 | 6    | Philadelphia     | 1,547,297  |
| 7    | Ohio           | 11,542,645 | 7    | San Antonio      | 1,373,677  |
| 8    | Michigan       | 9,969,727  | 8    | San Diego        | 1,306,228  |
| 9    | Georgia        | 9,829,211  | 9    | Dallas           | 1,299,590  |
| 10   | North Carolina | 9,380,884  | 10   | San Jose         | 964,679    |
| 11   | New Jersey     | 8,707,740  | 11   | Detroit          | 910,848    |
| 12   | Virginia       | 7,882,590  | 12   | San Francisco    | 815,358    |
| 13   | Washington     | 6,664,195  | 13   | Jacksonville     | 813,518    |
| 14   | Arizona        | 6,595,778  | 14   | Indianapolis     | 807,640    |
| 15   | Massachusetts  | 6,593,587  | 15   | Austin           | 790,593    |
| 16   | Indiana        | 6,423,113  | 16   | Columbus         | 773,021    |
| 17   | Tennessee      | 6,296,254  | 17   | Fort Worth       | 731,588    |
| 18   | Missouri       | 5,987,580  | 18   | Charlotte        | 704,417    |
| 19   | Maryland       | 5,699,478  | 19   | Memphis          | 676,646    |
| 20   | Wisconsin      | 5,654,774  | 20   | Boston           | 645,187    |
| 21   | Minnesota      | 5,266,215  | 21   | Baltimore        | 637,418    |
| 22   | Colorado       | 5,024,748  | 22   | El Paso          | 620,440    |
| 23   | Alabama        | 4,708,708  | 23   | Seattle          | 616,669    |
| 24   | South Carolina | 4,561,242  | 24   | Denver           | 610,345    |
| 25   | Louisiana      | 4,492,076  | 25   | Nashville        | 605,466    |
| 26   | Kentucky       | 4,314,113  | 26   | Milwaukee        | 605,027    |
| 27   | Oregon         | 3,825,657  | 27   | Washington, DC   | 599,657    |
| 28   | Oklahoma       | 3,687,050  | 28   | Las Vegas        | 567,610    |
| 29   | Connecticut    | 3,518,288  | 29   | Portland, OR     | 566,606    |
| 30   | Iowa           | 3,007,857  | 30   | Louisville       | 566,492    |
| 31   | Mississippi    | 2,951,996  | 31   | Oklahoma City    | 560,226    |
| 32   | Arkansas       | 2,889,450  | 32   | Tucson           | 543,907    |
| 33   | Kansas         | 2,818,747  | 33   | Atlanta          | 540,932    |
| 34   | Utah           | 2,784,572  | 34   | Albuquerque      | 529,216    |
| 35   | Nevada         | 2,643,085  | 35   | Kansas City, MO  | 482,228    |
| 36   | New Mexico     | 2,009,671  | 36   | Fresno           | 479,911    |
| 37   | West Virginia  | 1,819,777  | 37   | Mesa             | 467,178    |
| 38   | Nebraska       | 1,796,622  | 38   | Sacramento       | 466,685    |
| 39   | Idaho          | 1,545,801  | 39   | Long Beach       | 462,594    |
| 40   | New Hampshire  | 1,324,575  | 40   | Omaha            | 454,714    |
| 41   | Maine          | 1,318,301  | 41   | Virginia Beach   | 433,575    |
| 42   | Hawaii         | 1,295,178  | 42   | Miami            | 433,143    |
| 43   | Rhode Island   | 1,053,209  | 43   | Cleveland        | 431,369    |
| 44   | Montana        | 974,989    | 44   | Oakland          | 409,151    |
| 45   | Delaware       | 885,122    | 45   | Raleigh          | 405,197    |
| 46   | South Dakota   | 812,383    | 46   | Colorado Springs | 399,803    |
| 47   | Alaska         | 698,473    | 47   | Tulsa            | 389,369    |
| 48   | North Dakota   | 646,844    | 48   | Minneapolis      | 385,384    |
| 49   | Vermont        | 621,760    | 49   | Arlington        | 380,072    |
| 50   | Wyoming        | 544,270    | 50   | Honolulu         | 374,658    |
|      |                |            | 51 * | New Orleans      | 354,850    |

Source: 2009 ACS Note: \* New Orleans is not currently the 51st largest U.S. city but was included in this report for consistency and continuity with the 2007 and 2010 Benchmarking Reports.

Data and illustrations in this report are intended to be used by officials and advocates to argue for bicycling and walking as an important part of the solution to creating healthier communities.

## Strengthen the Alliance's Network

Lastly, the Alliance aims to strengthen its network of bicycle and pedestrian advocacy organizations by providing organizations the data they need to evaluate their success, prove results, and gain prominence in their communities. Alliance organizations can show data from this report to their community leaders, government officials, and media to highlight areas in which their community is successful, making progress, and in need of improvements.

Alliance organizations can also use these data to prove that advocacy gets results by showing the link between advocacy capacity and levels of bicycling and walking. This report is a tool for Alliance member organizations to gain prominence and win safe and accessible streets for bicycling and walking in their communities.

## Study Areas and Data Collection

### 50 States / 51 Cities

The Benchmarking Project focuses data collection efforts on the 50 U.S. states, the 50 largest U.S. cities,



and New Orleans<sup>(1)</sup>. The 51 largest cities were chosen for this study because these areas are the largest population areas of U.S. residents. Cities are also generally more densely developed than suburban and rural communities, and so may have greater opportunities for conversion of car trips to bicycling and walking.

## National Data Collection

The Project Team identified national and uniform government sources for data in this report whenever possible. National data sources utilized for this report include:

- American Community Survey (ACS) (2005-2009)
- American Public Transportation Association (APTA) (2010)
- Behavioral Risk Factor Surveillance System (BRFSS) (2009)
- Federal Highway Administration's FMIS (FHWA) (2004-2010)
- Fatality Analysis Reporting System (FARS) (2005-2009)
- League of American Bicyclists (LAB) Bicycle Friendly States Program (2011)
- National Center for Safe Routes to School (2011)
- National Complete Streets Coalition (2011)
- National Health Interview Survey (NHIS) (2005)
- National Health and Nutrition Examination Study (NHANES) (2005-2006)
- National Household Travel Survey (2001, 2009)

**Note:** (1) New Orleans was included in the 2007 Benchmarking Report as a top 50 population city (according to 2005 ACS population data), but experienced dramatic population loss after Hurricane Katrina in 2005. Raleigh, NC, moved up into the top 50 largest cities and was the only new city added for this report in 2010. The project team chose to keep New Orleans in this analysis to maintain consistency in cities reported. Throughout this report we refer to the "51 Largest U.S. Cities" which includes the 50 largest U.S. cities and New Orleans. Throughout this report, the top 51 largest U.S. cities are also referred to as "major" or "largest" U.S. cities.



Photo by Jim Swanson

# Primary Benchmarks in This Report

| Input Benchmarks                    |  |
|-------------------------------------|--|
| <b>Policy</b><br>(Chapter 4)        | <ul style="list-style-type: none"> <li>♦ funding levels (per capita and % of transportation dollars to bicycling and walking)</li> <li>♦ complete streets policies</li> <li>♦ goals to increase bicycling and walking</li> <li>♦ goals to increase safety</li> <li>♦ bike/ped master plan</li> <li>♦ bike/ped advisory committee</li> <li>♦ legislation</li> <li>♦ infrastructure (existing and planned miles per square mile)</li> <li>♦ bike-transit integration               <ul style="list-style-type: none"> <li>• bicycle racks on buses</li> <li>• bicycle parking spaces at transit stations (per capita)</li> <li>• bicycle access on rail</li> </ul> </li> </ul> |
| <b>Programs</b><br>(Chapter 5)      | <ul style="list-style-type: none"> <li>♦ adult and youth bicycle education courses participation (per capita)</li> <li>♦ Bike to Work Day participation (per capita)</li> <li>♦ open streets (ciclovía) initiatives participation (per capita)</li> <li>♦ city/state-sponsored bicycle rides participation (per capita)</li> <li>♦ Walk and Bike to School Day participation (per capita)</li> </ul>   |
| <b>Advocacy</b><br>(Chapter 6)      | <ul style="list-style-type: none"> <li>♦ presence of dedicated bike/ped advocacy organization</li> <li>♦ capacity indicators of advocacy organization               <ul style="list-style-type: none"> <li>• membership (per capita)</li> <li>• income (per capita)</li> <li>• staff levels (per capita)</li> <li>• contacts (per capita)</li> </ul> </li> </ul>   |
| Outcome Benchmarks                  |  |
| <b>Mode share</b><br>(Chapter 2)    | <ul style="list-style-type: none"> <li>♦ share of commuters</li> <li>♦ all trips</li> <li>♦ demographics               <ul style="list-style-type: none"> <li>• age</li> <li>• gender</li> <li>• ethnicity</li> <li>• income</li> </ul> </li> </ul>  |
| <b>Safety</b><br>(Chapter 3)        | <ul style="list-style-type: none"> <li>♦ fatalities (number and percent of all traffic fatalities)</li> <li>♦ risk</li> <li>♦ disparities in mode share and fatalities</li> <li>♦ demographics               <ul style="list-style-type: none"> <li>• age</li> </ul> </li> </ul>   |
| <b>Public health</b><br>(Chapter 8) | <ul style="list-style-type: none"> <li>♦ overweight and obesity levels</li> <li>♦ hypertension (high blood pressure) levels</li> <li>♦ diabetes levels</li> <li>♦ asthma levels</li> <li>♦ physical activity levels</li> </ul>   |

- National Transportation Enhancements Clearinghouse (2011)
- Rails-to-Trails Conservancy (2011)
- Safe Routes to School National Partnership (SRTSNP) State of the State's Report (2011)
- School Transportation News (2011)
- U.S. Census (1990, 2000)
- United States Historical Climatology Network (USHCN)
- Web-based Injury Statistics Query and Reporting System (WISQARS) (2009)

In some cases, data in this report come from individual independent studies. The sources for all data are identified throughout the report with accompanying charts, tables, and graphics. An overview of the national data sources used in this report can be found in Appendix 1 on page 199. Individual studies cited in this report can be referenced in the Bibliography on page 231.

## State and City Surveys

Many of the variables this report measures are not currently available from other national sources. In these cases, the project team relied on surveys completed by city and state agencies for data on indicators such as miles of bicycle facilities, city and state education efforts, and policies. The surveys were sent to leaders of Alliance organizations, government officials, and advocates in the 50 states and 51 cities represented in this report in October 2010. Because Alliance advocacy leaders can tap existing relationships with local government officials, they were able to help increase the survey response rate and ensure that finished surveys were as complete as possible.

Surveys were completed by department of transportation staff, metropolitan



planning organization staff, city officials, and Alliance advocacy leaders. In many cases surveys required input from multiple agencies because the requested data were not easily accessible in one place. The project team reached out to survey respondents through March 2011, with the final data for the report coming in early April. All data were entered into the Benchmarking Project's data collection tool, checked for quality control, and analyzed over the next several months. This report relies largely on self-reported data and while the Alliance has made all efforts to verify, the accuracy cannot be guaranteed.

## Benchmarks in This Report

Bicycling and walking mode share  
(percent of all trips and percent of trips

to work) and safety are the two primary outcome benchmarks of this project. Because our ultimate goals are to increase bicycling and walking, and improve bicyclist and pedestrian safety, these are the ultimate benchmarks to measure the progress of states and cities. We also measure a number of variables (called "input benchmarks" here) which we believe, and research has shown, influence levels of bicycling, walking, and safety. Input benchmarks are the factors that affect the outcome benchmarks. Policies, programs, and advocacy capacity are the three primary areas measured in this report. While likely no single policy or program measured here is solely responsible for bicycling and walking levels and safety, a number of them combined may shape mode share and safety levels.

This report includes additional data on factors that may influence bicycling and walking including weather, residential





density, and levels of car ownership. This report also includes data on public health, an outcome benchmark of this project.

## Using This Report

The Benchmarking Project is intended as a resource for government officials, bicycle and pedestrian advocates, researchers, and the media searching for comparable data and means to measure progress. We encourage you to search this report for your city or state to see how you compare to others. To make data easy to find, this report orders all data tables alphabetically by city or state. Charts and graphs are ordered by benchmark in order to most clearly see how states and cities compare with each other. **Here are a few additional tips for using this report:**

1. **See where you measure up:** Review the report for your city or state. See how your city/state compares to others. Are you below or above the average for other cities/states? Note where you are leading and where you are behind.
2. **Connect with the media:** Consider issuing a press release or talking with the media about this report. Discuss how your state or city stacks up against others in bicycling and walking levels, safety, and funding. Highlight any areas where you are leading and opportunities for improvement. Use the data to support the work you are doing to promote bicycling and walking locally.
3. **Evaluate your efforts:** Think about where you have been focusing your efforts toward increasing bicycling and walking and safety. Are these efforts working? Look for trends in the data in this report. Look for benchmarks set by cities and states that are leading in the area you are working in.
4. **Set new goals:** Use the data in this report to set new goals and refocus your efforts if needed. There are examples in this report of significant improvements in just a few short years. You will find which cities and states are leading in funding, safety, facilities, and other areas and will also see what the national average and averages for major U.S. cities are. Use these benchmarks to set goals for your city/state.
5. **Use it as a reference book:** The Alliance has heard from a number of government officials and advocates that the Benchmarking Report is a publication they reference frequently in their work. Keep this report on your office bookshelf in an accessible location or digital format. Use it when you are contacted by the media for statistics in your community, or when you need facts for a presentation or paper you are preparing. Use these data to support your work promoting bicycling and walking in your state or city.
6. **Share it:** Purchase extra hard copies of the report to give to your local elected and agency officials, organization leaders, and others who can use it. The report can be a great reason to have a meeting, talk about the current status, and improvements you can mutually strive for. It is always best to deliver the report in person. Also share the link to the Benchmarking Project Website with members, allies, and funders."

If you have questions about the data in this report, would like to request additional data from the Benchmarking Project, have feedback for our team, or other questions or inquiries, please don't hesitate to contact us at [benchmarking@PeoplePoweredMovement.org](mailto:benchmarking@PeoplePoweredMovement.org).



Photo courtesy of Ernesto De Quesada

## 2: LEVELS OF BICYCLING AND WALKING

### How Many People Bicycle and Walk?

The question of how many people in a given area bicycle and walk, and what percentage of trips bicycling and walking account for, is arguably the most important question for advocates and officials. Bicycling and walking levels are the ultimate outcome benchmarks of all efforts to promote bicycling and walking. These figures show communities if they are gaining or losing ground in their efforts to convert more trips to active transportation. Unfortunately, accurate and comparable data on bicycling and walking levels are still very limited<sup>(1)</sup>.

### Trip Data for This Report

This report relied on the most consistent and dependable source of data on levels of bicycling and walking available: the American Community Survey (ACS). The ACS is an annual survey which provides yearly estimates on the share of workers who usually commute by bicycle or foot. ACS data are available as 1-year estimates, 3-year estimates, and 5-year estimates. Five-year estimates provide the greatest accuracy, and 1-year estimates provide the most current data. In this report, 3-year estimates were used when comparing states and cities to provide a current, yet more accurate picture of levels of biking and walking. One-year estimates are used for national averages only. This report also includes the estimated bi-

<sup>(1)</sup> For a discussion of the challenges with determining accurate levels of bicycling and walking, see Appendix 3, page 202. Appendix 3 also contains a discussion on the differences between the ACS and Census methodologies.

# STATE RANKING

## Cycling to Work

1. Oregon
2. Montana
3. Idaho
4. Colorado
5. Wyoming
6. California
7. Hawaii
8. Alaska
9. Washington
10. Arizona
11. Minnesota
12. Utah
13. New Mexico
14. Wisconsin
15. Massachusetts
16. Vermont
17. North Dakota
18. Florida
19. Illinois
20. South Dakota
21. Nevada
22. Nebraska
23. Maine
24. New York
25. Pennsylvania
26. Michigan
27. Iowa
28. Indiana
29. Kansas
30. Delaware
31. Louisiana
32. New Hampshire
33. Virginia
34. Ohio
35. New Jersey
36. Rhode Island
37. Maryland
38. Connecticut
39. Texas
40. South Carolina
41. North Carolina
42. Oklahoma
43. Kentucky
44. Missouri
45. Georgia
46. Mississippi
47. West Virginia
48. Tennessee
49. Arkansas
50. Alabama

## Walking to Work

1. Alaska
2. New York
3. Vermont
4. Montana
5. Hawaii
6. South Dakota
7. Massachusetts
8. Maine
9. Wyoming
10. Pennsylvania
11. Iowa
12. North Dakota
13. Oregon
14. Washington
15. Wisconsin
16. New Jersey
17. New Hampshire
18. Nebraska
19. Illinois
20. Idaho
21. Rhode Island
22. Minnesota
23. Colorado
24. Connecticut
25. Utah
26. West Virginia
27. California
28. Kansas
29. Maryland
30. Delaware
31. New Mexico
32. Kentucky
33. Michigan
34. Nevada
35. Virginia
36. Ohio
37. Indiana
38. Arizona
39. Louisiana
40. Missouri
41. Oklahoma
42. North Carolina
43. South Carolina
44. Mississippi
45. Arkansas
46. Texas
47. Georgia
48. Florida
49. Tennessee
50. Alabama

cycling and walking mode share for all trips from the 2009 National Household Travel Survey (NHTS).

This report looks at the share of commuters who walk or bike to work using data from the 1990 and 2000 decennial Census, and annual ACS between 2005 and 2009, and the most recent 3-year average (2007-2009) and 5-year average (2005-2009) from the ACS. Although work trips account for only 16% of all trips (NHTS 2009), these data provide a glimpse into trends in bicycling and walking levels over the last 19 years.

## Findings on Mode Share

The Alliance used 2009 ACS data to determine that nationwide, an average of 3.5% of commuters get to work by bicycle (0.6%) or foot (2.9%). In the major U.S. cities studied here, the share of commuters by bicycle and foot is higher at 5.9% (1.0% bicycling and 4.9% walking). People in major cities are 1.7 times more likely to bicycle to work, and 1.7 times more likely to walk to work, than their counterparts nationwide.

Since the 2010 Benchmarking Report, Oregon remains the state with the highest bicycle to work share at 2.1%. Portland retains the highest share of workers commuting by bicycle—5.5%—among cities in this study. Alabama, Arkansas, and Tennessee rank lowest in bicycle to work commute share with only 0.1% of work trips by bicycle. San Antonio, Oklahoma City, and Dallas

**Tables to left:** Source: 2007-2009 ACS Notes: This ranking is based on the 3-year average share of commuters who bicycle and walk to work. The state with the greatest share of commuters who bicycle or walk is ranked #1. The 50th position is the state with the least percentage of commuters who bicycle or walk. View these data on pages 45 and 46 of this report..

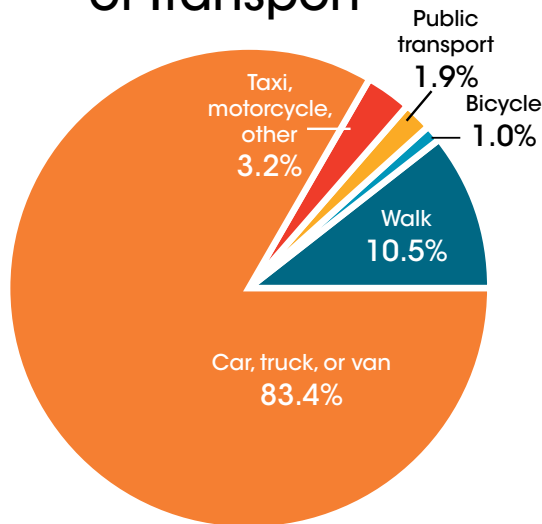


rank lowest among cities for bicycle work commute share with just 0.1% of work trips by bicycle.

Alaska and Boston remain the state and city with the highest pedestrian commute share (8.0% and 13.9% of all workers commute by foot, respectively). Alabama, with only 1.3% of work trips by foot, ranks lowest among states. Fort Worth has the lowest pedestrian commute share among cities—just 1.2% of work trips by foot.

According to 2009 NHTS estimates the total bicycle mode share for all trip purposes nationwide is 1.0%. In the largest metropolitan areas, 1.1% of all trips are by bicycle.

## U.S. Trips by Mode of Transport



**Source:** NHTS 2009 (Graph above) and ACS 2007-2009 (ranking to right) **Notes:** (ranking to right) This ranking is based on the share of commuters who bicycle and walk to work in cities. The city with the greatest percent of commuters who bicycle or walk is ranked #1. The 51st position is the city with the least percentage of people who commute by bicycle or foot. View this data on pages 45 and 47 of this report. (1) For details and reliability of state and city level NHTS estimates, please see Appendix 3, page 202.

## CITY RANKING

### Cycling to Work

1. Portland, OR
2. Minneapolis
3. Seattle
4. San Francisco
5. Sacramento
6. Oakland
7. Washington, DC
8. Tucson
9. Denver
10. New Orleans

11. Honolulu
12. Philadelphia
13. Boston
14. Albuquerque
15. Austin
16. Chicago
17. Mesa
18. Long Beach
19. San Jose
20. San Diego
21. Los Angeles
22. Milwaukee
23. Atlanta
24. Columbus
25. Phoenix
26. New York
27. Fresno
28. Baltimore
29. Cleveland
30. Colorado Springs
31. Virginia Beach
32. Raleigh
33. Louisville
34. Jacksonville
35. Las Vegas
36. Tulsa
37. Detroit
38. Houston
39. Miami
40. Indianapolis
41. Nashville
42. Kansas City, MO
43. Arlington, TX
44. Omaha
45. El Paso
46. Memphis
47. Fort Worth
48. Charlotte
49. Dallas
50. Oklahoma City
51. San Antonio

### Walking to Work

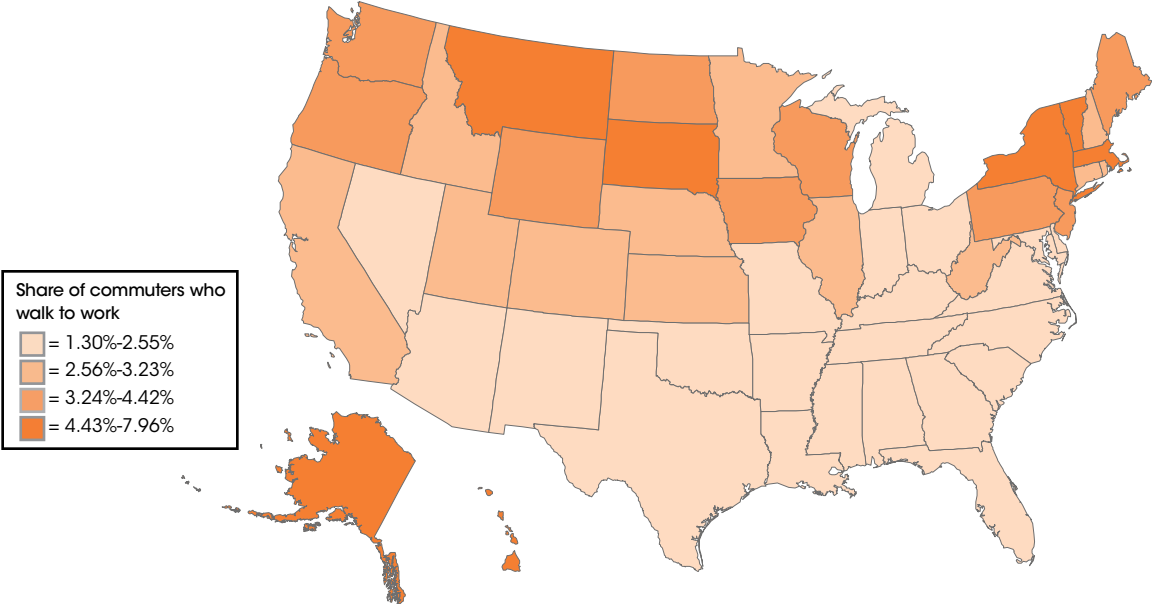
1. Boston
2. Washington, DC
3. New York
4. San Francisco
5. Seattle
6. Philadelphia
7. Honolulu
8. Baltimore
9. Minneapolis
10. New Orleans

11. Chicago
12. Portland, OR
13. Milwaukee
14. Cleveland
15. Oakland
16. Atlanta
17. Denver
18. Miami
19. Tucson
20. Los Angeles
21. Detroit
22. Sacramento
23. Long Beach
24. San Diego
25. Omaha
26. Columbus
27. Raleigh
28. Colorado Springs
29. Louisville
30. Tulsa
31. Houston
32. El Paso
33. Kansas City, MO
34. Indianapolis
35. Virginia Beach
36. Albuquerque
37. Austin
38. Memphis
39. Las Vegas
40. San Antonio
41. Fresno
42. Charlotte
43. Mesa
44. San Jose
45. Arlington, TX
46. Phoenix
47. Dallas
48. Nashville
49. Jacksonville
50. Oklahoma City
51. Fort Worth

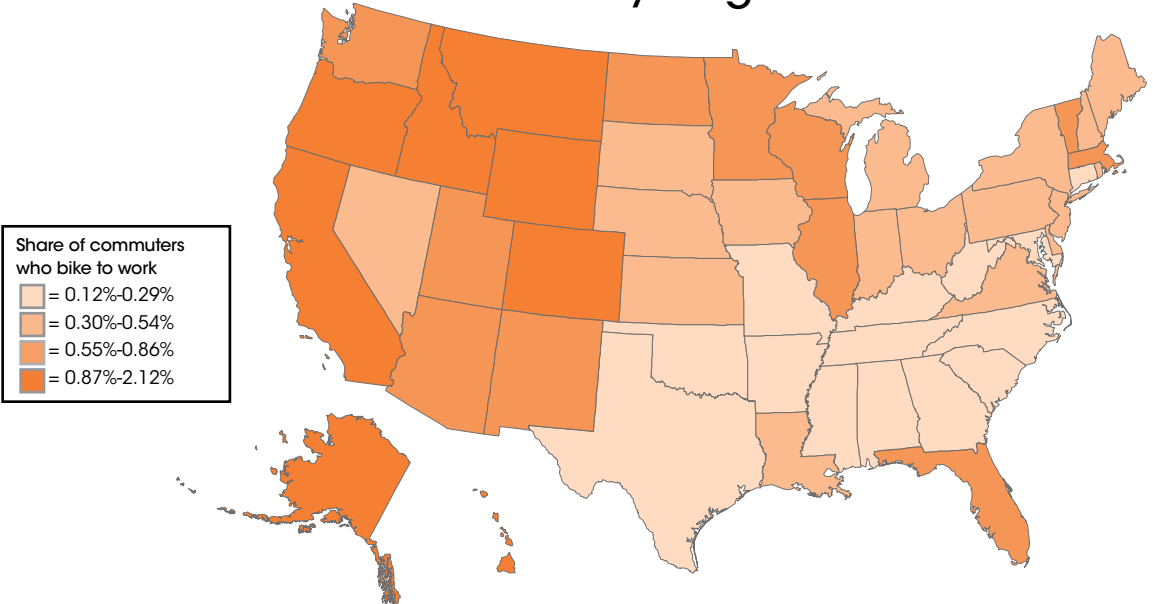
# The share of commuters who walk and bicycle to work has grown in recent years.

Levels of walking to work increased in all but six states between 2005 and 2009. Levels of bicycling to work increased in all but four states during this time period. The southern U.S. remains the region with the lowest levels of bicycling and walking to work.

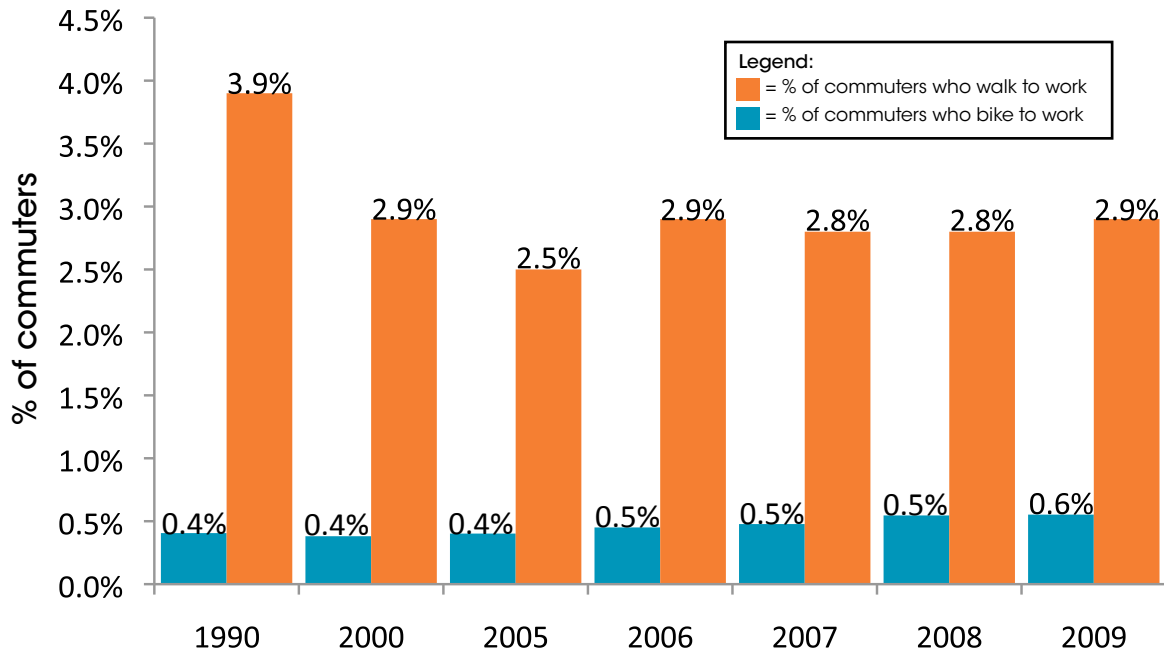
Levels of Walking to Work in the U.S.



Levels of Bicycling to Work in U.S.



## Share of Commuters Who Bicycle and Walk 1990-2009



Sources: U.S. Census 1990, 2000; ACS 2005, ACS 2006, ACS 2007, ACS 2008, ACS 2009

NHTS data for 2009 show that nationally 10.5% of all trips are by foot. This is up 18% from the 2001 level of 8.9%. Rates of walking in major metropolitan areas ("cities") are even greater. NHTS estimates that 12.7% of all city trips are by foot. This is up 15% from the 2001 level of 11% of all city trips.

The 2009 NHTS also asked respondents how many times they took a trip by bicycle or foot in the last week. Results indicate that 13% of people take at least one bicycle trip per week and 68% of people take at least one walking trip per week. These amount to over 4 billion bicycle trips and nearly 41 billion walking trips in 2009 in the United States.

### Trends in Bicycling and Walking Levels

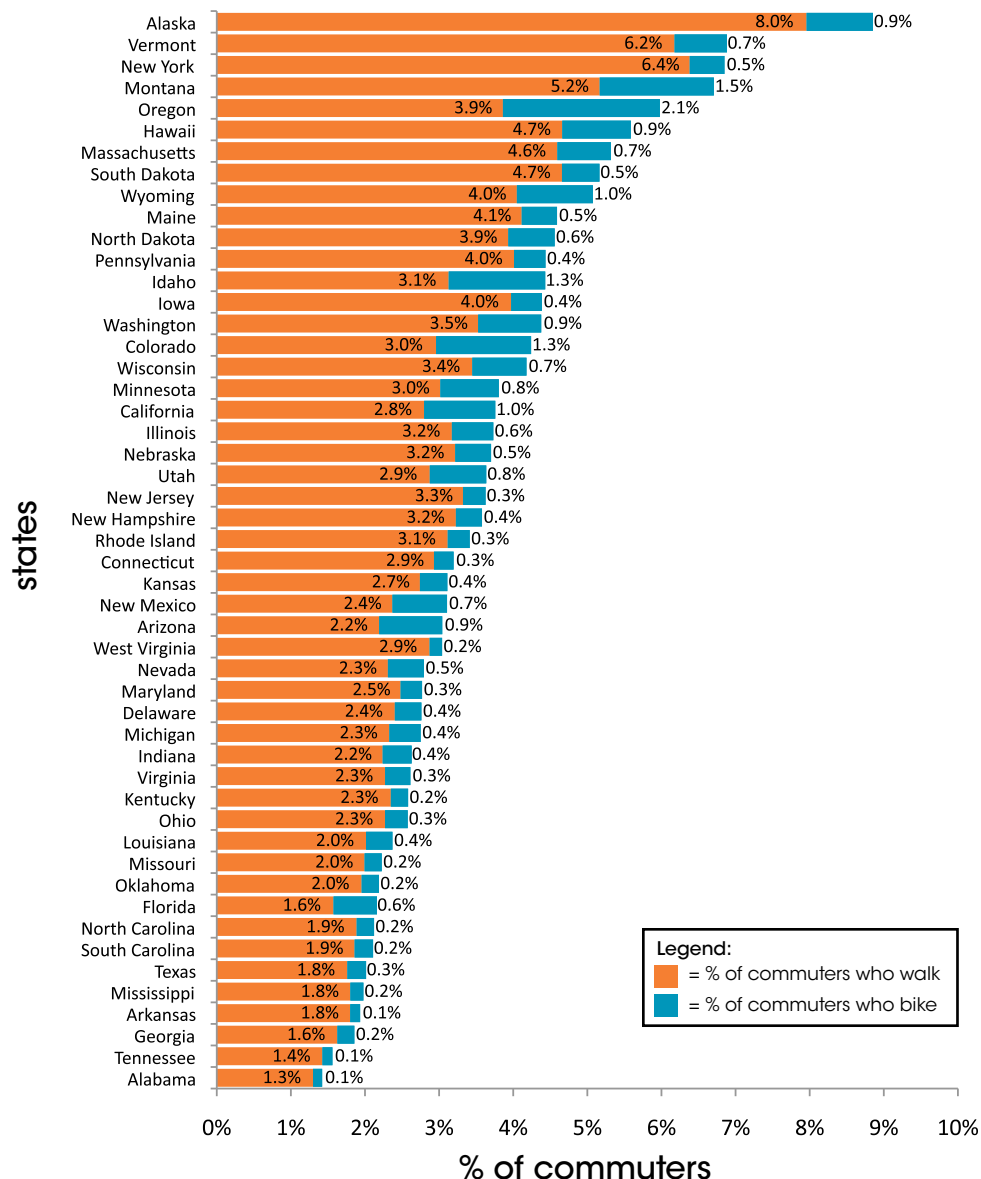
The Alliance looked at data from the 1990 and 2000 decennial Census and annual American Community Surveys from 2005 through 2009 to examine trends in the share of commuters who bicycle or walk to work daily over the last two decades. (Find additional data on bicycling and walking levels over time in Appendix 4, page 205.)

The number of people who bicycle to work has increased steadily, rising 64% between 1990 and 2009 from 466,856 to 765,703 people who bicycle to work nationwide. The share of commuters who bicycle to work rose from 0.4% nationwide in 1990 and 2000 to 0.6% in 2009.

(Continued page 41)



# Share of Commuters Who Walk and Bicycle in 50 States

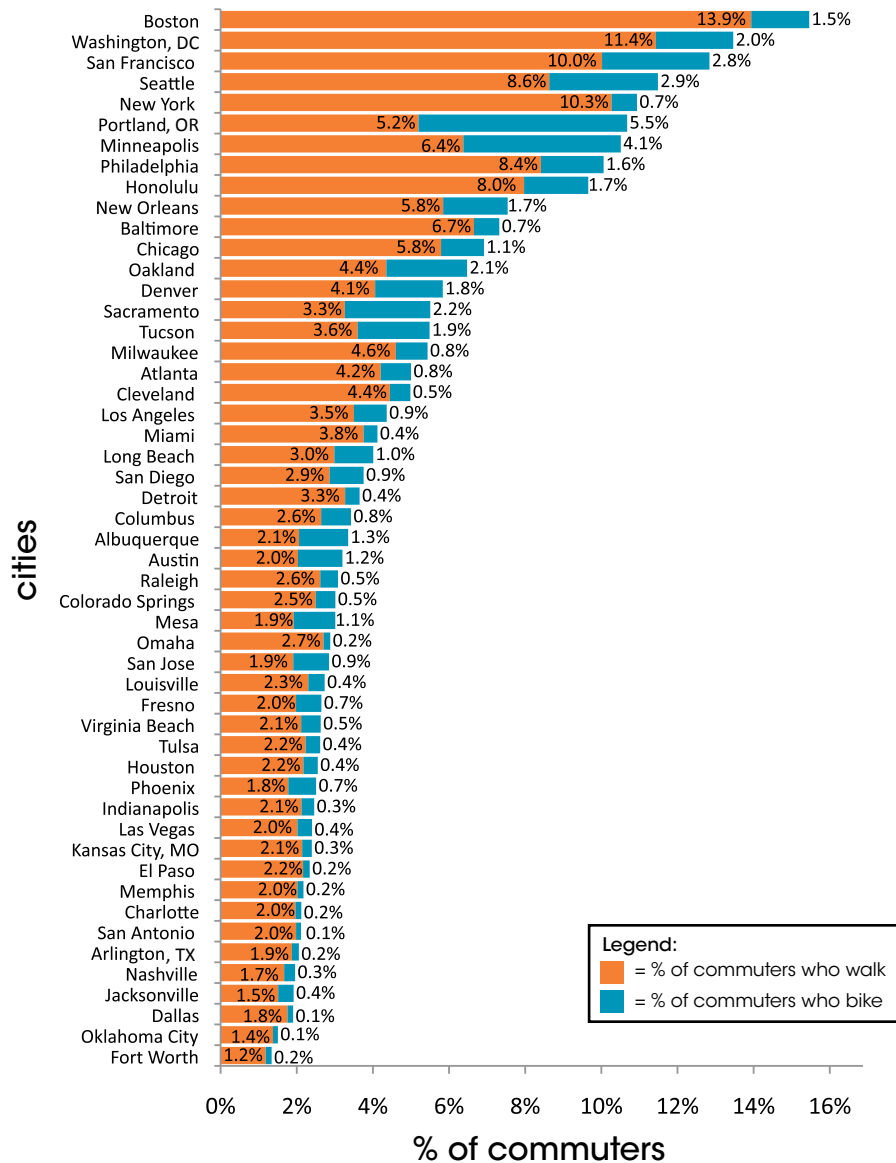


Source: 2007-2009 ACS (3-year average) Note: For a discussion of the challenges with determining accurate levels of bicycling and walking, see Appendix 3.

**Alaska leads states  
for bicycle + walk to  
work mode share.**

Alaska leads Vermont, New York, and Montana as the state with the highest percentage of commuters who bike or walk—8.9% of all commuters. Alabama and Tennessee rank lowest among states with 1.4% and 1.5% bicycle and walk to work mode share, respectively.

# Share of Commuters Who Walk and Bicycle in Largest U.S. Cities



Source: 2007-2009 ACS (3-year average) Note: For a discussion of the challenges with determining accurate levels of bicycling and walking, see Appendix 3.

Bicycling and walking mode share is significantly higher in cities. On average 5.8% of commuters in the largest U.S. cities bike or walk to work. Boston (15.4%) leads Washington, DC (13.4%), San Francisco (12.8%), and Seattle (11.5%) as the cities with the highest rate of bicycling and walking to work.

**Boston ranks top for bicycle + walk to work mode share.**

# Looking Outside the Borders

## Bicycling and Walking Levels and Demographics

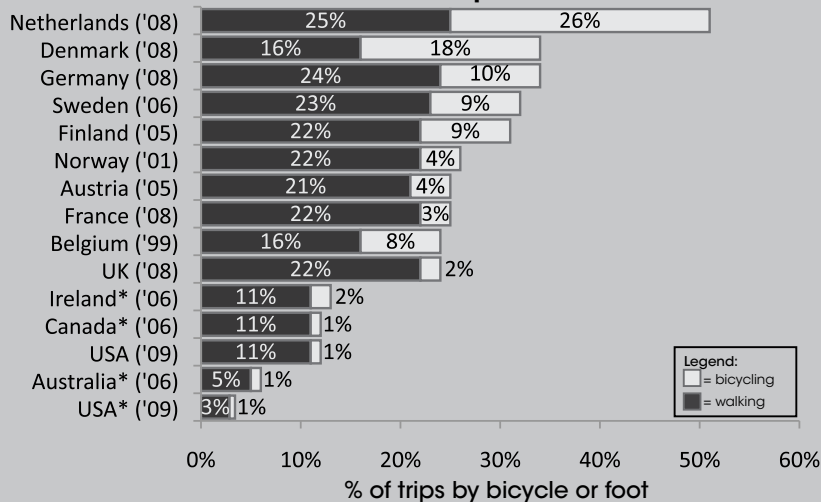
In our efforts to increase bicycling and walking in the United States, it is crucial to learn from the successful policies implemented in other countries, which have far higher levels of walking and bicycling as well as much better safety. A recent study by Pucher and Buehler (2010; chart this page) found that walking and cycling accounted for only about 12% of all trips in the United States in 2009, which is similar to levels in Ireland and Canada, but only about a third as much walking and cycling as many European countries.

With over a third of their trips by walking and cycling, countries like Sweden, Germany, Denmark, and the Netherlands set the standard for active travel in affluent countries with high levels of car ownership. With their bike mode shares of 9%-26%, the same four countries have roughly 10 times as much

cycling as the U.S. Similarly, the U.S. has only about half as much walking as most European countries. The variation among countries is confirmed by large differences among cities in active travel rates, with American cities lagging far behind European cities (Pucher and Buehler 2008; chart page 37). In most large U.S. cities, the bicycle share of trips is less than 1%. Portland, Minneapolis, and Seattle have the highest bicycle to work share among cities: 5.5%, 4.1%, and 2.9%, respectively. By comparison, many cities in Germany, Denmark, and the Netherlands have bicycle trip shares over 10%.

Examining bicycling and walking levels by trip distance shows that in the U.S., 38% of trips shorter than 1.6 miles (2.5 km) were by walking or cycling in 2009. For the same trip distance, the percent of short trips by walking or cycling

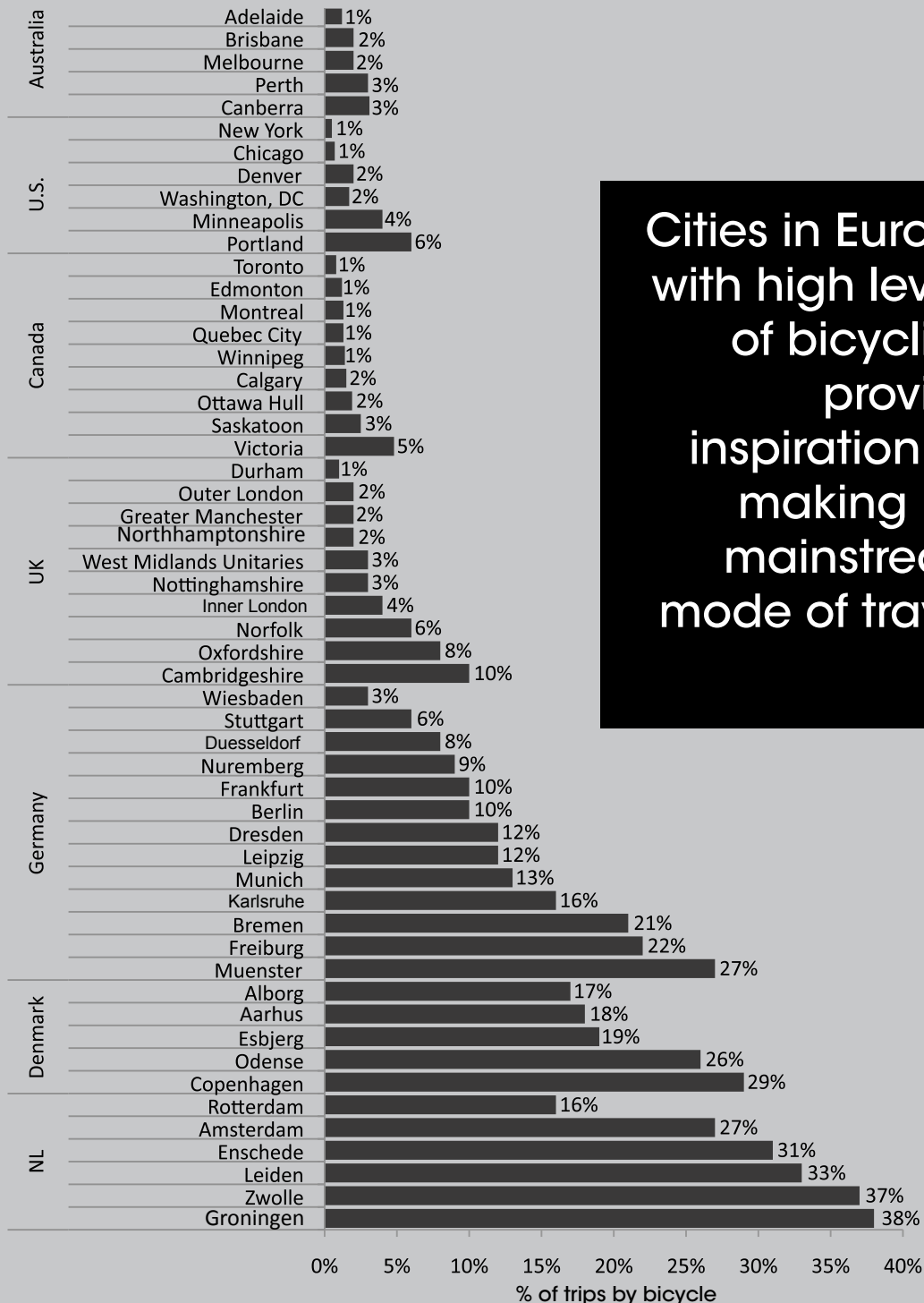
**Bike and Walk Share of Daily Trips in the USA, Canada, Australia, and 11 European Countries**



Source: J. Pucher and R. Buehler, 2010. "Walking and Cycling for Healthy Cities," *Built Environment* 36(5), pp. 391-414. Note: \* denotes for the worktrip only, while other country surveys are for all trip purposes.



## Bicycle Share of Trips in 55 Cities in the U.S., Canada, Australia, UK, Germany, Denmark, and the Netherlands



Cities in Europe  
with high levels  
of bicycling  
provide  
inspiration for  
making it a  
mainstream  
mode of travel.

Source: J. Pucher and R. Buehler, 2008. "Making Cycling Irresistible: Lessons from the Netherlands, Denmark, and Germany," *Transport Reviews* 28(4), pp. 495–528. Note: UK data are for counties.

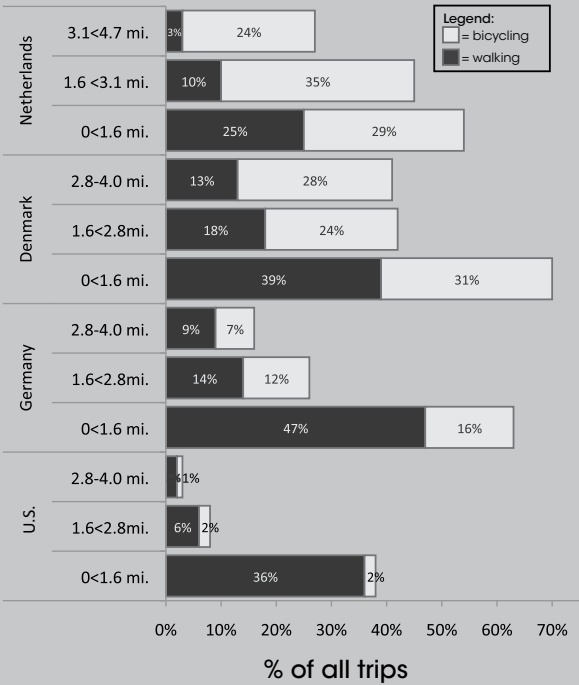


Photo by Kate McCarthy

was 63% in Germany, 70% in Denmark, and 54% in the Netherlands (see chart this page). The variation between the U.S. and other countries is greatest when looking at longer trip distances. Bicycling and walking account for only 3% of trips of 2.8 to 4 miles (4.5-6.5 km) in the U.S., compared to 16% in Germany, 21% in Denmark, and 27% in the Netherlands. Thus, at every trip distance, walking and cycling rates are much higher in northern Europe than in the U.S.

Perhaps the most striking differences among countries in walking and cycling rates are by age group. In Germany,

Bicycling and Walking Levels by Trip Distance



Source: J. Pucher and R. Buehler, 2010 "Walking and Cycling for Healthy Cities," *Built Environment* 36(5), pp. 391-414. URL link: [http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment\\_WalkBike\\_10Dec2010.pdf](http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment_WalkBike_10Dec2010.pdf)

Denmark, and the Netherlands, a high proportion of trips in all age categories are by walking or cycling (see chart page 39). In the U.S., only 18% of trips by children are made by walking or cycling, compared to 43% in Germany, 51% in Denmark, and 64% in the Netherlands. Similarly, only 10% of trips by American elderly are by walking or cycling, compared to 43% in Germany, 51% in Denmark, and 64% in the Netherlands. The much higher levels of walking and cycling in northern Europe provide important physical activity, mobility, and independence for all age groups, while children and seniors in the U.S. are often dependent on their families, neighbors, and friends for many trips they need to make.

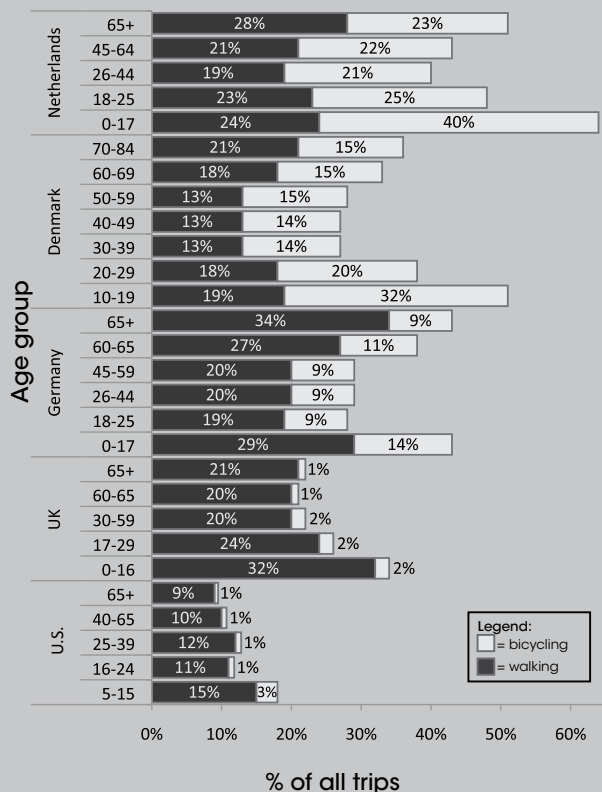
Trends in bicycling and walking levels over the last 35 years vary greatly among

countries (see chart page 40). France and the UK, for example, suffered dramatic falls in walking and cycling, with roughly 50% declines in both countries. By comparison, walking and cycling levels have been roughly stable in the Netherlands, Denmark, and Germany, with declines in walking partly offset by increases in cycling. The much smaller declines in active transport in the Netherlands, Denmark, and Germany are due to far more car-restrictive policies in those countries since the 1970s, combined with a wide range of measures to encourage more walking and cycling. Car-restrictive measures have been far less common in France and the UK, and those two countries have also done less to promote walking and cycling through infrastructure, programs, and policies (Pucher and Buehler 2010). In ad-

dition, suburban and exurban sprawl has been more extensive in France and the UK than in the Netherlands, Denmark, and Germany.

It is more difficult to gauge walking and cycling trends in the U.S. because there was an important change in the national travel survey methodology in 2001 that raised the walk mode share by capturing previously unreported walk trips. The survey results in the chart on page 40 suggest slight increases in walking and cycling levels in the USA, but in fact, they have probably declined. For example, the U.S. Census, using a consistent methodology over time, reports a substantial decline in walking and cycling to work: from 7.9% in 1970 to only 3.3% in 2008 (USDOT 2010).

### Bicycling and Walking Levels by Age



Source: J. Pucher and R. Buehler, 2010. "Walking and Cycling for Healthy Cities," *Built Environment* 36(5), pp. 391–414. URL link: [http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment\\_WalkBike\\_10Dec2010.pdf](http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment_WalkBike_10Dec2010.pdf) Note (above) (1): Methods for NHTS changed in 2001. Thus the increase from 1990 to 2001 may be due to methods. Moreover, the long-term trend may also be skewed because of that.

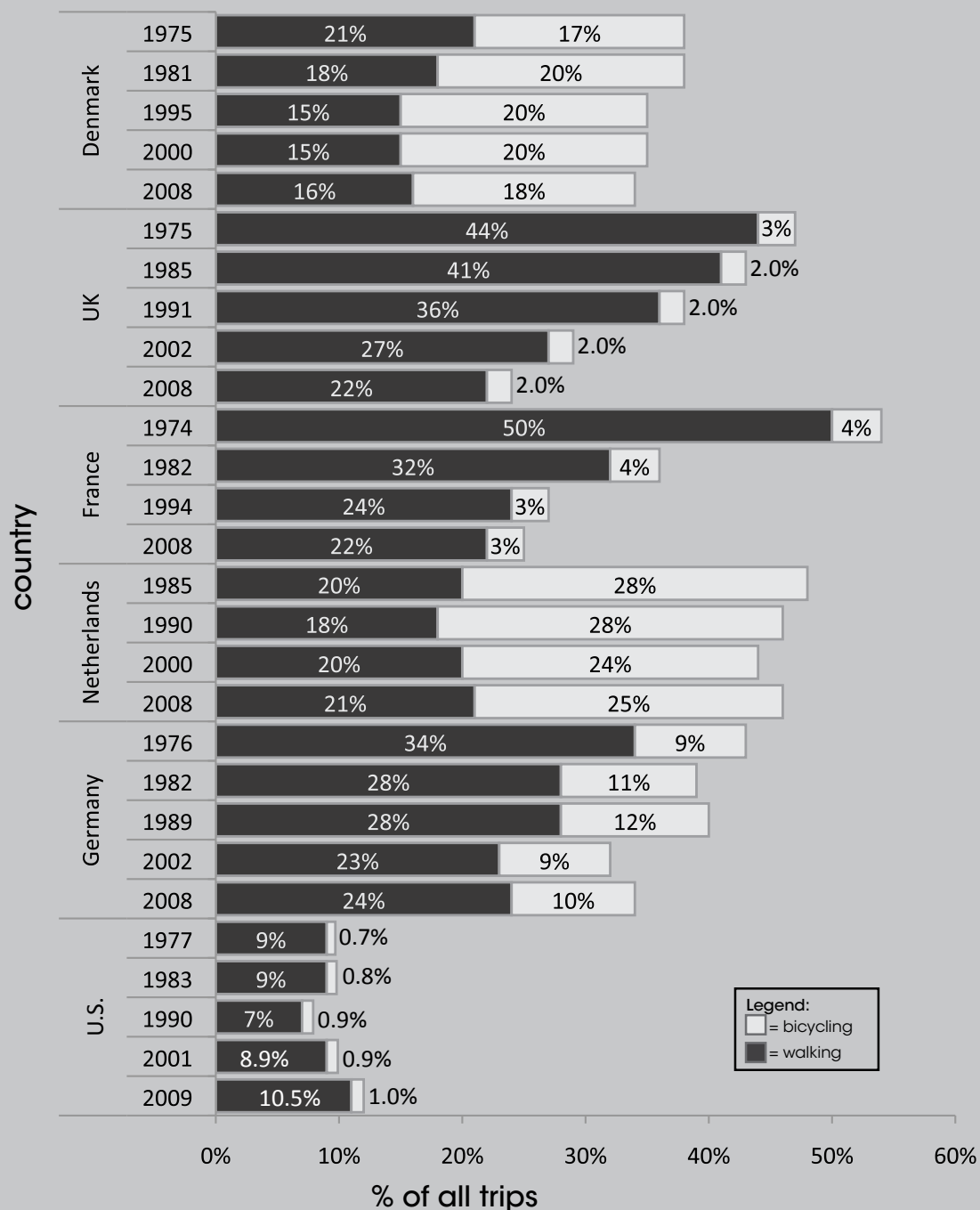


Photo by Dan Burden, Walkable and Livable Communities Institute



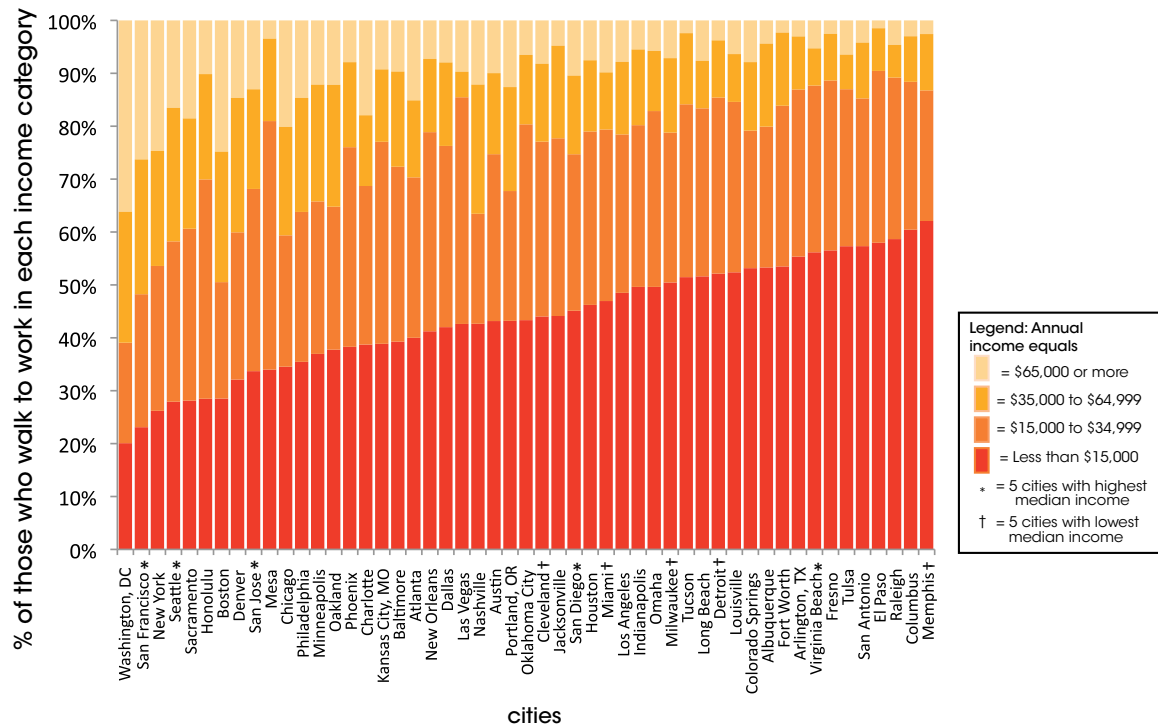
## Trends in Cycling and Walking

Share of all daily trips in the U.S., Germany, the Netherlands, France, the UK, and Denmark, 1974-2009



Source: J. Pucher and R. Buehler, 2010. "Walking and Cycling for Healthy Cities," *Built Environment* 36(5), pp. 391-414. URL link: [http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment\\_WalkBike\\_10Dec2010.pdf](http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment_WalkBike_10Dec2010.pdf). Note: Methods for NHTS (U.S.) changed in 2001. Thus the increase from 1990 to 2001 may be due to methods. Moreover, the long-term trend may also be skewed because of that.

## Pedestrian Commuters by Income Classification



During the same time period the number of people who walk to work fell 12% (from roughly 4.5 million people in 1990 to roughly 4.0 million people in 2009). The number of people who walk to work increased by just 5% between 2000 and 2009. The share of commuters who walk to work is now 2.9%, down from 3.9% in 1990. The share of commuters who walk to work has remained relatively stable since 2000.

## Who Bicycles and Walks?

### Demographic Data

Determining who walks and bicycles is also difficult. Because the ACS counts only commuter trips, trips taken for nonwork purposes, such as those made

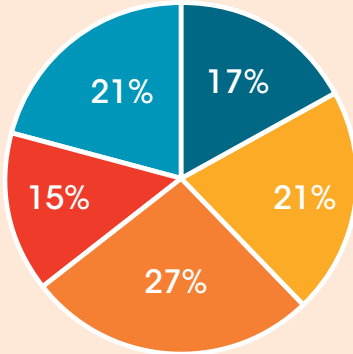
## Bicyclist and Pedestrian Mode Share by Income Class

|             | Household Income   |                      |                      |                      |                    |       |
|-------------|--------------------|----------------------|----------------------|----------------------|--------------------|-------|
|             | Less than \$20,000 | \$20,000 to \$39,999 | \$40,000 to \$74,999 | \$75,000 to \$99,999 | \$100,000 and over | All   |
| Bicyclists  | 1.0%               | 1.2%                 | 1.0%                 | 0.9%                 | 1.1%               | 1.1%  |
| Pedestrians | 16.3%              | 10.3%                | 8.9%                 | 8.9%                 | 10.2%              | 10.5% |

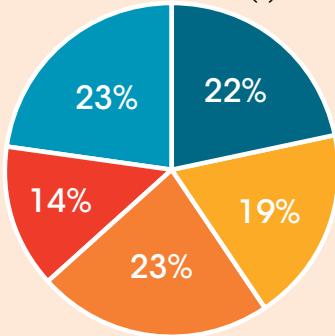
Source: NHTS 2009

# A Look at Income

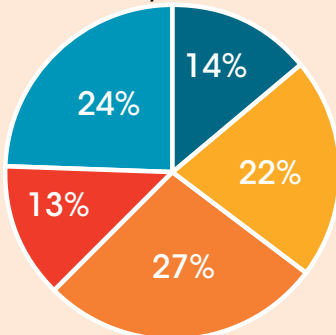
Income Distribution in U.S.<sup>(1)</sup>



Income Distribution of Pedestrians<sup>(1)</sup>



Income Distribution of Bicyclists



Legend: Total earnings =  
 ■ = Less than \$20,000  
 ■ = \$20,000-\$39,999  
 ■ = \$40,000-\$74,999  
 ■ = \$75,000-\$99,999  
 ■ = \$100,000+

Source: NHTS 2009 Note: (1) Numbers round up and so appear to add to 101%.

by children, for recreational purposes, or in combination with other modes of transportation are left out. Many local trip count efforts include demographic survey questions (including some referenced in Appendix 6 of this report). However, because there is no standardized format used for these local surveys, the Alliance relied on ACS and NHTS data for demographic information.

## Bicyclist and Pedestrian Income

There is almost no variation in the bicycle mode share by income class. Data from the 2009 NHTS show that bicycling mode share is similar for all income classes. However, a closer look at data by trip purpose reveals the percent of bicycle trips for recreational purposes rises with increasing income, from 27% to 41%, while the percent of utilitarian trips falls correspondingly with increased income. Regardless of the reason for bicycle trips, these data show that bicycling levels are roughly evenly distributed among all income classes.

While bicycling is distributed evenly among all income groups, walking to work is mainly by lower income workers. Data from ACS reveal that nearly half of people who walk to work earn less than \$15,000 per year. More than two-thirds of people who walk to work, on average, earn below \$35,000 a year. Washington, DC, San Francisco, and New York City have the most even income distribution among people who walk to work, with all income groups well represented. Memphis and Columbus have the least equal distribution with walking concentrated mostly among low-income groups. The difference in average median income among cities could also account for some variation and should be considered with these data.

## Bicyclist and Pedestrian Gender

The gap between men and women is much wider among bicyclists than pedestrians. Na-





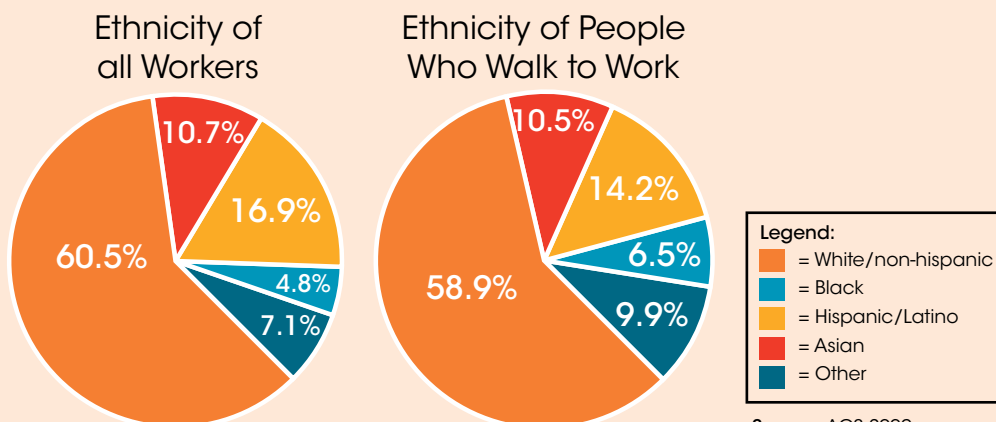
Photo by Ed Yourdon

tionwide, just 27% of bicycle commuters are women (up from 23% in 2007). Just 24% of all bicycle trips are female according to the 2009 NHTS. Men make up 73% of bicycle commuters and 54% of pedestrian commuters. Walking is more even between the sexes. Men comprise 49% of the population and the same percentage of all walking trips.

Massachusetts and Wyoming are the only states where women walk to work at slightly higher rates than men. Men bicycle to work at higher rates than women in all states, though the gap varies among states. Montana has the smallest gap among men (66%) and women (34%) bicyclists. Delaware has the largest gap between men (91%) and women (9%) bicyclists.

The gap between men and women also varies largely among major U.S. cities. Again, most cities have relatively small gaps between levels of men and women who walk to work. In roughly 1/6 of cities surveyed, women walk to work at slightly higher rates. Philadelphia has the greatest percentage of pedestrian commuters who are women—55%. Mesa has the least percentage of pedestrian commuters who are women—30%.

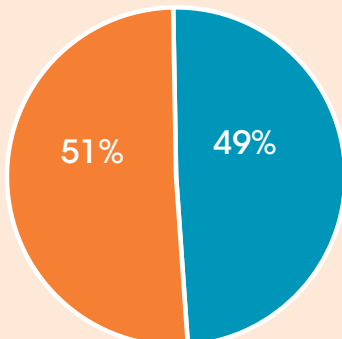
## A Look at Ethnicity



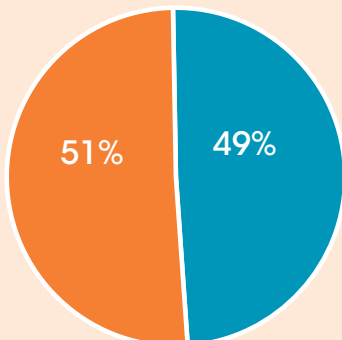
Source: ACS 2009

## A Look at Gender

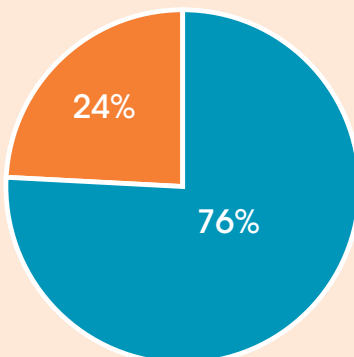
Gender Distribution  
in U.S.





Walk Trips by Gender



Bike Trips by Gender



Legend:  
 = Female  
 = Male

Source: NHTS 2009



Photo courtesy of Transportation for America

On average, men make up 76% of bicycle commuters in the U.S. and 72% in major U.S. cities. According to ACS data, the vast majority of bicycle commuters in Omaha, El Paso, and Dallas are male, making these the cities with the greatest gender divide among bicyclists. Because of low sample sizes, it is possible that there are more female commuters in these cities, but it is not reflected in the data.

### Bicyclist and Pedestrian Ethnicity

ACS data reveal a fairly even distribution among bicyclists and pedestrians in regard to ethnicity. Asians, hispanics, and white/non-hispanic groups are slightly less likely to walk to work. African Americans/blacks are 35% more likely to walk to work, comprising 4.8% of the U.S. workers, but accounting for 6.5% of pedestrian commuters. "Other ethnicities" which include American Indian, Alaska Native, Native Hawaiian, Other Asian Pacific Islander, and other minority ethnicities alone are also more likely to walk to

(Continued page 48)



## Bicycling to Work in States

| States           | % of commuters who bike to work | % men | % women |
|------------------|---------------------------------|-------|---------|
| Alabama          | 0.1%                            | 84%   | 16%     |
| Alaska           | 0.9%                            | 68%   | 32%     |
| Arizona          | 0.9%                            | 78%   | 22%     |
| Arkansas         | 0.1%                            | 74%   | 26%     |
| California       | 1.0%                            | 75%   | 25%     |
| Colorado         | 1.3%                            | 71%   | 29%     |
| Connecticut      | 0.3%                            | 75%   | 25%     |
| Delaware         | 0.4%                            | 91%   | 9%      |
| Florida          | 0.6%                            | 76%   | 24%     |
| Georgia          | 0.2%                            | 76%   | 24%     |
| Hawaii           | 0.9%                            | 71%   | 29%     |
| Idaho            | 1.3%                            | 70%   | 30%     |
| Illinois         | 0.6%                            | 77%   | 23%     |
| Indiana          | 0.4%                            | 73%   | 27%     |
| Iowa             | 0.4%                            | 71%   | 29%     |
| Kansas           | 0.4%                            | 75%   | 25%     |
| Kentucky         | 0.2%                            | 68%   | 32%     |
| Louisiana        | 0.4%                            | 79%   | 21%     |
| Maine            | 0.5%                            | 67%   | 33%     |
| Maryland         | 0.3%                            | 80%   | 20%     |
| Massachusetts    | 0.7%                            | 72%   | 28%     |
| Michigan         | 0.4%                            | 71%   | 29%     |
| Minnesota        | 0.8%                            | 70%   | 30%     |
| Mississippi      | 0.2%                            | 86%   | 14%     |
| Missouri         | 0.2%                            | 79%   | 21%     |
| Montana          | 1.5%                            | 66%   | 34%     |
| Nebraska         | 0.5%                            | 73%   | 27%     |
| Nevada           | 0.5%                            | 81%   | 19%     |
| New Hampshire    | 0.4%                            | 74%   | 26%     |
| New Jersey       | 0.3%                            | 80%   | 20%     |
| New Mexico       | 0.7%                            | 74%   | 26%     |
| New York         | 0.5%                            | 77%   | 23%     |
| North Carolina   | 0.2%                            | 80%   | 20%     |
| North Dakota     | 0.6%                            | 81%   | 19%     |
| Ohio             | 0.3%                            | 73%   | 27%     |
| Oklahoma         | 0.2%                            | 69%   | 31%     |
| Oregon           | 2.1%                            | 67%   | 33%     |
| Pennsylvania     | 0.4%                            | 73%   | 27%     |
| Rhode Island     | 0.3%                            | 69%   | 31%     |
| South Carolina   | 0.2%                            | 79%   | 21%     |
| South Dakota     | 0.5%                            | 72%   | 28%     |
| Tennessee        | 0.1%                            | 77%   | 23%     |
| Texas            | 0.3%                            | 78%   | 22%     |
| Utah             | 0.8%                            | 72%   | 28%     |
| Vermont          | 0.7%                            | 68%   | 32%     |
| Virginia         | 0.3%                            | 72%   | 28%     |
| Washington       | 0.9%                            | 70%   | 30%     |
| West Virginia    | 0.2%                            | 74%   | 26%     |
| Wisconsin        | 0.7%                            | 70%   | 30%     |
| Wyoming          | 1.0%                            | 75%   | 25%     |
| Mean/Average (1) | 0.5%                            | 74%   | 26%     |
| Median           | 0.4%                            | 74%   | 26%     |
| High             | 2.1%                            | 91%   | 34%     |
| Low              | 0.1%                            | 66%   | 9%      |

## Bicycling to Work in Cities

| Cities           | % of commuters who bike to work | % men | % women |
|------------------|---------------------------------|-------|---------|
| Albuquerque      | 1.3%                            | 69%   | 31%     |
| Arlington, TX    | 0.2%                            | 84%   | 16%     |
| Atlanta          | 0.8%                            | 71%   | 29%     |
| Austin           | 1.2%                            | 72%   | 28%     |
| Baltimore        | 0.7%                            | 77%   | 23%     |
| Boston           | 1.5%                            | 67%   | 33%     |
| Charlotte        | 0.2%                            | 82%   | 18%     |
| Chicago          | 1.1%                            | 76%   | 24%     |
| Cleveland        | 0.5%                            | 65%   | 35%     |
| Colorado Springs | 0.5%                            | 74%   | 26%     |
| Columbus         | 0.8%                            | 76%   | 24%     |
| Dallas           | 0.1%                            | 91%   | 9%      |
| Denver           | 1.8%                            | 70%   | 30%     |
| Detroit          | 0.4%                            | 78%   | 22%     |
| El Paso          | 0.2%                            | 92%   | 8%      |
| Fort Worth       | 0.2%                            | 88%   | 12%     |
| Fresno           | 0.7%                            | 77%   | 23%     |
| Honolulu         | 1.7%                            | 72%   | 28%     |
| Houston          | 0.4%                            | 77%   | 23%     |
| Indianapolis     | 0.3%                            | 75%   | 25%     |
| Jacksonville     | 0.4%                            | 80%   | 20%     |
| Kansas City, MO  | 0.3%                            | 63%   | 37%     |
| Las Vegas        | 0.4%                            | 89%   | 11%     |
| Long Beach       | 1.0%                            | 85%   | 15%     |
| Los Angeles      | 0.9%                            | 80%   | 20%     |
| Louisville       | 0.4%                            | 62%   | 38%     |
| Memphis          | 0.2%                            | 51%   | 49%     |
| Mesa             | 1.1%                            | 84%   | 16%     |
| Miami            | 0.4%                            | 70%   | 30%     |
| Milwaukee        | 0.8%                            | 73%   | 27%     |
| Minneapolis      | 4.1%                            | 63%   | 37%     |
| Nashville        | 0.3%                            | 78%   | 22%     |
| New Orleans      | 1.7%                            | 76%   | 24%     |
| New York         | 0.7%                            | 75%   | 25%     |
| Oakland          | 2.1%                            | 66%   | 34%     |
| Oklahoma City    | 0.1%                            | 81%   | 19%     |
| Omaha            | 0.2%                            | 97%   | 3%      |
| Philadelphia     | 1.6%                            | 70%   | 30%     |
| Phoenix          | 0.7%                            | 84%   | 16%     |
| Portland, OR     | 5.5%                            | 62%   | 38%     |
| Raleigh          | 0.5%                            | 76%   | 24%     |
| Sacramento       | 2.2%                            | 67%   | 33%     |
| San Antonio      | 0.1%                            | 81%   | 19%     |
| San Diego        | 0.9%                            | 72%   | 28%     |
| San Francisco    | 2.8%                            | 70%   | 30%     |
| San Jose         | 0.9%                            | 79%   | 21%     |
| Seattle          | 2.9%                            | 68%   | 32%     |
| Tucson           | 1.9%                            | 71%   | 29%     |
| Tulsa            | 0.4%                            | 75%   | 25%     |
| Virginia Beach   | 0.5%                            | 53%   | 47%     |
| Washington, DC   | 2.0%                            | 67%   | 33%     |
| Mean/Average (1) | 0.9%                            | 72%   | 28%     |
| Median           | 0.7%                            | 75%   | 25%     |
| High             | 5.5%                            | 97%   | 49%     |
| Low              | 0.1%                            | 51%   | 3%      |



Source: ACS 2007-2009 (3-year average) Notes: (1) All averages are weighted. (2) For some states and cities the number of total bicyclists captured in the ACS is very small. Additionally, disaggregating these estimates into male and female categories might lead to unexpected and unreliable results. For example, some cities show particularly low or high shares of women commuting by bicycle.

Legend:  
 = High value  
 = Low value



## Walking to Work in States

| State            | % of commuters who walk to work | % men | % women | Percent of workers who walk to work by annual income (total = 100%) |                   |                   |           |
|------------------|---------------------------------|-------|---------|---|-------------------|-------------------|-----------|
|                  |                                 |       |         | <\$15,000   | \$15,000-\$34,999 | \$35,000-\$64,999 | \$65,000+ |
| Alabama          | 1.3%                            | 60%   | 40%     | 51%   | 30%               | 13%               | 6%        |
| Alaska           | 8.0%                            | 63%   | 37%     | 34%   | 32%               | 22%               | 12%       |
| Arizona          | 2.2%                            | 58%   | 42%     | 44%   | 35%               | 14%               | 6%        |
| Arkansas         | 1.8%                            | 61%   | 39%     | 52%   | 28%               | 13%               | 6%        |
| California       | 2.8%                            | 53%   | 47%     | 43%   | 31%               | 15%               | 11%       |
| Colorado         | 3.0%                            | 56%   | 44%     | 48%   | 27%               | 16%               | 10%       |
| Connecticut      | 2.9%                            | 54%   | 46%     | 50%   | 24%               | 15%               | 10%       |
| Delaware         | 2.4%                            | 54%   | 46%     | 54%   | 22%               | 15%               | 9%        |
| Florida          | 1.6%                            | 56%   | 44%     | 45%   | 34%               | 14%               | 7%        |
| Georgia          | 1.6%                            | 59%   | 41%     | 46%   | 32%               | 13%               | 9%        |
| Hawaii           | 4.7%                            | 56%   | 44%     | 34%   | 40%               | 18%               | 8%        |
| Idaho            | 3.1%                            | 59%   | 41%     | 47%   | 32%               | 14%               | 7%        |
| Illinois         | 3.2%                            | 53%   | 47%     | 46%   | 26%               | 15%               | 12%       |
| Indiana          | 2.2%                            | 54%   | 46%     | 58%   | 26%               | 11%               | 5%        |
| Iowa             | 4.0%                            | 54%   | 46%     | 57%   | 24%               | 14%               | 5%        |
| Kansas           | 2.7%                            | 56%   | 44%     | 52%   | 29%               | 14%               | 5%        |
| Kentucky         | 2.3%                            | 57%   | 43%     | 55%   | 30%               | 10%               | 5%        |
| Louisiana        | 2.0%                            | 55%   | 45%     | 52%   | 31%               | 12%               | 5%        |
| Maine            | 4.1%                            | 55%   | 45%     | 48%   | 30%               | 16%               | 7%        |
| Maryland         | 2.5%                            | 51%   | 49%     | 48%   | 28%               | 14%               | 11%       |
| Massachusetts    | 4.6%                            | 48%   | 52%     | 42%   | 25%               | 19%               | 15%       |
| Michigan         | 2.3%                            | 53%   | 47%     | 58%   | 24%               | 12%               | 6%        |
| Minnesota        | 3.0%                            | 53%   | 47%     | 47%   | 26%               | 18%               | 9%        |
| Mississippi      | 1.8%                            | 62%   | 38%     | 54%   | 29%               | 11%               | 6%        |
| Missouri         | 2.0%                            | 57%   | 43%     | 53%   | 28%               | 13%               | 6%        |
| Montana          | 5.2%                            | 55%   | 45%     | 45%   | 30%               | 18%               | 7%        |
| Nebraska         | 3.2%                            | 56%   | 44%     | 49%   | 31%               | 15%               | 4%        |
| Nevada           | 2.3%                            | 53%   | 47%     | 40%   | 41%               | 12%               | 7%        |
| New Hampshire    | 3.2%                            | 52%   | 48%     | 50%   | 28%               | 14%               | 8%        |
| New Jersey       | 3.3%                            | 54%   | 46%     | 40%   | 33%               | 17%               | 10%       |
| New Mexico       | 2.4%                            | 57%   | 43%     | 47%   | 31%               | 15%               | 7%        |
| New York         | 6.4%                            | 50%   | 50%     | 35%   | 27%               | 19%               | 19%       |
| North Carolina   | 1.9%                            | 63%   | 37%     | 49%   | 32%               | 12%               | 7%        |
| North Dakota     | 3.9%                            | 57%   | 43%     | 46%   | 30%               | 16%               | 8%        |
| Ohio             | 2.3%                            | 53%   | 47%     | 57%   | 26%               | 12%               | 5%        |
| Oklahoma         | 2.0%                            | 61%   | 39%     | 54%   | 29%               | 12%               | 5%        |
| Oregon           | 3.9%                            | 52%   | 48%     | 46%   | 30%               | 15%               | 9%        |
| Pennsylvania     | 4.0%                            | 51%   | 49%     | 49%   | 28%               | 15%               | 8%        |
| Rhode Island     | 3.1%                            | 51%   | 49%     | 54%   | 21%               | 15%               | 10%       |
| South Carolina   | 1.9%                            | 58%   | 42%     | 55%   | 28%               | 10%               | 6%        |
| South Dakota     | 4.7%                            | 56%   | 44%     | 43%   | 34%               | 16%               | 6%        |
| Tennessee        | 1.4%                            | 61%   | 39%     | 55%   | 26%               | 13%               | 7%        |
| Texas            | 1.8%                            | 56%   | 44%     | 51%   | 31%               | 12%               | 6%        |
| Utah             | 2.9%                            | 52%   | 48%     | 62%   | 22%               | 12%               | 4%        |
| Vermont          | 6.2%                            | 50%   | 50%     | 50%   | 29%               | 14%               | 7%        |
| Virginia         | 2.3%                            | 58%   | 42%     | 45%   | 28%               | 14%               | 12%       |
| Washington       | 3.5%                            | 55%   | 45%     | 38%   | 33%               | 19%               | 10%       |
| West Virginia    | 2.9%                            | 57%   | 43%     | 57%   | 27%               | 12%               | 4%        |
| Wisconsin        | 3.4%                            | 53%   | 47%     | 53%   | 26%               | 14%               | 6%        |
| Wyoming          | 4.0%                            | 49%   | 51%     | 38%   | 35%               | 19%               | 9%        |
| Mean/Average (1) | 2.9%                            | 54%   | 46%     | 46%   | 29%               | 15%               | 10%       |
| Median           | 2.9%                            | 55%   | 45%     | 49%   | 29%               | 14%               | 7%        |
| High             | 8.0%                            | 63%   | 52%     | 62%   | 41%               | 22%               | 19%       |
| Low              | 1.3%                            | 48%   | 37%     | 34%   | 21%               | 10%               | 4%        |

Legend:  
 = High value  
 = Low value

Source: ACS 2007-2009 Notes: (1) All averages are weighted.

## Walking to Work in Cities

| Cities (1)        | % of commuters who walk to work | % men | % women | Percent of workers who walk to work by annual income (total = 100%) |                   |                   |           |
|-------------------|---------------------------------|-------|---------|---|-------------------|-------------------|-----------|
|                   |                                 |       |         | <\$15,000   | \$15,000-\$34,999 | \$35,000-\$64,999 | \$65,000+ |
| Albuquerque       | 2.1%                            | 49%   | 51%     | 53%   | 27%               | 16%               | 4%        |
| Arlington, TX     | 1.9%                            | 58%   | 42%     | 55%   | 32%               | 10%               | 3%        |
| Atlanta           | 4.2%                            | 62%   | 38%     | 40%   | 30%               | 15%               | 15%       |
| Austin            | 2.0%                            | 60%   | 40%     | 43%   | 32%               | 15%               | 10%       |
| Baltimore         | 6.7%                            | 46%   | 54%     | 39%   | 33%               | 18%               | 10%       |
| Boston            | 13.9%                           | 48%   | 52%     | 29%   | 22%               | 25%               | 25%       |
| Charlotte         | 2.0%                            | 61%   | 39%     | 39%   | 30%               | 13%               | 18%       |
| Chicago           | 5.8%                            | 48%   | 52%     | 35%   | 25%               | 20%               | 20%       |
| Cleveland         | 4.4%                            | 47%   | 53%     | 44%   | 33%               | 15%               | 8%        |
| Colorado Springs  | 2.5%                            | 57%   | 43%     | 53%   | 26%               | 13%               | 8%        |
| Columbus          | 2.6%                            | 60%   | 40%     | 60%   | 28%               | 9%                | 3%        |
| Dallas            | 1.8%                            | 48%   | 52%     | 42%   | 34%               | 16%               | 8%        |
| Denver            | 4.1%                            | 55%   | 45%     | 32%   | 28%               | 25%               | 15%       |
| Detroit           | 3.3%                            | 59%   | 41%     | 52%   | 33%               | 11%               | 4%        |
| El Paso           | 2.2%                            | 53%   | 47%     | 58%   | 32%               | 8%                | 1%        |
| Fort Worth        | 1.2%                            | 60%   | 40%     | 53%   | 30%               | 14%               | 2%        |
| Fresno            | 2.0%                            | 55%   | 45%     | 57%   | 32%               | 9%                | 3%        |
| Honolulu          | 8.0%                            | 53%   | 47%     | 28%   | 41%               | 20%               | 10%       |
| Houston           | 2.2%                            | 52%   | 48%     | 46%   | 33%               | 13%               | 8%        |
| Indianapolis      | 2.1%                            | 55%   | 45%     | 50%   | 31%               | 14%               | 5%        |
| Jacksonville      | 1.5%                            | 50%   | 50%     | 44%   | 34%               | 18%               | 5%        |
| Kansas City, MO   | 2.1%                            | 59%   | 41%     | 39%   | 38%               | 14%               | 9%        |
| Las Vegas         | 2.0%                            | 54%   | 46%     | 43%   | 43%               | 5%                | 10%       |
| Long Beach        | 3.0%                            | 55%   | 45%     | 52%   | 32%               | 9%                | 8%        |
| Los Angeles       | 3.5%                            | 52%   | 48%     | 48%   | 30%               | 14%               | 8%        |
| Louisville        | 2.3%                            | 47%   | 53%     | 52%   | 32%               | 9%                | 6%        |
| Memphis           | 2.0%                            | 59%   | 41%     | 62%   | 25%               | 11%               | 3%        |
| Mesa              | 1.9%                            | 70%   | 30%     | 34%   | 47%               | 16%               | 3%        |
| Miami             | 3.8%                            | 57%   | 43%     | 47%   | 32%               | 11%               | 10%       |
| Milwaukee         | 4.6%                            | 50%   | 50%     | 50%   | 28%               | 14%               | 7%        |
| Minneapolis       | 6.4%                            | 58%   | 42%     | 37%   | 29%               | 22%               | 12%       |
| Nashville         | 1.7%                            | 54%   | 46%     | 43%   | 21%               | 24%               | 12%       |
| New Orleans       | 5.8%                            | 60%   | 40%     | 41%   | 38%               | 14%               | 7%        |
| New York          | 10.3%                           | 49%   | 51%     | 26%   | 27%               | 22%               | 25%       |
| Oakland           | 4.4%                            | 53%   | 47%     | 38%   | 27%               | 23%               | 12%       |
| Oklahoma City     | 1.4%                            | 64%   | 36%     | 43%   | 37%               | 13%               | 7%        |
| Omaha             | 2.7%                            | 59%   | 41%     | 50%   | 33%               | 11%               | 6%        |
| Philadelphia      | 8.4%                            | 45%   | 55%     | 35%   | 28%               | 22%               | 15%       |
| Phoenix           | 1.8%                            | 58%   | 42%     | 38%   | 38%               | 16%               | 8%        |
| Portland, OR      | 5.2%                            | 53%   | 47%     | 43%   | 25%               | 20%               | 13%       |
| Raleigh           | 2.6%                            | 62%   | 38%     | 59%   | 31%               | 6%                | 5%        |
| Sacramento        | 3.3%                            | 51%   | 49%     | 28%   | 32%               | 21%               | 19%       |
| San Antonio       | 2.0%                            | 53%   | 47%     | 57%   | 28%               | 11%               | 4%        |
| San Diego         | 2.9%                            | 53%   | 47%     | 45%   | 30%               | 15%               | 10%       |
| San Francisco     | 10.0%                           | 54%   | 46%     | 23%   | 25%               | 25%               | 26%       |
| San Jose          | 1.9%                            | 54%   | 46%     | 34%   | 34%               | 19%               | 13%       |
| Seattle           | 8.6%                            | 53%   | 47%     | 28%   | 30%               | 25%               | 17%       |
| Tucson            | 3.6%                            | 54%   | 46%     | 51%   | 33%               | 13%               | 2%        |
| Tulsa             | 2.2%                            | 59%   | 41%     | 57%   | 30%               | 7%                | 6%        |
| Virginia Beach    | 2.1%                            | 58%   | 42%     | 56%   | 32%               | 7%                | 5%        |
| Washington, DC    | 11.4%                           | 50%   | 50%     | 20%   | 19%               | 25%               | 36%       |
| Mean/ Average (2) | 4.9%                            | 51%   | 49%     | 35%   | 28%               | 19%               | 18%       |
| Median            | 2.7%                            | 54%   | 46%     | 43%   | 31%               | 14%               | 8%        |
| High              | 13.9%                           | 70%   | 55%     | 62%   | 47%               | 25%               | 36%       |
| Low               | 1.2%                            | 45%   | 30%     | 20%   | 19%               | 5%                | 1%        |

Legend:  
  = High value  
  = Low value

Source: ACS 2007-2009 Notes: (1) For some cities the number of total bicyclists captured in the ACS is very small. Additionally, disaggregating these estimates into male and female categories might lead to unexpected and unreliable results. For example, some cities show particularly low or high shares of women commuting by bicycle. (2) All averages are weighted.



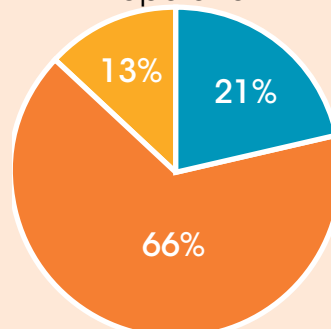
work comprising 7.1% of the working population and 9.9% of pedestrian commuters.

### Age of Bicyclists and Pedestrians

It is no surprise that youth, who are not of legal driving age, make up a disproportionate amount of bicycling trips. National estimates from NHTS indicate that youth under age 16 make up 39% of bicycling trips, despite accounting for just 21% of the population. This age group accounts for 17% of walking trips. Adults over age 65 account for 13% of the population and make up 10% of all walking trips and 6% of all bicycling trips. The rest of people age 16-65 make up 66% of the population and account for 73% of all walking trips and 54% of trips by bicycle.

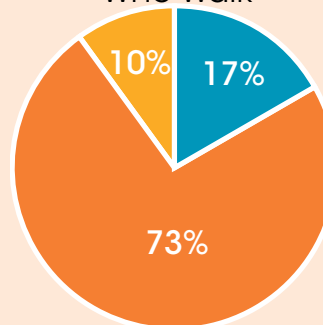
## A Look at Age

Age of the U.S. Population



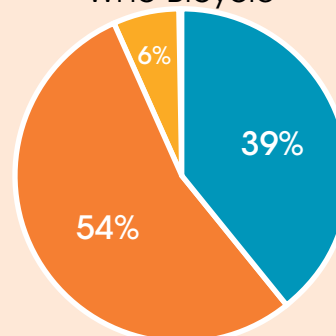
Source: ACS 2009

Age of People Who Walk



Source: NHTS 2009

Age of People Who Bicycle



Source: NHTS 2009

Note: (1) Numbers round down and so appear to equal 99%.

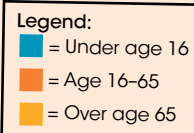






Photo by Eric Gilliland

## 3: SAFETY

While news headlines are filled with deaths of war and cancer victims, the public rarely hears reports on the more than 32,000 people who die each year in traffic crashes. In 2010, according to the National Highway Traffic Safety Administration (NHTSA), 32,788 people died on U.S. roadways. The death toll of pedestrians alone is equivalent to a jumbo jet full of passengers crashing roughly every month (Ernst 2011). Even though bicycle and pedestrian fatalities have been decreasing, bicyclists and pedestrians are still disproportionately at risk.

Data for this chapter came largely from the NHTSA's Fatality Analysis

Reporting System (FARS). FARS collects data from police reports of traffic accidents and is the authoritative national source for traffic fatalities in the United States. Data on bicycle and pedestrian injuries came from CDC's Web-based Injury Statistics Query and Reporting System (WISQARS).

FARS data indicate that bicyclists and pedestrians account for 13.5% of all traffic fatalities, despite the fact that they make up roughly 11.5% of all trips (according to NHTS estimates). In the 51 largest U.S. cities bicycling and walking account for 13.8% of all trips, yet bicyclists and pedestrians represent 30.0% of all traffic fatalities.

## Victim Demographics

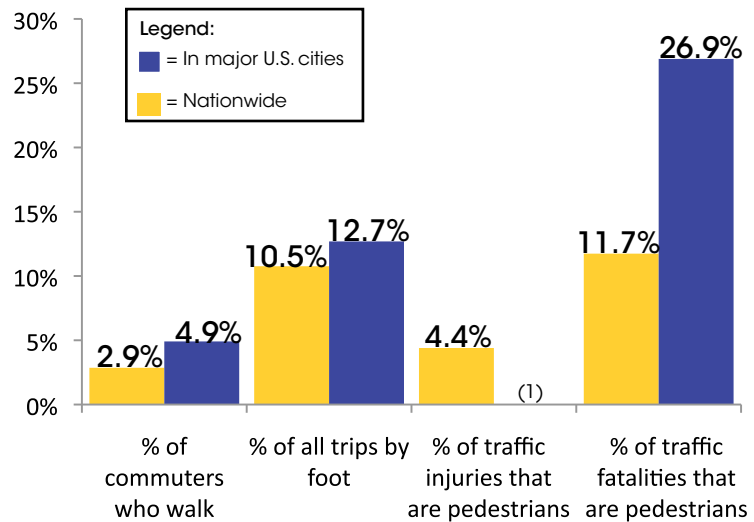
According to FARS, between 2007-2009, nearly one-quarter of all bicycle fatality victims are youth (under age 16) and seniors (over age 65). These age groups account for 26% of pedestrian fatalities. Seniors (over age 65) are at a disproportionate risk, accounting for just 10% of all walking trips and roughly 19% of pedestrian fatalities. Adults over age 65 make up 6% of all bicycling trips and account for roughly 10% of bicyclist fatalities.

In some areas the risk facing seniors is even greater. In Honolulu, where 46% of all traffic fatalities are pedestrians, 69% of victims are over age 65. Similarly in San Francisco, where 49% of all traffic fatalities are pedestrians, 50% of these are seniors. While cities do vary in their demographic composition, these rates of senior fatalities are still disproportionately higher than the percent of trips they represent.

## What's the Risk?

To understand bicycle and pedestrian safety in a city or state, it is not enough to

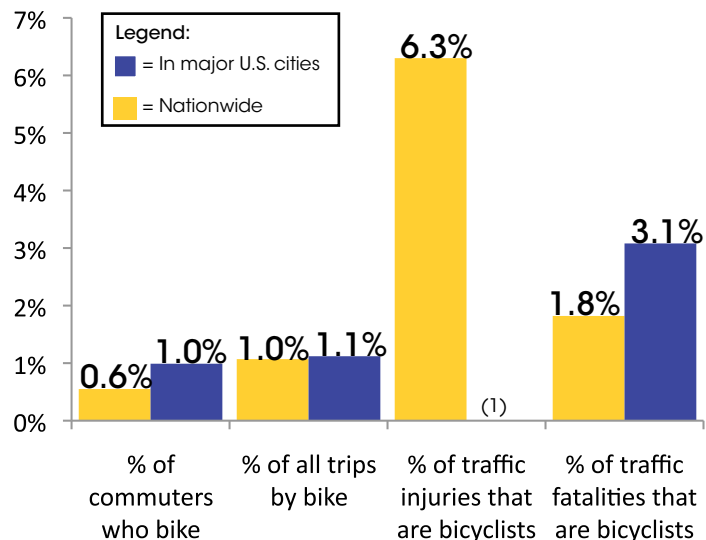
### Overview of Walking and Pedestrian Safety Nationwide and in Largest U.S. Cities



Sources: FARS 2009, NHTS 2009, ACS 2009, WISQARS 2009

Note: (1) City-level data for pedestrian injuries is unavailable.

### Overview of Bicycling and Bicycle Safety Nationwide and in Largest U.S. Cities



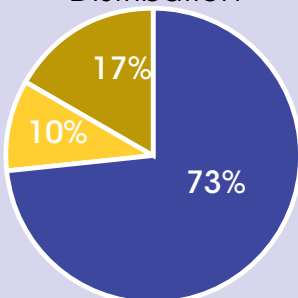
Sources: FARS 2009, NHTS 2009, ACS 2009, WISQARS 2009

Note: (1) City-level data for bicycle injuries is unavailable.

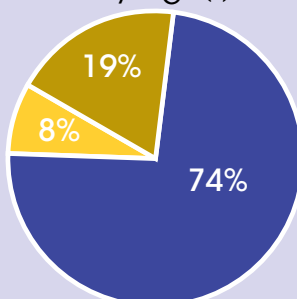
# SAFETY DEMOGRAPHICS

## Age and Risk

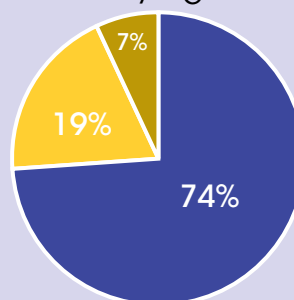
Pedestrians Age Distribution



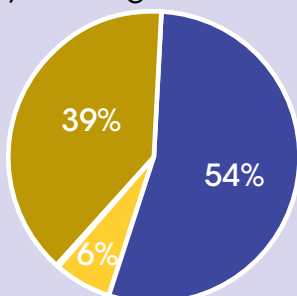
Pedestrians Injuries by Age<sup>(1)</sup>



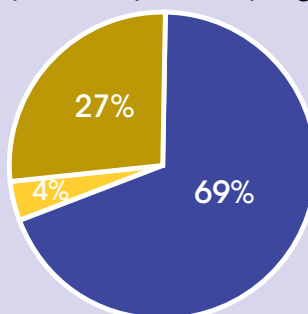
Pedestrian Fatalities by Age



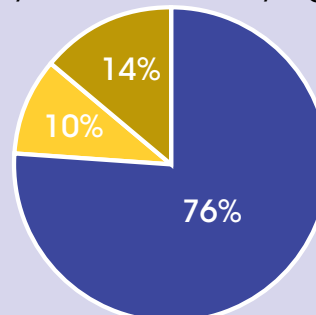
Cyclists Age Distribution



Cyclists Injuries by Age

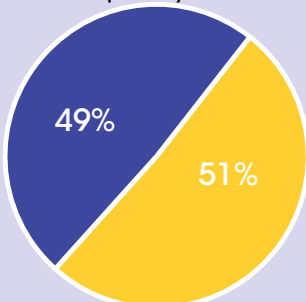


Cyclist Fatalities by Age

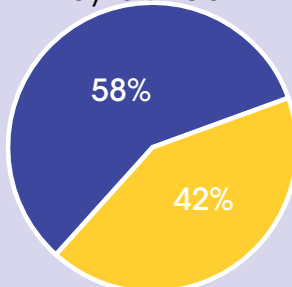


## Sex and Risk

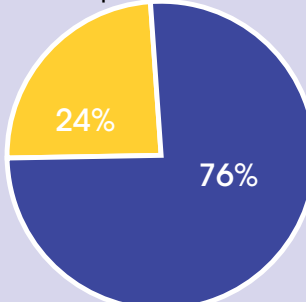
Walk Trips by Gender



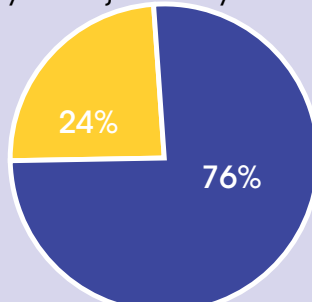
Pedestrian Injuries by Gender



Bike Trips by Gender



Bicycle Injuries by Gender



### Age Legend:

- = Under age 16
- = Over age 65
- = Age 16-65

Source: NHTS 2009,  
WISQARS 2009,  
FARS 2007-2009

### Sex Legend:

- = Male
- = Female

Source: NHTS 2009,  
WISQARS 2009

Note: (1) Numbers round up  
and so appear to add to  
101%.



simply look at the number of fatalities. The level of bicycling and walking in an area also must be taken into account to determine what the risk of bicycling or walking is. For example, if a city had just 100 people who bicycled and had one bicycle fatality and another city had 6,000 people who bicycled and had two bicycle fatalities, the first city would have a higher fatality rate. If 1 out of 100 bicyclists was a victim of a traffic fatality, the risk in that community would be much greater than the one where two out of 6,000 bicyclists died in traffic.

To measure risk, the Alliance divided the number of annual bicycle and pedestrian fatalities by population (weighted, or multiplied, by share of the population biking and walking to work). Multiplying population times commuter mode share allows us to better estimate exposure levels for bicycling and walking. Unlike the ACS, national travel surveys including all trip purposes have sample sizes that are too small to disaggregate to the state and city level. Thus, our method is a rough approximation of exposure levels that takes both population and cycling levels into account. Exposure data are rough approximations and fatalities can vary greatly from year to year. Thus, all fatality rate data should be interpreted as rough estimates of risk, and not as the exact risk level for any city or state.

FARS and ACS data indicate that nationwide, 4.2 bicyclists are killed per year per 10,000 daily bicyclists. Bicy-

**Sources:** FARS 2007-2009, ACS 2007-2009 **Notes:** This ranking is based on the fatality rate which is calculated by dividing the number of annual bicycle fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population biking to work). View these data on pages 56 and 57 of this report.

## Safest Places to Bike **RANKING**

### STATES

1. South Dakota
2. Vermont
3. Oregon
4. Nebraska
5. North Dakota
6. Colorado
7. Montana
8. Wyoming
9. Idaho
10. Washington

11. Massachusetts
12. Wisconsin
13. Rhode Island
14. Minnesota
15. Utah
16. Hawaii
17. Maine
18. Alaska
19. Pennsylvania
20. California
21. Illinois
22. West Virginia
23. Missouri
24. Iowa
25. New Mexico
26. Virginia
27. Arizona
28. Kansas
29. New Hampshire
30. Connecticut
31. New York
32. Kentucky
33. Michigan
34. Maryland
35. Ohio
36. Indiana
37. New Jersey
38. Nevada
39. Oklahoma
40. Texas
41. Georgia
42. Tennessee
43. Louisiana
44. North Carolina
45. Florida
46. Alabama
47. Arkansas
48. Delaware
49. South Carolina
50. Mississippi

### CITIES

1. Honolulu
2. Milwaukee
3. Omaha
4. Washington, DC
5. Portland, OR
6. San Francisco
7. Sacramento
8. Boston
9. Minneapolis
10. Austin

11. San Jose
12. Seattle
13. Oakland
14. Philadelphia
15. Chicago
16. Denver
17. Atlanta
18. Los Angeles
19. New Orleans
20. Tulsa
21. Baltimore
22. Long Beach
23. San Diego
24. Albuquerque
25. Virginia Beach
26. Tucson
27. Mesa
28. Columbus
29. New York
30. Houston
31. Oklahoma City
32. Detroit
33. Indianapolis
34. Kansas City, MO
35. Cleveland
36. Phoenix
37. Nashville
38. El Paso
39. Miami
40. Colorado Springs
41. Raleigh
42. Louisville
43. Dallas
44. Fort Worth
45. Fresno
46. Las Vegas
47. San Antonio
48. Memphis
49. Jacksonville
50. Arlington, TX
51. Charlotte

## Safest Places to Walk **RANKING**

### STATES

1. Vermont
2. Nebraska
3. Alaska
4. Wyoming
5. Iowa
6. South Dakota
7. North Dakota
8. Maine
9. Massachusetts
10. Minnesota

11. New Hampshire
12. New York
13. Wisconsin
14. Washington
15. Idaho
16. Kansas
17. Montana
18. Pennsylvania
19. Oregon
20. Colorado
21. Illinois
22. Connecticut
23. Utah
24. Hawaii
25. Ohio
26. Indiana
27. West Virginia
28. Rhode Island
29. Virginia
30. Kentucky
31. New Jersey
32. Michigan
33. Missouri
34. California
35. Oklahoma
36. Tennessee
37. Nevada
38. Arkansas
39. Maryland
40. Delaware
41. North Carolina
42. Texas
43. New Mexico
44. Arizona
45. Georgia
46. Mississippi
47. Alabama
48. South Carolina
49. Louisiana
50. Florida

### CITIES

1. Boston
2. Omaha
3. Minneapolis
4. Colorado Springs
5. New York
6. Seattle
7. Washington, DC
8. Cleveland
9. Philadelphia
10. San Francisco

11. Portland, OR
12. Chicago
13. Honolulu
14. Baltimore
15. Oakland
16. Milwaukee
17. Virginia Beach
18. Denver
19. Tucson
20. Sacramento
21. San Diego
22. New Orleans
23. Mesa
24. Indianapolis
25. Columbus
26. Los Angeles
27. Atlanta
28. Arlington, TX
29. Long Beach
30. San Jose
31. Raleigh
32. Las Vegas
33. Fresno
34. Memphis
35. Charlotte
36. San Antonio
37. El Paso
38. Detroit
39. Nashville
40. Louisville
41. Houston
42. Miami
43. Kansas City, MO
44. Austin
45. Albuquerque
46. Oklahoma City
47. Tulsa
48. Dallas
49. Phoenix
50. Jacksonville
51. Fort Worth

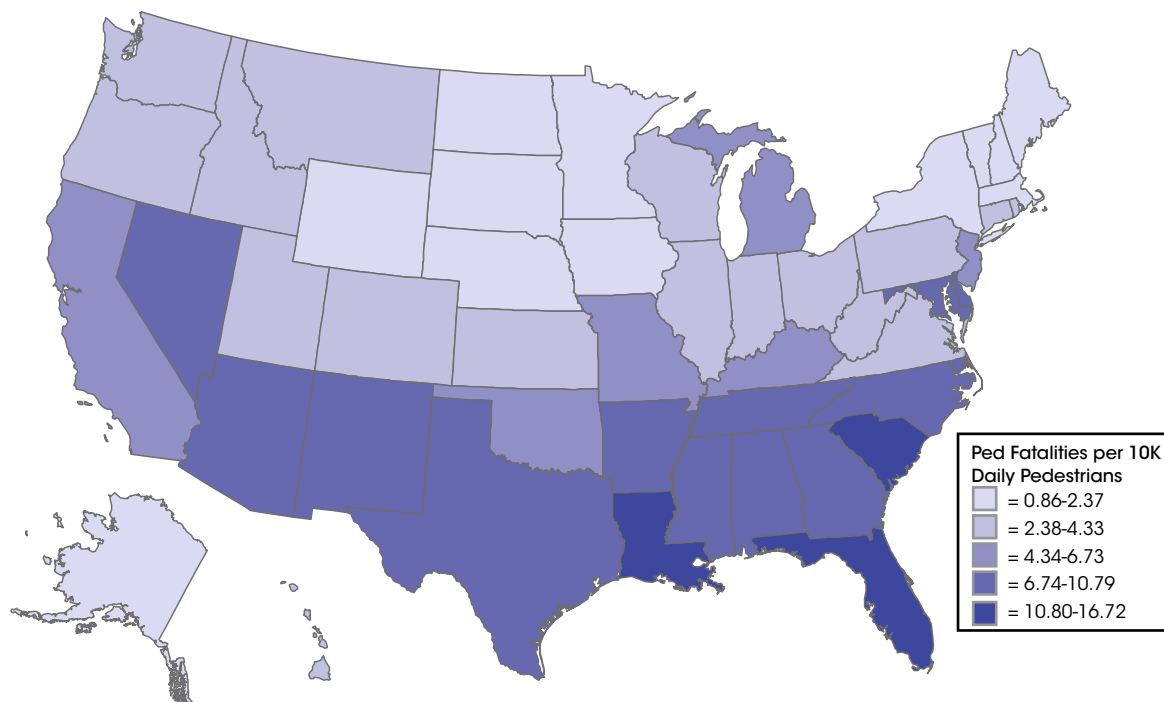
## Bicyclist and pedestrian fatality risk is lower in major U.S. cities.

clists are safer in major U.S. cities(1) where the fatality rate is 2.4 fatalities per year per 10,000 daily bicyclists. South Dakota and Vermont are the safest states for bicycling with 0 deaths per 10,000 daily bicyclists. Mississippi is the most dangerous state for bicycling ( 14.1 deaths per 10,000 daily bicyclists) followed by South Carolina (13.5 deaths per 10,000 daily bicyclists). Honolulu, Milwaukee, and Omaha report no bicycle fatalities in the years studied. Washington, DC, Portland, OR, and San Francisco are the next safest cities for bicycling with fatality rates of 0.5, 0.9, and 0.9 deaths per 10,000 daily bicyclists, respectively. Charlotte, Arlington, TX, and Jacksonville are the least safe major cities for bicycling with 18.5, 14.5, and 14.2 bicyclists killed per 10,000 daily bicyclists, respectively.

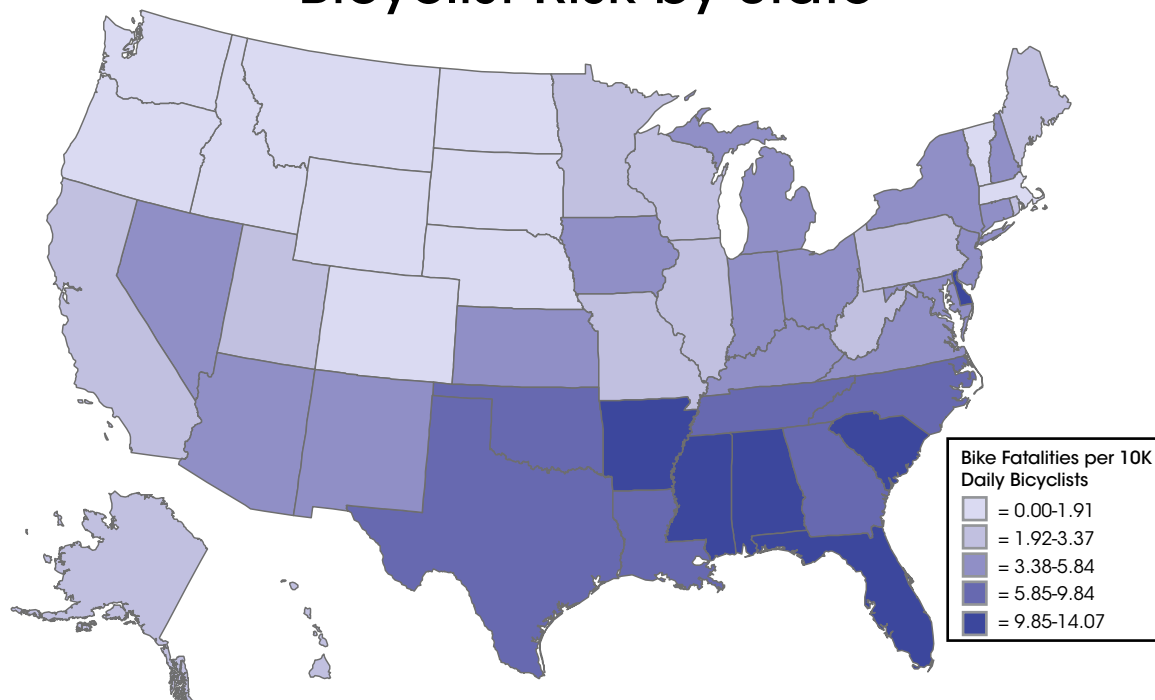
Pedestrians are similarly safer in major U.S. cities where 4.0 pedestrian fatalities occur each year for every 10,000 daily pedestrians. In states, there are 5.0 pedestrian deaths per 10,000 daily pedestrians. Vermont is also the safest state for walking with 0.9 pedestrian

**Sources:** FARS 2007-2009, ACS 2007-2009 **Notes:** This ranking is based on the fatality rate which is calculated by dividing the number of annual pedestrian fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population walking to work). View these data on pages 56 and 62 of this report. (1) Percentage of fatalities that are bicyclists in cities is greater than nationwide, but a higher number of people biking in cities makes the fatality rate lower for cities than nationwide.

## Pedestrian Risk by State



## Bicyclist Risk by State



**Source:** FARS 2007-2009, ACS 2007-2009 **Notes:** These maps use a fatality rate calculated by dividing the number of annual bicycle and pedestrian fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population biking and walking to work—to adjust for exposure). Because of the approximate nature of the exposure data and great fluctuations in fatality data from year to year, this rate should be seen as a rough estimate.





Photo by Kate McCarthy

deaths per 10,000 daily pedestrians. Florida (17.0 deaths per 10,000 daily pedestrians) is followed by Louisiana (12.0 deaths per 10,000 daily pedestrians), and South Carolina (11.7 deaths per 10,000 daily pedestrians) as the least safe states for walking. Boston, Omaha, and Minneapolis have the lowest pedestrian fatality rates among major U.S. cities with 0.9, 1.6, and 1.6 pedestrian deaths per 10,000 daily pedestrians, respectively. Fort Worth has the highest pedestrian fatality rates with 20.0 pedestrian deaths per 10,000 daily pedestrians.

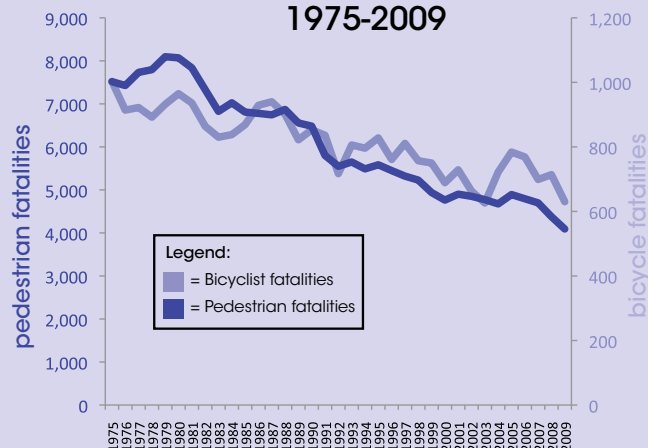
## Emerging Trends

Traffic fatalities are on the decline throughout the U.S., including those involving bicyclists and pedestrians. Between 1995 and 2009 the number of

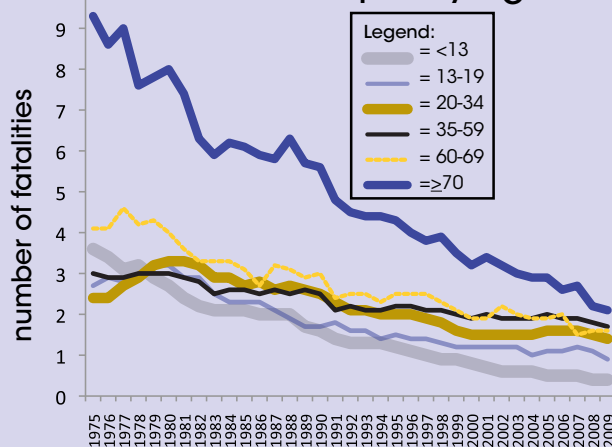
(Continued page 64)

## Fatality Trends

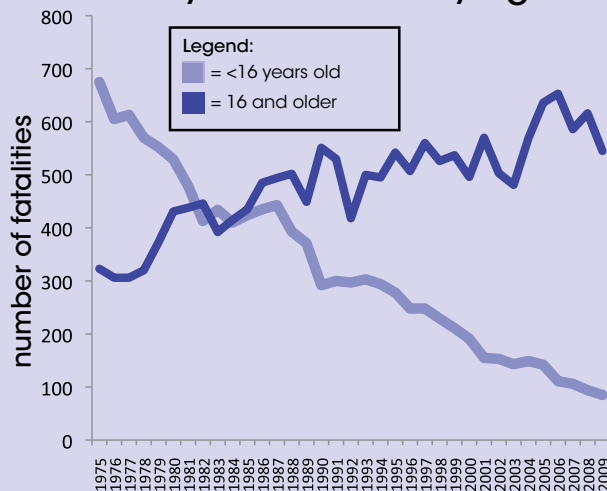
U.S. Bicycle and Pedestrian Fatalities  
1975-2009



Pedestrian Fatalities per  
100,000 People by Age



Bicycle Fatalities by Age



Source: FARS 1975-2009

# Pedestrian Safety in States

**12% of all traffic fatalities in the U.S. are pedestrians.**

**Legend:**

∅ = Not applicable

Yellow = High value

Light yellow = Low value

**Sources:** FARS 2007-2009, ACS 2007-2009 **Notes:** (1) All fatality data are based on the 3-year average number of fatalities from 2007-2009. (2) Pedestrian fatality rate was calculated by dividing the number of annual pedestrian fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population walking to work—to adjust for exposure). Because of the approximate nature of the exposure data and great fluctuations in fatality data from year to year, this rate should be seen as a rough estimate. (3) All averages are weighted by population except for annual reported pedestrian fatalities.

| State            | Annual reported pedestrian fatalities (1) | Ped. fatalities per 10K daily peds (1.2) | % Of all traffic fatalities that are pedestrians (1) | % Of pedestrian fatalities |             |
|------------------|---|--|--|----------------------------|-------------|
|                  |   |  |  | Under age 16               | Over age 65 |
| Alabama          | 67.0                                      | 11.0                                     | 6.9%   | 5%                         | 13%         |
| Alaska           | 8.3                                       | 1.5                                      | 12.0%  | 16%                        | 8%          |
| Arizona          | 131.7                                     | 9.1                                      | 14.0%  | 5%                         | 17%         |
| Arkansas         | 42.0                                      | 8.1                                      | 6.9%   | 7%                         | 13%         |
| California       | 611.0                                     | 5.9                                      | 17.4%  | 7%                         | 24%         |
| Colorado         | 49.3                                      | 3.3                                      | 9.4%   | 7%                         | 20%         |
| Connecticut      | 35.0                                      | 3.4                                      | 12.8%  | 7%                         | 30%         |
| Delaware         | 17.3                                      | 8.2                                      | 14.7%  | 4%                         | 13%         |
| Florida          | 495.3                                     | 17.0                                     | 17.0%  | 5%                         | 19%         |
| Georgia          | 150.3                                     | 9.4                                      | 10.2%  | 6%                         | 10%         |
| Hawaii           | 21.0                                      | 3.5                                      | 17.8%  | 0%                         | 48%         |
| Idaho            | 12.7                                      | 2.6                                      | 5.4%   | 13%                        | 37%         |
| Illinois         | 139.0                                     | 3.4                                      | 13.0%  | 9%                         | 18%         |
| Indiana          | 54.3                                      | 3.8                                      | 6.8%   | 10%                        | 21%         |
| Iowa             | 20.3                                      | 1.7                                      | 5.0%   | 16%                        | 20%         |
| Kansas           | 20.3                                      | 2.6                                      | 5.1%   | 7%                         | 26%         |
| Kentucky         | 50.3                                      | 5.0                                      | 6.1%   | 8%                         | 11%         |
| Louisiana        | 108.3                                     | 12.0                                     | 11.9%  | 10%                        | 6%          |
| Maine            | 11.0                                      | 2.0                                      | 6.6%   | 6%                         | 21%         |
| Maryland         | 115.0                                     | 8.1                                      | 19.7%  | 7%                         | 12%         |
| Massachusetts    | 63.3                                      | 2.1                                      | 16.8%  | 5%                         | 34%         |
| Michigan         | 121.0                                     | 5.2                                      | 12.4%  | 8%                         | 16%         |
| Minnesota        | 33.3                                      | 2.1                                      | 7.2%   | 15%                        | 24%         |
| Mississippi      | 55.3                                      | 10.4                                     | 7.0%   | 7%                         | 14%         |
| Missouri         | 70.0                                      | 5.9                                      | 7.4%   | 9%                         | 15%         |
| Montana          | 13.7                                      | 2.7                                      | 5.6%   | 12%                        | 22%         |
| Nebraska         | 7.3                                       | 1.3                                      | 3.2%   | 5%                         | 23%         |
| Nevada           | 47.7                                      | 7.8                                      | 15.2%  | 7%                         | 17%         |
| New Hampshire    | 9.3                                       | 2.2                                      | 7.4%   | 11%                        | 43%         |
| New Jersey       | 147.0                                     | 5.1                                      | 23.2%  | 6%                         | 22%         |
| New Mexico       | 43.3                                      | 9.1                                      | 11.4%  | 5%                         | 9%          |
| New York         | 293.0                                     | 2.3                                      | 23.6%  | 6%                         | 31%         |
| North Carolina   | 159.3                                     | 9.0                                      | 10.8%  | 7%                         | 10%         |
| North Dakota     | 5.0                                       | 2.0                                      | 4.2%   | 13%                        | 7%          |
| Ohio             | 97.3                                      | 3.7                                      | 8.4%   | 12%                        | 16%         |
| Oklahoma         | 49.3                                      | 6.8                                      | 6.6%   | 8%                         | 8%          |
| Oregon           | 44.7                                      | 3.0                                      | 10.7%  | 3%                         | 19%         |
| Pennsylvania     | 140.7                                     | 2.8                                      | 10.0%  | 9%                         | 28%         |
| Rhode Island     | 13.7                                      | 4.2                                      | 18.9%  | 7%                         | 39%         |
| South Carolina   | 99.3                                      | 11.7                                     | 10.3%  | 5%                         | 11%         |
| South Dakota     | 7.0                                       | 1.9                                      | 5.3%   | 0%                         | 24%         |
| Tennessee        | 66.3                                      | 7.4                                      | 6.1%   | 10%                        | 17%         |
| Texas            | 396.3                                     | 9.1                                      | 11.9%  | 8%                         | 11%         |
| Utah             | 27.7                                      | 3.5                                      | 10.1%  | 12%                        | 20%         |
| Vermont          | 3.3                                       | 0.9                                      | 4.7%   | 0%                         | 30%         |
| Virginia         | 78.7                                      | 4.4                                      | 9.0%   | 4%                         | 19%         |
| Washington       | 61.3                                      | 2.6                                      | 11.6%  | 7%                         | 23%         |
| West Virginia    | 20.3                                      | 3.9                                      | 5.2%   | 7%                         | 15%         |
| Wisconsin        | 49.7                                      | 2.5                                      | 7.8%   | 11%                        | 26%         |
| Wyoming          | 3.7                                       | 1.7                                      | 2.5%   | 9%                         | 9%          |
| Mean/Average (3) | ∅   | 5.2                                      | 11.7%  | 7%                         | 19%         |
| Median           | 49.3                                      | 3.7                                      | 9.4%   | 7%                         | 19%         |
| High             | 611.0                                     | 17.0                                     | 23.6%  | 16%                        | 48%         |
| Low              | 3.3                                       | 0.9                                      | 2.5%   | 0%                         | 6%          |

# Bicycle Safety in States

| State                       | Annual reported bicycle fatalities <sup>(1)</sup> | Bicycle fatalities per 10K daily bicyclists <sup>(1,2)</sup> | % Of all traffic fatalities that are bicyclists <sup>(1)</sup> | % Of bicycle fatalities <sup>(1)</sup> |             |
|-----------------------------|---|--|--|--|-------------|
|                             |   |  |  | Under age 16                           | Over age 65 |
| Alabama                     | 6.3   | 10.9   | 0.6%   | 32%                                    | 0%          |
| Alaska                      | 1.7   | 2.7  | 2.4%   | 20%                                    | 0%          |
| Arizona                     | 21.7  | 3.9  | 2.3%   | 11%                                    | 15%         |
| Arkansas                    | 4.3   | 11.3   | 0.7%   | 23%                                    | 0%          |
| California                  | 105.7   | 3.0  | 3.0%   | 13%                                    | 15%         |
| Colorado                    | 11.0  | 1.7  | 2.1%   | 27%                                    | 6%          |
| Connecticut                 | 4.0   | 4.3  | 1.5%   | 33%                                    | 8%          |
| Delaware                    | 4.0   | 12.6   | 3.4%   | 33%                                    | 17%         |
| Florida                     | 117.3   | 10.8   | 4.0%   | 5%                                     | 13%         |
| Georgia                     | 18.7  | 8.3  | 1.3%   | 14%                                    | 7%          |
| Hawaii                      | 3.0   | 2.5  | 2.5%   | 0%                                     | 0%          |
| Idaho                       | 3.7   | 1.8  | 1.5%   | 9%                                     | 18%         |
| Illinois                    | 21.7  | 3.0  | 2.0%   | 18%                                    | 5%          |
| Indiana                     | 13.3  | 5.3  | 1.7%   | 25%                                    | 8%          |
| Iowa                        | 4.7   | 3.7  | 1.1%   | 14%                                    | 14%         |
| Kansas                      | 4.3   | 4.2  | 1.1%   | 15%                                    | 15%         |
| Kentucky                    | 4.7   | 4.7  | 0.6%   | 21%                                    | 0%          |
| Louisiana                   | 15.7  | 9.8  | 1.7%   | 11%                                    | 6%          |
| Maine                       | 1.7   | 2.7  | 1.0%   | 0%                                     | 0%          |
| Maryland                    | 8.0   | 4.9  | 1.4%   | 21%                                    | 4%          |
| Massachusetts               | 9.0   | 1.9  | 2.4%   | 22%                                    | 4%          |
| Michigan                    | 20.3  | 4.8  | 2.1%   | 15%                                    | 13%         |
| Minnesota                   | 9.0   | 2.2  | 1.9%   | 19%                                    | 22%         |
| Mississippi                 | 7.3   | 14.1   | 0.9%   | 23%                                    | 5%          |
| Missouri                    | 4.7   | 3.4  | 0.5%   | 29%                                    | 7%          |
| Montana                     | 2.7   | 1.8  | 1.1%   | 25%                                    | 0%          |
| Nebraska                    | 1.3   | 1.5  | 0.6%   | 25%                                    | 0%          |
| Nevada                      | 7.7   | 6.0  | 2.4%   | 26%                                    | 4%          |
| New Hampshire               | 2.0   | 4.3  | 1.6%   | 50%                                    | 0%          |
| New Jersey                  | 15.0  | 5.6  | 2.4%   | 20%                                    | 9%          |
| New Mexico                  | 5.7   | 3.8  | 1.5%   | 6%                                     | 24%         |
| New York                    | 40.7  | 4.4  | 3.3%   | 13%                                    | 11%         |
| North Carolina              | 22.0  | 10.0   | 1.5%   | 5%                                     | 5%          |
| North Dakota                | 0.7   | 1.6  | 0.6%   | 0%                                     | 0%          |
| Ohio                        | 18.0  | 5.1  | 1.6%   | 15%                                    | 9%          |
| Oklahoma                    | 6.0   | 7.0  | 0.8%   | 22%                                    | 17%         |
| Oregon                      | 11.0  | 1.4  | 2.6%   | 6%                                     | 18%         |
| Pennsylvania                | 14.3  | 2.7  | 1.0%   | 23%                                    | 0%          |
| Rhode Island                | 0.7   | 2.1  | 0.9%   | 0%                                     | 0%          |
| South Carolina              | 15.3  | 13.5   | 1.6%   | 9%                                     | 9%          |
| South Dakota                | 0.0   | 0.0  | 0.0%   | Ø                                      | Ø           |
| Tennessee                   | 7.3   | 8.7  | 0.7%   | 41%                                    | 5%          |
| Texas                       | 49.7  | 7.9  | 1.5%   | 17%                                    | 7%          |
| Utah                        | 5.0   | 2.4  | 1.8%   | 33%                                    | 13%         |
| Vermont                     | 0.0   | 0.0  | 0.0%   | Ø                                      | Ø           |
| Virginia                    | 10.3  | 3.8  | 1.2%   | 13%                                    | 0%          |
| Washington                  | 10.7  | 1.9  | 2.0%   | 6%                                     | 9%          |
| West Virginia               | 1.0   | 3.3  | 0.3%   | 0%                                     | 33%         |
| Wisconsin                   | 8.7   | 2.1  | 1.4%   | 19%                                    | 4%          |
| Wyoming                     | 1.0   | 1.8  | 0.7%   | 0%                                     | 0%          |
| Mean/Average <sup>(3)</sup> | Ø   | 4.8  | 1.8%   | 14%                                    | 10%         |
| Median                      | 7.3   | 3.8  | 1.5%   | 16%                                    | 6%          |
| High                        | 117.3   | 14.1   | 4.0%   | 50%                                    | 33%         |
| Low                         | 0.0   | 0.0  | 0.0%   | 0%                                     | 0%          |

**Bicyclists  
account for  
2% of  
all traffic  
fatalities in  
U.S.**

**Legend:**  
Ø = Not applicable  
= High value  
= Low value

**Sources:** FARS 2007-2009, ACS 2007-2009 **Notes:** (1) All fatality data are based on the 3-year average number of fatalities from 2007-2009. (2) Bicyclist fatality rate was calculated by dividing the number of annual bicycle fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population biking to work—to adjust for exposure). Because of the approximate nature of the exposure data and great fluctuations in fatality data from year to year, this rate should be seen as a rough estimate. (3) All averages are weighted by population except for annual reported bicycle fatalities.





# Bicycle Safety in Cities

| City                        | Annual reported bicycle fatalities <sup>(1)</sup> | Bicycle fatalities per 10K daily bicyclists <sup>(1,2)</sup> | % Of all traffic fatalities that are bicyclists <sup>(1)</sup> | % Of bicycle fatalities <sup>(1)</sup> |             |
|-----------------------------|---|--|--|--|-------------|
|                             |   |  |  | Under age 16                           | Over age 60 |
| Albuquerque                 | 2.0   | 2.9  | 4.2%   | 17%                                    | 17%         |
| Arlington ,TX               | 1.0   | 14.5   | 3.6%   | 0%                                     | 0%          |
| Atlanta                     | 0.7   | 1.5  | 1.2%   | 0%                                     | 0%          |
| Austin                      | 1.0   | 1.1  | 1.6%   | 0%                                     | 0%          |
| Baltimore                   | 1.0   | 2.4  | 2.3%   | 0%                                     | 33%         |
| Boston                      | 1.0   | 1.0  | 4.1%   | 0%                                     | 0%          |
| Charlotte                   | 2.0   | 18.5   | 3.0%   | 0%                                     | 0%          |
| Chicago                     | 4.7   | 1.5  | 2.7%   | 21%                                    | 14%         |
| Cleveland                   | 1.3   | 5.7  | 3.6%   | 25%                                    | 0%          |
| Colorado Springs            | 1.3   | 6.5  | 6.1%   | 0%                                     | 0%          |
| Columbus                    | 2.0   | 3.3  | 3.5%   | 0%                                     | 17%         |
| Dallas                      | 1.7   | 8.7  | 1.2%   | 60%                                    | 20%         |
| Denver                      | 1.7   | 1.5  | 4.1%   | 20%                                    | 20%         |
| Detroit                     | 1.7   | 4.8  | 1.5%   | 20%                                    | 0%          |
| El Paso                     | 0.7   | 6.2  | 1.4%   | 0%                                     | 50%         |
| Fort Worth                  | 1.0   | 8.8  | 1.5%   | 33%                                    | 0%          |
| Fresno                      | 3.3   | 10.4   | 9.9%   | 20%                                    | 10%         |
| Honolulu                    | 0.0   | 0.0  | 0.0%   | Ø                                      | Ø           |
| Houston                     | 3.7   | 4.3  | 1.6%   | 0%                                     | 18%         |
| Indianapolis                | 1.3   | 4.9  | 1.8%   | 25%                                    | 0%          |
| Jacksonville                | 4.7   | 14.2   | 3.7%   | 0%                                     | 21%         |
| Kansas City, MO             | 0.7   | 5.5  | 1.1%   | 0%                                     | 0%          |
| Las Vegas                   | 2.3   | 10.7   | 5.8%   | 14%                                    | 0%          |
| Long Beach                  | 1.3   | 2.8  | 4.1%   | 0%                                     | 25%         |
| Los Angeles                 | 6.3   | 1.9  | 2.4%   | 5%                                     | 21%         |
| Louisville                  | 2.0   | 8.2  | 2.9%   | 0%                                     | 0%          |
| Memphis                     | 1.3   | 12.5   | 1.3%   | 50%                                    | 0%          |
| Mesa                        | 1.7   | 3.3  | 5.3%   | 20%                                    | 40%         |
| Miami                       | 1.0   | 6.4  | 2.0%   | 0%                                     | 0%          |
| Milwaukee                   | 0.0   | 0.0  | 0.0%   | Ø                                      | Ø           |
| Minneapolis                 | 1.7   | 1.0  | 7.6%   | 0%                                     | 20%         |
| Nashville                   | 1.0   | 5.7  | 1.5%   | 33%                                    | 0%          |
| New Orleans                 | 1.3   | 2.2  | 3.3%   | 0%                                     | 0%          |
| New York                    | 19.7  | 3.5  | 7.1%   | 10%                                    | 12%         |
| Oakland                     | 1.0   | 1.2  | 3.1%   | 0%                                     | 0%          |
| Oklahoma City               | 0.3   | 4.6  | 0.5%   | 0%                                     | 0%          |
| Omaha                       | 0.0   | 0.0  | 0.0%   | Ø                                      | Ø           |
| Philadelphia                | 3.3   | 1.3  | 3.2%   | 10%                                    | 0%          |
| Phoenix                     | 6.7   | 5.7  | 4.0%   | 5%                                     | 5%          |
| Portland, OR                | 2.7   | 0.9  | 9.4%   | 0%                                     | 0%          |
| Raleigh                     | 1.3   | 7.1  | 4.3%   | 0%                                     | 0%          |
| Sacramento                  | 1.0   | 1.0  | 2.9%   | 0%                                     | 33%         |
| San Antonio                 | 2.0   | 11.3   | 1.7%   | 17%                                    | 0%          |
| San Diego                   | 3.3   | 2.9  | 3.9%   | 10%                                    | 0%          |
| San Francisco               | 2.0   | 0.9  | 4.7%   | 0%                                     | 0%          |
| San Jose                    | 1.0   | 1.1  | 2.2%   | 33%                                    | 0%          |
| Seattle                     | 2.0   | 1.1  | 8.1%   | 0%                                     | 0%          |
| Tucson                      | 3.3   | 3.2  | 6.7%   | 40%                                    | 0%          |
| Tulsa                       | 0.3   | 2.2  | 0.6%   | 0%                                     | 100%        |
| Virginia Beach              | 0.7   | 3.0  | 2.4%   | 0%                                     | 0%          |
| Washington, DC              | 0.7   | 0.5  | 1.9%   | 0%                                     | 0%          |
| Mean/Average <sup>(3)</sup> | 2.2   | 2.4  | 3.1%   | 11%                                    | 10%         |
| Median                      | 1.3   | 3.1  | 2.9%   | 0%                                     | 0%          |
| High                        | 19.7  | 18.5   | 9.9%   | 60%                                    | 100%        |
| Low                         | 0.0   | 0.0  | 0.0%   | 0%                                     | 0%          |

**3% of traffic fatalities in major U.S. cities are bicyclists.**

Honolulu, Milwaukee, and Omaha have the lowest number of annual reported bicycle fatalities <sup>(0)</sup> among the largest U.S. cities. Fresno has the greatest percentage of fatalities that are bicyclists: 9.9% of traffic fatalities are bicyclists although only 0.7% of commuters bicycle to work.

#### Legend:

Ø = Not applicable  
 = High value  
 = Low value

**Sources:** FARS 2007-2009, ACS 2007  
**Notes:** (1) All fatality data are based on the 3-year average number of fatalities from 2007-2009. (2) Bicyclist fatality rate was calculated by dividing the number of annual bicycle fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population biking to work). (3) All averages are weighted by population except annual reported bicycle fatalities.

# Looking Outside the Borders

## Pedestrian and Bicyclist Fatalities and Injuries

In an effort to foster safety for bicycling and walking, it is also crucial that the U.S. look to other countries to see what safety levels have been achieved. One such comparison by Pucher and Buehler (2010; chart this page) found that the U.S. has the highest rates of bicyclist and pedestrian injuries and fatalities when compared to four other developed countries: the UK, Germany, Denmark, and the Netherlands.

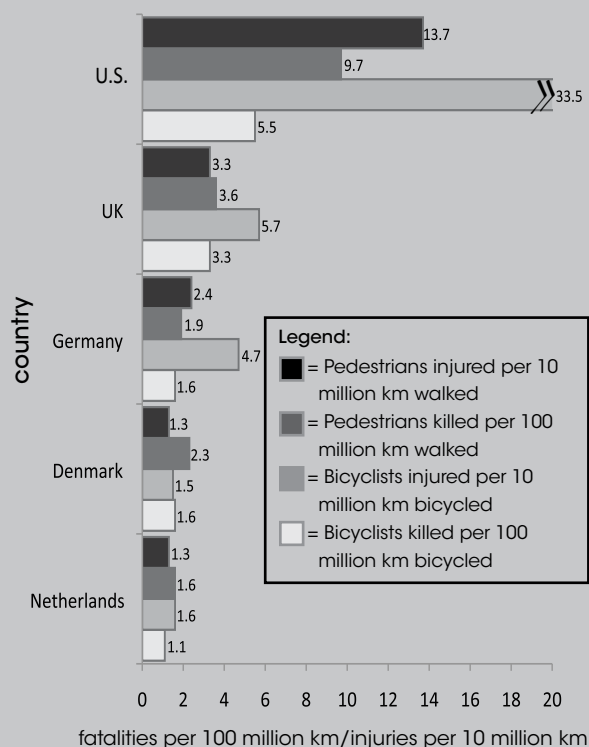
The bicyclist fatality rate, calculated as bicyclists killed per 100 million km bicycled, is 1.7 times greater in the U.S. than any of the other four countries. For every 100 million km bicycled in the U.S. there are 5.5 bicyclist fatalities. The UK has the next highest bicycle fatality rate with 3.3 bicyclist fatalities per 100 million km cycled. The U.S. also leads the UK for bicyclist injuries. In the U.S., there are 33.5 bicyclists injured per 10 million km bicycled. This is nearly six times the U.K. rate of 5.7 bicyclists injured per 10 million km bicycled. The Netherlands is the safest country for cycling, with by far the lowest fatality and injury rates.

Pedestrian fatality rate was calculated with a similar method—pedestrians killed per 100 million km walked. The U.S. pedestrian fatality rate of 9.7 fatalities for every 100 million km walked is 2.7 times greater than that of any other country studied. The UK is again behind the U.S. with 3.6 pedestrian fatalities per 100 million km walked. More than 13 pedestrians are injured for every 10 million km walked in the U.S. This compares to 3.3 pedestrian injuries in the UK. The Netherlands also leads other countries in pedestrian safety

having the lowest rate of pedestrian fatalities and injuries.

An examination of bicyclist and pedestrian fatalities since 1970 reveals that other countries are experiencing the same decline in fatalities as the U.S. The U.S., UK, Denmark, Germany, and the Netherlands have all seen a general downward trend in number of bicyclist and pedestrian fatalities over the last four decades. However, the U.S. again lags behind international peers with the least decline while the Netherlands has seen the greatest decline in fatalities.

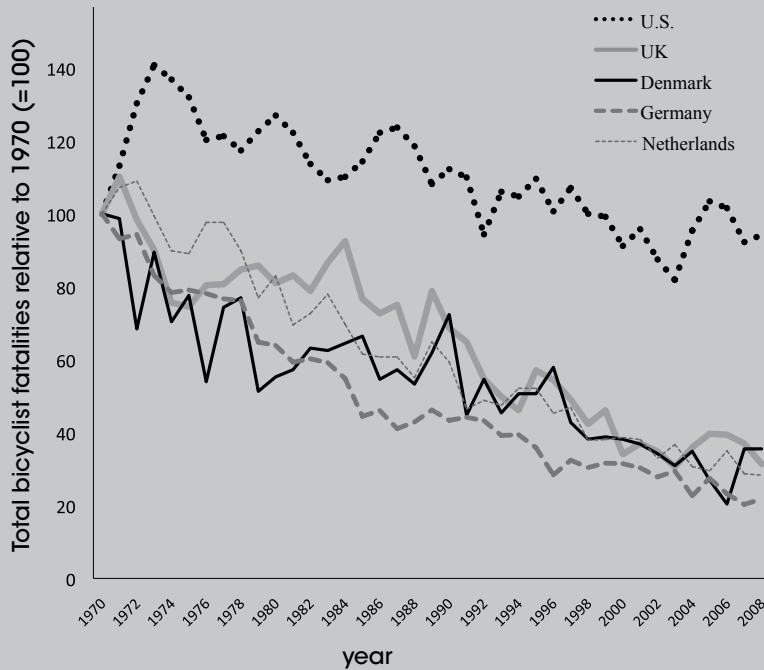
### Bicyclist and Pedestrian Fatality and Injury Rates



Source: John Pucher and Ralph Buehler, "Walking and Cycling for Healthy Cities," *Built Environment*, Vol 36, No. 5, December 2010, pp. 391-414. URL link: [http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment\\_WalkBike\\_10Dec2010.pdf](http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment_WalkBike_10Dec2010.pdf)

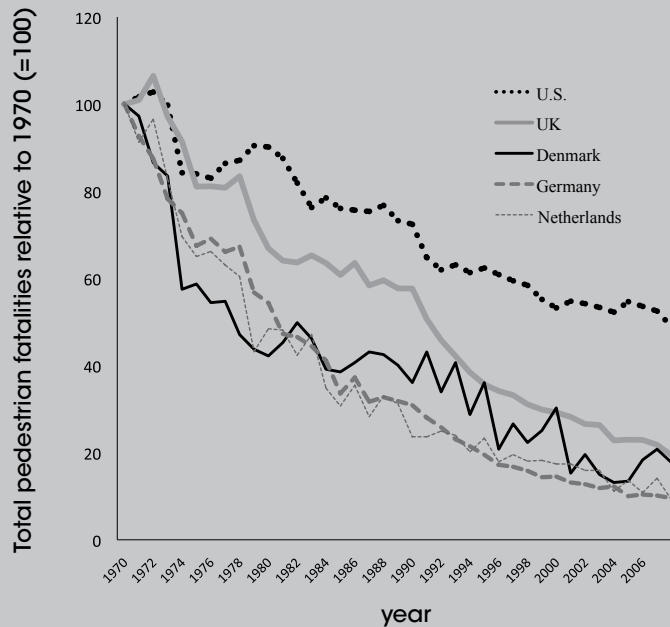


## Trend in Bicyclist Fatalities



**Bicyclist and pedestrian fatalities have declined much more in other countries than in the U.S.**

## Trend in Pedestrian Fatalities



Source: John Pucher and Ralph Buehler, "Walking and Cycling for Healthy Cities," *Built Environment*, Vol 36, No. 5, December 2010, pp. 391-414.  
 URL link: [http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment\\_WalkBike\\_10Dec2010.pdf](http://policy.rutgers.edu/faculty/pucher/BuiltEnvironment_WalkBike_10Dec2010.pdf).



# Pedestrian Safety in Cities

## Pedestrians account for 27% of traffic fatalities in major U.S. cities.

Despite comprising 5% of trips to work and nearly 13% of all trips, pedestrians in major U.S. cities account for over a quarter of traffic fatalities. In Honolulu, New York, and San Francisco, roughly half of all traffic fatalities are pedestrians. Boston has the lowest pedestrian fatality rate.

### Legend:

■ = High value  
■ = Low value

Sources: FARS 2007-2009, ACS 2009

Notes: (1) All fatality data in this table are based on the 3-year average number of fatalities from 2007-2009. (2) Pedestrian fatality rate was calculated by dividing the number of annual pedestrian fatalities (averaged between 2007-2009) by population (weighted, or multiplied, by share of the population walking to work). (3) All averages are weighted by population except for annual reported pedestrian fatalities.

| City             | Annual reported pedestrian fatalities (1) | Ped. fatalities Rate per 10K daily peds (1,2) | % Of all traffic fatalities that are pedestrians (1) | % Of pedestrian fatalities (1) |             |
|------------------|---|---|--|--------------------------------|-------------|
|                  |   |   |  | Under age 16                   | Over age 60 |
| Albuquerque      | 12.3                                      | 11.3  | 26.1%  | 0%                             | 16%         |
| Arlington, TX    | 5.0                                       | 7.0   | 18.1%  | 7%                             | 7%          |
| Atlanta          | 14.7                                      | 6.4   | 25.4%  | 16%                            | 2%          |
| Austin           | 17.7                                      | 11.0  | 29.0%  | 2%                             | 11%         |
| Baltimore        | 14.3                                      | 3.4   | 32.3%  | 7%                             | 16%         |
| Boston           | 8.3                                       | 0.9   | 34.2%  | 0%                             | 32%         |
| Charlotte        | 12.3                                      | 8.9   | 18.5%  | 3%                             | 8%          |
| Chicago          | 46.7                                      | 2.8   | 27.3%  | 14%                            | 21%         |
| Cleveland        | 4.3                                       | 2.3   | 11.7%  | 0%                             | 23%         |
| Colorado Springs | 1.7                                       | 1.7   | 7.6%   | 20%                            | 20%         |
| Columbus         | 12.3                                      | 6.0   | 21.6%  | 5%                             | 3%          |
| Dallas           | 33.0                                      | 14.4  | 24.1%  | 6%                             | 10%         |
| Denver           | 12.7                                      | 5.1   | 31.4%  | 5%                             | 26%         |
| Detroit          | 29.3                                      | 9.8   | 26.9%  | 6%                             | 13%         |
| El Paso          | 12.3                                      | 9.2   | 25.5%  | 8%                             | 22%         |
| Fort Worth       | 17.3                                      | 20.0  | 25.7%  | 8%                             | 12%         |
| Fresno           | 8.3                                       | 8.8   | 24.8%  | 12%                            | 12%         |
| Honolulu         | 8.7                                       | 2.9   | 45.6%  | 0%                             | 69%         |
| Houston          | 51.3                                      | 10.4  | 23.0%  | 8%                             | 8%          |
| Indianapolis     | 10.3                                      | 6.0   | 14.2%  | 10%                            | 16%         |
| Jacksonville     | 23.0                                      | 18.7  | 18.1%  | 4%                             | 13%         |
| Kansas City, MO  | 11.0                                      | 10.6  | 18.9%  | 18%                            | 6%          |
| Las Vegas        | 9.7                                       | 8.4   | 24.0%  | 3%                             | 28%         |
| Long Beach       | 10.0                                      | 7.2   | 30.9%  | 10%                            | 17%         |
| Los Angeles      | 86.0                                      | 6.4   | 31.9%  | 6%                             | 22%         |
| Louisville       | 13.3                                      | 10.2  | 19.5%  | 13%                            | 5%          |
| Memphis          | 12.0                                      | 8.8   | 12.1%  | 6%                             | 11%         |
| Mesa             | 5.3                                       | 6.0   | 17.0%  | 0%                             | 6%          |
| Miami            | 17.0                                      | 10.4  | 34.7%  | 6%                             | 31%         |
| Milwaukee        | 11.7                                      | 4.2   | 33.0%  | 17%                            | 26%         |
| Minneapolis      | 4.0                                       | 1.6   | 18.2%  | 0%                             | 25%         |
| Nashville        | 10.0                                      | 9.9   | 14.8%  | 3%                             | 10%         |
| New Orleans      | 12.3                                      | 5.9   | 30.8%  | 8%                             | 5%          |
| New York         | 148.7                                     | 1.7   | 53.9%  | 6%                             | 35%         |
| Oakland          | 7.3                                       | 4.1   | 22.9%  | 18%                            | 0%          |
| Oklahoma City    | 9.3                                       | 12.1  | 13.0%  | 14%                            | 4%          |
| Omaha            | 2.0                                       | 1.6   | 9.4%   | 0%                             | 0%          |
| Philadelphia     | 32.0                                      | 2.5   | 31.1%  | 15%                            | 28%         |
| Phoenix          | 42.3                                      | 14.9  | 25.1%  | 7%                             | 12%         |
| Portland, OR     | 7.7                                       | 2.6   | 27.1%  | 4%                             | 22%         |
| Raleigh          | 8.7                                       | 8.2   | 28.3%  | 15%                            | 8%          |
| Sacramento       | 8.7                                       | 5.7   | 24.8%  | 4%                             | 23%         |
| San Antonio      | 24.7                                      | 9.1   | 20.5%  | 3%                             | 16%         |
| San Diego        | 21.7                                      | 5.8   | 25.6%  | 3%                             | 29%         |
| San Francisco    | 20.7                                      | 2.5   | 48.8%  | 3%                             | 50%         |
| San Jose         | 13.7                                      | 7.4   | 29.7%  | 5%                             | 34%         |
| Seattle          | 10.0                                      | 1.9   | 40.5%  | 0%                             | 43%         |
| Tucson           | 10.3                                      | 5.3   | 20.7%  | 6%                             | 29%         |
| Tulsa            | 12.0                                      | 13.8  | 23.4%  | 8%                             | 8%          |
| Virginia Beach   | 4.3                                       | 4.7   | 15.5%  | 0%                             | 23%         |
| Washington, DC   | 14.0                                      | 2.0   | 39.3%  | 7%                             | 29%         |
| Mean/Average (3) | 18.8                                      | 4.0   | 26.9%  | 7%                             | 21%         |
| Median           | 12.0                                      | 6.0   | 24.8%  | 6%                             | 16%         |
| High             | 148.7                                     | 20.0  | 53.9%  | 20%                            | 69%         |
| Low              | 1.7                                       | 0.9   | 7.6%   | 0%                             | 0%          |

# State Safety Policies and Funding

| State            | Percent of traffic fatalities bike/ped (1) | State Highway Safety Funds(2) |                 | Emphasized in state highway safety plan |         |
|------------------|--|-------------------------------|-----------------|---|---------|
|                  |  | % to bike/ped                 | amt. per capita | Bicycling                               | Walking |
| Alabama          | 7.5%                                       | 0.01%                         | \$0.00          |   |         |
| Alaska           | 14.4%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Arizona          | 16.3%                                      | 0.00%                         | \$0.00          |   |         |
| Arkansas         | 7.6%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| California       | 20.5%                                      | 0.52%                         | \$0.01          | ✓                                       | ✓       |
| Colorado         | 11.6%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Connecticut      | 14.3%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Delaware         | 18.1%                                      | 0.00%                         | \$0.00          |   | ✓       |
| Florida          | 21.0%                                      | 4.30%                         | \$0.15          | ✓                                       | ✓       |
| Georgia          | 11.5%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Hawaii           | 20.3%                                      | 0.00%                         | \$0.00          |   |         |
| Idaho            | 6.9%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Illinois         | 15.1%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Indiana          | 8.4%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Iowa             | 6.1%                                       | 0.00%                         | \$0.00          |   |         |
| Kansas           | 6.2%                                       | 0.00%                         | \$0.00          |   |         |
| Kentucky         | 6.7%                                       | 0.00%                         | \$0.00          |   |         |
| Louisiana        | 13.6%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Maine            | 7.6%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Maryland         | 21.1%                                      | 0.00%                         | \$0.00          |   | ✓       |
| Massachusetts    | 19.2%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Michigan         | 14.4%                                      | 0.20%                         | \$0.01          | ✓                                       | ✓       |
| Minnesota        | 9.2%                                       | 0.17%                         | \$0.01          |   |         |
| Mississippi      | 7.9%                                       | 0.00%                         | \$0.00          |   |         |
| Missouri         | 7.9%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Montana          | 6.7%                                       | 0.00%                         | \$0.00          |   |         |
| Nebraska         | 3.8%                                       | 0.00%                         | \$0.00          |   |         |
| Nevada           | 17.7%                                      | 0.00%                         | \$0.00          |   | ✓       |
| New Hampshire    | 9.0%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| New Jersey       | 25.6%                                      | 0.21%                         | \$0.00          | ✓                                       | ✓       |
| New Mexico       | 12.9%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| New York         | 26.9%                                      | 0.00%                         | \$0.00          |   | ✓       |
| North Carolina   | 12.3%                                      | 0.52%                         | \$0.01          | ✓                                       | ✓       |
| North Dakota     | 4.8%                                       | 0.00%                         | \$0.00          |   |         |
| Ohio             | 10.0%                                      | 0.05%                         | \$0.00          | ✓                                       | ✓       |
| Oklahoma         | 7.4%                                       | 0.00%                         | \$0.00          |   |         |
| Oregon           | 13.4%                                      | 0.00%                         | \$0.00          |   |         |
| Pennsylvania     | 11.0%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Rhode Island     | 19.8%                                      | 0.00%                         | \$0.00          |   |         |
| South Carolina   | 11.9%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| South Dakota     | 5.3%                                       | 0.00%                         | \$0.00          |   |         |
| Tennessee        | 6.8%                                       | 0.00%                         | \$0.00          |   |         |
| Texas            | 13.4%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Utah             | 12.0%                                      | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Vermont          | 4.7%                                       | 0.00%                         | \$0.00          |   |         |
| Virginia         | 10.2%                                      | 0.56%                         | \$0.01          | ✓                                       | ✓       |
| Washington       | 13.6%                                      | 3.23%                         | \$0.04          | ✓                                       | ✓       |
| West Virginia    | 5.5%                                       | 0.00%                         | \$0.00          |   |         |
| Wisconsin        | 9.1%                                       | 0.00%                         | \$0.00          |   |         |
| Wyoming          | 3.2%                                       | 0.00%                         | \$0.00          | ✓                                       | ✓       |
| Mean/Average (3) | 13.6%                                      | 0.40%                         | \$0.01          | Yes                                     | Yes     |
| Median           | 11.3%                                      | 0.00%                         | \$0.00          | Yes                                     | Yes     |
| High             | 26.9%                                      | 4.30%                         | \$0.15          | ø                                       | ø       |
| Low              | 3.2%                                       | 0.00%                         | \$0.00          | ø                                       | ø       |

**Legend:**  
 ✓ = Yes  
 = High value  
 = Low value

Sources: FARS 2007-2009, FHWA FMIS 2006-2010, LAB 2011 Notes: (1) Fatality data in this table are based on the 3-year average number of fatalities from 2007-2009. (2) State highway funds represent funding from the federal Highway Safety Improvement Program (HSIP).



bicyclists killed in traffic in the U.S. decreased by 27%. Pedestrian fatalities fell 24% over the same period. Pedestrian fatalities have experienced a steady decline with 2009 being a record low year for fatalities.

When looking at trends in bicycle and pedestrian fatalities over the last three decades, pedestrian fatalities have steadily declined in every age group. While bicycle fatalities among children under 16 have declined sharply in this time period, fatalities in the 16 and older age group have steadily increased. However, these charts do not take into account the change in number of people who bike or walk in these age groups. For example, the number of children who bicycle or walk to school has decreased 75% between 1966 and 2009. When walking and cycling levels have declined at such rates, then reduced fatalities do not necessarily suggest safer walking and cycling.

## Safety Policy

Though almost all of the policies discussed in the following chapter could impact safety, this chapter takes a closer look at state highway safety policy. The federal Highway Safety Improvement Program (HSIP) is a federal funding program that aims to reduce traffic deaths and injuries through infrastructure-related improvements. States must have a state highway safety plan to be eligible for these funds. Twenty-seven states emphasize bicycling in their state highway safety plan and 31 states emphasize walking. However, the rate at which states obligate safety funds to bicycling and walking is disproportionately low compared to the percent of traffic fatalities these modes represent. While 13.6% of traffic fatalities are bicyclists or pedestrians, just 0.4% of state highway safety funds are directed at these modes. This amounts to just one cent per capita toward bicycle and pedestrian safety from this fund.

Photo by Dan Burden, Walkable and Livable Communities Institute





Green bike lane in New York City. Photo by Payton Chung

## 4: POLICIES

Research shows that better policies for bicycling and walking lead to higher levels of bicycling and walking (Pucher and Buehler 2007 and 2008, Pucher et al., 2010). The cities and countries that have invested most heavily in these modes see the greatest share of trips by bicycle and foot (Gotschi and Mills 2009).

For benchmarks in this chapter the Alliance relied on state and city surveys, the National Transportation Enhancements Clearinghouse, the Federal Highway Administration's (FHWA) Fiscal Management Information System (FMIS), League of American Bicyclists' Bicycle Friendly States data, Safe Routes to School National Partnership, National Center for Safe Routes to School, the Rails-to-Trails Conservancy, and the American Public Transportation Association. The Alliance sent surveys to all 50 states and the 51 cities included

in this report. State and city surveys were answered by local advocates and government officials (department of transportation employees, state bicycle and pedestrian coordinators, state Safe Routes to School coordinators, and city planning staff) (for more information on this process, see Chapter 1, page 26). State/city survey data are self-reported by cities/states. Respondents received follow-up only where data appeared inconsistent. Whenever possible, a note is included at the bottom of tables and illustrations noting cities and states that were unable to supply data.

This chapter focuses more heavily on cities since they are where provisions can best be measured. However, not all cities were able to report on bicycling and walking provisions because their agencies have not implemented methods to collect these data and thus have no data available.





## Bicycling and Walking Policies

Strong policies to provide provisions for and promote bicycling and walking can help transform communities into healthier and more livable places. This report considered a number of policies such as complete streets policies, bicycle parking policies, annual spending targets for bicycle and pedestrian projects, published goals to increase bicycling and walking, and published goals to decrease bicycle and pedestrian fatalities.

### Planning for Bicycling and Walking

#### Published Goals

When states or cities publish goals to increase bicycling and walking and decrease crashes, they are making public commitments to progress for which success can be easily measured. Since the 2010 Benchmarking Report, states and cities have improved in this area with several adopting new goals in the last two years. Thirty-four states report they have published goals for increasing *both* bicycling and walking. Mississippi has a goal to increase walking only. Nevada has a goal to increase bicycling only. This is up from just 16 states that reported goals for increasing bicycling and walking in 2007 and 20 states as of the 2010 Benchmarking Report.

Similarly, more cities have now adopted goals to increase bicycling and walking. Of the cities surveyed, 36 have goals to increase walking and 46 have goals to increase bicycling. Two years ago just 20 and 33 of these cities reported having such goals, respectively.

States and cities are also increasing their commitment to bicycling and walking safety. Forty-one states report having adopted goals to decrease pedestrian fatalities and 38 have goals to decrease bicycle fatalities. Of the cities surveyed, 39 have adopted goals to reduce bicycle fatalities and 31 have adopted goals to decrease pedestrian fatalities. Just 20 of these cities reported having goals to reduce bicycle and pedestrian fatalities in 2007.

#### Master Plans

Planning is an integral step to creating healthy livable communities. Bicycle and pedestrian master plans set communities' visions for the future and their road maps for achieving their goals. Roughly half of cities and states have adopted master plans for bicycling and walking as of this report. Twenty-four states have bicycle and pedestrian master plans. Hawaii, Minnesota, and Nevada have bicycle master plans only. Rhode Island has a pedestrian master plan only. Colorado is currently developing a bicycle and pedestrian master plan, and Hawaii is currently developing a pedestrian master plan. Twenty-one of the cities surveyed have bicycle and pedestrian master plans. Twenty more have bicycle master plans only.

Many states and cities have also adopted master plans for trails and mountain biking. Two-thirds of states report having adopted a trail master plan. Florida, Kansas, New Jersey, and Virginia have mountain bike plans. Florida's mountain bike plan is included in its state trail plan. Twenty-seven cities have trail master plans. Three of these focus on mountain biking. (For links to sample bicycle and pedestrian master plans, see Appendix 5, pages 213 and 214).

(Continued page 70)



# Planning for Bicycling and Walking in States

| State                      | Published Goals:    |                       |                          |                             | Master Plan Adopted: |             |        |                | Bike/Ped Advisory Committee |
|----------------------------|---------------------|-----------------------|--------------------------|-----------------------------|----------------------|-------------|--------|----------------|-----------------------------|
|                            | To Increase Walking | To Increase Bicycling | Decrease Ped. Fatalities | Decrease Bicycle Fatalities | For Bicycling        | For Walking | Trails | Mountain Bikes |                             |
| Alabama                    |                     |                       |                          |                             | ✓★                   | ✓★          | ✓      |                |                             |
| Alaska                     | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                |                             |
| Arizona                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓                           |
| Arkansas                   |                     |                       | ✓★                       | ✓★                          |                      |             |        |                |                             |
| California                 | ✓                   | ✓                     | ✓                        | ✓                           |                      |             |        |                | ✓                           |
| Colorado                   | ✓                   | ✓                     | ✓                        | ✓                           | (1)                  | (1)         | ✓      |                |                             |
| Connecticut                |                     |                       | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓                           |
| Delaware                   | ✓★                  | ✓★                    | ✓                        | ✓                           | ✓                    | ✓★          | ✓      |                | ✓                           |
| Florida                    | ✓★                  | ✓★                    | ✓                        | ✓                           |                      |             | ✓      | ✓(2)           | ✓★                          |
| Georgia                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           |        |                | ✓★                          |
| Hawaii                     | ✓★                  | ✓                     | ✓★                       |                             | ✓                    | (1)         | ✓      |                |                             |
| Idaho                      | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           |        |                |                             |
| Illinois                   | ✓                   | ✓                     | ✓                        | ✓                           |                      |             |        |                | ✓                           |
| Indiana                    | ✓★                  | ✓★                    |                          |                             | ✓                    | ✓           | ✓      |                |                             |
| Iowa                       |                     |                       | ✓                        | ✓                           |                      |             | ✓      |                | ✓                           |
| Kansas                     | ✓★                  | ✓★                    | ✓★                       | ✓★                          | ✓                    | ✓           | ✓      | ✓              |                             |
| Kentucky                   | ✓                   | ✓                     | ✓                        | ✓                           |                      |             |        |                | ✓(3)                        |
| Louisiana                  |                     |                       | ✓                        | ✓                           | ✓                    | ✓           |        |                |                             |
| Maine                      | ✓                   | ✓                     | ✓                        | ✓                           |                      |             | ✓      |                | ✓                           |
| Maryland                   | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓                           |
| Massachusetts              | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓                           |
| Michigan                   | ✓                   | ✓                     | ✓                        | ✓                           |                      |             | ✓      |                |                             |
| Minnesota                  | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    |             | ✓      |                | ✓                           |
| Mississippi                | ✓                   |                       |                          |                             |                      |             |        |                | ✓★                          |
| Missouri                   |                     |                       | ✓                        | ✓                           |                      |             |        |                |                             |
| Nebraska                   | ✓                   | ✓                     |                          |                             |                      |             | ✓      |                | ✓                           |
| Nevada                     |                     | ✓                     | ✓                        | ✓                           | ✓                    |             | ✓      |                | ✓                           |
| New Hampshire              |                     |                       |                          |                             | ✓                    | ✓           | ✓      |                |                             |
| New Jersey                 | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      | ✓              | ✓                           |
| New York                   | ✓★                  | ✓★                    | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓                           |
| North Carolina             | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓(3)                        |
| North Dakota               |                     |                       |                          |                             |                      |             |        |                |                             |
| Ohio                       | ✓★                  | ✓★                    | ✓★                       | ✓★                          |                      |             | ✓      |                |                             |
| Oklahoma                   |                     |                       |                          |                             |                      |             | ✓      |                |                             |
| Oregon                     | ✓                   | ✓                     | ✓                        | ✓                           | ✓★                   | ✓★          | ✓      |                | ✓                           |
| Pennsylvania               | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓                           |
| Rhode Island               | ✓                   | ✓★                    | ✓★                       |                             |                      | ✓           | ✓      |                | ✓★                          |
| South Carolina             |                     |                       | ✓                        | ✓                           |                      |             | ✓      |                | (4)                         |
| South Dakota               | ✓                   | ✓                     | ✓                        | ✓                           |                      |             | ✓      |                |                             |
| Tennessee                  | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                | ✓★                          |
| Texas                      |                     |                       | ✓                        | ✓                           |                      |             |        |                | ✓                           |
| Utah                       | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           |        |                |                             |
| Vermont                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                |                             |
| Virginia                   | ✓                   | ✓                     | ✓                        | ✓                           |                      |             | ✓      | ✓              |                             |
| Washington                 | ✓★                  | ✓★                    | ✓★                       | ✓★                          | ✓★                   | ✓★          |        |                |                             |
| West Virginia              | ✓                   | ✓                     | ✓                        | ✓                           |                      |             |        |                |                             |
| Wisconsin                  | ✓                   | ✓                     | ✓                        | ✓                           | ✓                    | ✓           | ✓      |                |                             |
| Wyoming                    |                     |                       | ✓                        |                             | ✓★                   | ✓★          |        |                |                             |
| # of states responding yes | 35                  | 35                    | 41                       | 38                          | 27                   | 25          | 33     | 4              | 24                          |
| Mean / Average             | Yes                 | Yes                   | Yes                      | Yes                         | Yes                  | No          | Yes    | No             | No                          |

Legend (this page and next):

✓ = Yes/has policy

★ = New policy since 2010 Benchmarking Report

Source: State surveys 2010/2011 Notes: No data received from Montana and New Mexico and therefore these states are not shown on this table; Responses of "unknown" and "NA" were taken to mean "no" for this table. All empty cells should be understood to be a "no" response. (1) In progress. (2) State trail master plan includes mountain bike trails. (3) Bicycle only. (4) Formerly had committee that has since dissolved.

# Planning for Bicycling and Walking in Cities

| City                       | Published Goals:    |                       |                          |                             | Master Plan Adopted |             |                            | Advisory Committee |                |
|----------------------------|---------------------|-----------------------|--------------------------|-----------------------------|---------------------|-------------|----------------------------|--------------------|----------------|
|                            | To Increase Walking | To Increase Bicycling | Decrease Ped. Fatalities | Decrease Bicycle Fatalities | For bicycling       | For walking | For trails (or mnt. bikes) | For bicycling      | For walking    |
| Albuquerque                | ✓                   | ✓                     | ✓                        | ✓                           |                     |             | ✓                          | ✓                  | ✓              |
| Arlington, TX              | ✓★                  | ✓★                    | ✓★                       | ✓★                          | ✓                   | ✓★          | ✓                          | ✓                  | ✓              |
| Atlanta                    | ✓                   | ✓                     |                          |                             | ✓                   | ✓           |                            |                    |                |
| Austin                     | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           |                            | ✓                  |                |
| Baltimore                  | ✓★                  | ✓★                    |                          |                             | ✓                   |             | ✓ <sup>(1)</sup>           | ✓                  |                |
| Boston                     |                     | ✓                     |                          | ✓★                          | ✓                   |             |                            | ✓                  |                |
| Charlotte                  | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   |             | ✓                          | ✓                  |                |
| Chicago                    |                     | ✓                     |                          | ✓                           | ✓                   |             |                            | ✓                  | ✓              |
| Colorado Springs           |                     | ✓                     |                          |                             | ✓                   |             | ✓                          | ✓★                 |                |
| Columbus                   | ✓★                  | ✓                     | ✓★                       | ✓                           | ✓                   | ✓★          |                            | ✓                  | ✓              |
| Dallas                     | ✓★                  | ✓                     |                          | ✓★                          | ✓                   |             | ✓                          | ✓                  |                |
| Denver                     | ✓                   | ✓                     |                          |                             | ✓                   | ✓           |                            | ✓                  |                |
| El Paso                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           | ✓                          |                    |                |
| Fort Worth                 |                     | ✓★                    |                          | ✓★                          | ✓★                  |             |                            |                    |                |
| Fresno                     | ✓                   | ✓                     | ✓                        | ✓                           | ✓★                  | ✓★          | ✓ <sup>(1)</sup>           | ✓                  | ✓              |
| Honolulu                   |                     | ✓                     | ✓                        | ✓                           | ✓                   |             |                            | ✓                  |                |
| Houston                    |                     | ✓                     |                          | ✓                           | ✓                   |             | ✓                          | ✓                  | ✓              |
| Jacksonville               | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           | ✓                          | ✓                  | ✓              |
| Kansas City, MO            | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           | ✓                          | ✓                  | ✓              |
| Las Vegas                  | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           | ✓                          |                    |                |
| Long Beach                 | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   |             |                            |                    |                |
| Los Angeles                | ✓★                  | ✓★                    | ✓★                       | ✓★                          | ✓                   |             |                            | ✓                  | ✓              |
| Louisville                 | ✓                   | ✓                     | ✓                        | ✓                           |                     |             |                            | ✓                  | ✓              |
| Memphis                    | ✓★                  | ✓★                    | ✓★                       | ✓★                          |                     |             | ✓                          |                    |                |
| Mesa                       |                     | ✓                     | ✓                        | ✓                           |                     |             |                            | <sup>(2)</sup>     |                |
| Miami                      |                     | ✓                     |                          | ✓                           | ✓★                  |             | ✓                          | ✓                  |                |
| Milwaukee                  |                     | ✓                     |                          | ✓                           | ✓                   |             |                            | ✓                  | ✓              |
| Minneapolis                | ✓★                  | ✓                     | ✓★                       | ✓★                          | ✓★                  | ✓★          | ✓                          | ✓                  | ✓              |
| Nashville                  | ✓★                  | ✓★                    | ✓★                       | ✓★                          | ✓                   | ✓           | ✓                          | ✓                  | ✓              |
| New Orleans                |                     |                       | ✓★                       | ✓★                          | ✓★                  | ✓★          |                            |                    |                |
| New York                   | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   |             | ✓                          |                    |                |
| Oakland                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           |                            | ✓                  | ✓              |
| Oklahoma City              |                     | ✓                     |                          | ✓                           | ✓                   |             | ✓                          | ✓                  | ✓              |
| Omaha                      | ✓★                  | ✓★                    |                          |                             |                     |             | ✓                          | ✓                  | ✓              |
| Philadelphia               | ✓★                  | ✓★                    | ✓                        | ✓                           | ✓                   | ✓★          | ✓ <sup>(1)</sup>           |                    |                |
| Phoenix                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   |             |                            | ✓                  |                |
| Portland, OR               | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           | ✓                          | ✓                  | ✓              |
| Raleigh                    | ✓★                  | ✓                     | ✓★                       | ✓                           | ✓                   |             | ✓                          | ✓                  | ✓              |
| Sacramento                 | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           |                            | ✓                  | ✓              |
| San Antonio                |                     | ✓★                    |                          |                             | ✓★                  |             |                            | ✓★                 | ✓★             |
| San Diego                  | ✓                   | ✓                     |                          | *                           | ✓                   |             |                            |                    |                |
| San Francisco              | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           |                            | ✓                  | ✓              |
| San Jose                   | ✓★                  | ✓★                    | ✓                        | ✓                           | ✓                   | ✓           | ✓                          | ✓                  | ✓              |
| Seattle                    | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           |                            | ✓                  | ✓              |
| Tucson                     | ✓                   | ✓                     |                          |                             | ✓                   |             | ✓                          | ✓                  | ✓              |
| Tulsa                      | ✓                   | ✓                     |                          |                             |                     |             | ✓                          | <sup>(2)</sup>     | <sup>(2)</sup> |
| Virginia Beach             | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓★          | ✓                          | ✓                  | ✓              |
| Washington, DC             | ✓                   | ✓                     | ✓                        | ✓                           | ✓                   | ✓           |                            | ✓                  | ✓              |
| # of cities responding yes | 36                  | 47                    | 31                       | 39                          | 41                  | 21          | 27                         | 36                 | 26             |
| Mean/Average               | Yes                 | Yes                   | Yes                      | Yes                         | Yes                 | No          | Yes                        | Yes                | Yes            |

**Source:** City surveys 2010/2011 **Notes:** For legend, see previous page. The following top 51 population cities did not respond to these survey questions: Cleveland, Detroit, and Indianapolis; Responses of "na" and "unknown" were taken to mean "no." Cities with combined bike/ped master plans have both columns marked; cities with separate bike and ped master plans have respective columns marked. Cities with combined bike/ped advisory committees have both columns marked; cities with separate bike and ped advisory committees have respective columns marked. (1) Mountain bike plan. (2) A previously formed advisory committee has since dissolved.

### Advisory Committees

In many states and cities, bicycle and pedestrian advisory committees assist with the planning, development, prioritizing, and implementation of bicycling and walking programs and facilities. These committees are typically comprised of volunteer community stakeholders such as bicycle and running club leaders, bicycle shop owners, advocacy leaders, and concerned citizens. Groups typically meet monthly or quarterly to review and make recommendations to city or state staff and planners about facilities, programs, and issues relating to bicycling and walking in their state/community. Twenty-six cities and 24 states that were surveyed report having a bicycle and pedestrian advisory committee. Ten cities have bicycle advisory committees only as do the states of Kentucky and North Carolina.

### Complete Streets Policies

The bicycle and pedestrian advocacy movement and its partners for transit and disabled rights have adopted the term “complete streets” because it accurately frames the discussion to show that a street is not complete unless all modes of transport are provided for. A complete street provides safe access for pedestrians, bicyclists, children, the elderly, disabled people, transit users, and motorists. Complete streets policies require that all streets are designed and built to provide safe access for all potential users. These policies ensure that provisions such as sidewalks, curb cuts, bike lanes, traffic calming, and inviting crossings are included in all road projects and not as an optional add-on. According to the National Complete Streets Coalition (as of September 2011), 26 states and 19 of the 51 cities in this report have adopted local complete

#### Before: Incomplete Street

6th Avenue South in Seattle, WA, photos by Seattle Department of Transportation



#### After: Complete Street





# Complete Streets Policies



**Source:** National Complete Streets Coalition, September 2011 **Note:** Only cities out of the 51 cities included in this report are included on this map. As of August 2011 there are 283 local jurisdictions with written policies—see [www.CompleteStreets.org](http://www.CompleteStreets.org) for details. California has an existing Complete Streets policy from 2001, but new policies were also adopted in 2008 and 2010.

streets policies. This is up from 2007 when just 10 states and 8 of the 51 cities had adopted complete streets policies. In total, there were 283 local complete streets policies in the U.S. as of August 2011. (For links to complete streets resources and model policies, see Appendix 5, page 214.)

## Bicycle Level of Service

Level of Service (LOS) is a rating system used by transportation engineers, planners, and authorities to evaluate the speed, convenience, and comfort of roadway facilities. LOS most often assigns a letter grade to roadways, making the rating easy to understand. LOS has been used traditionally in highway planning, and the values assigned to roads can affect funding and other policy decisions. Although traditional LOS models have not included ratings for bicycling and walking, multimodal LOS models

are becoming more common in some places. According to data from the League of American Bicyclists, 17 states use the bicycle LOS rating to assess roads.

## Bicycle Parking Requirements

Over 1.5 million bicycles are stolen in the United States each year ([www.stolenbicycleregistry.com/links.php](http://www.stolenbicycleregistry.com/links.php)). In a 2008 survey of roughly 1,800 San Francisco bicyclists, the number one reason bicyclists cited why they don't bicycle more was fear of theft (Report Card on Bicycling: San Francisco 2008).

A lack of safe places to park a bicycle is a barrier to increasing bicycling (Hunt and Abraham 2007). Many cities have taken steps to overcome this barrier by requiring businesses and new developments, parking garages, and public events to include bicycle (Continued page 74)

Over 1/2 of states have now adopted a complete streets policy.



Green bike lane on Fell Street in San Francisco, CA.  
Photo by Frank Chan, San Francisco Bicycle Coalition

## State Policies

| State                      | Publicly available bicycle map | Complete Streets Policy | Use Bicycle Level of Service to Assess Roads <sup>(1)</sup> |
|----------------------------|--------------------------------|-------------------------|---|
| Alabama                    |                                |                         |   |
| Alaska                     |                                |                         |   |
| Arizona                    | ✓                              |                         | ✓   |
| Arkansas                   |                                |                         |   |
| California                 | ✓                              | ✓                       |   |
| Colorado                   | ✓                              | ✓★                      |   |
| Connecticut                | ✓                              | ✓                       |   |
| Delaware                   | ✓                              | ✓                       | ✓   |
| Florida                    |                                | ✓                       | ✓   |
| Georgia                    | ✓                              |                         |   |
| Hawaii                     | ✓                              | ✓                       |   |
| Idaho                      | ✓                              |                         |   |
| Illinois                   | ✓                              | ✓                       | ✓   |
| Indiana                    |                                |                         |   |
| Iowa                       | ✓                              |                         | ✓   |
| Kansas                     | ✓                              |                         |   |
| Kentucky                   | ✓                              |                         |   |
| Louisiana                  | ✓                              | ✓★                      | ✓   |
| Maine                      | ✓                              |                         | ✓   |
| Maryland                   | ✓                              | ✓                       | ✓   |
| Massachusetts              | ✓                              | ✓                       | ✓   |
| Michigan                   | ✓                              | ✓★                      |   |
| Minnesota                  | ✓                              | ✓★                      |   |
| Mississippi                | ✓                              | ✓★                      |   |
| Missouri                   | ✓                              |                         |   |
| Montana                    | ✓                              |                         |   |
| Nebraska                   | ✓                              |                         | ✓   |
| Nevada                     | ✓                              |                         |   |
| New Hampshire              | ✓                              |                         | ✓   |
| New Jersey                 | ✓                              | ✓★                      | ✓   |
| New Mexico                 | ✓                              |                         |   |
| New York                   |                                | ✓★                      |   |
| North Carolina             | ✓                              | ✓                       |   |
| North Dakota               |                                |                         |   |
| Ohio                       |                                |                         |   |
| Oklahoma                   |                                |                         |   |
| Oregon                     | ✓                              | ✓                       |   |
| Pennsylvania               | ✓                              | ✓                       | ✓   |
| Rhode Island               | ✓                              | ✓                       |   |
| South Carolina             | ✓                              | ✓                       |   |
| South Dakota               | ✓                              |                         |   |
| Tennessee                  | ✓                              | ✓                       | ✓   |
| Texas                      |                                | ✓★                      |   |
| Utah                       | ✓                              |                         |   |
| Vermont                    |                                | ✓                       |   |
| Virginia                   | ✓                              | ✓                       | ✓   |
| Washington                 | ✓                              | ✓★                      | ✓   |
| West Virginia              |                                |                         |   |
| Wisconsin                  | ✓                              | ✓                       | ✓   |
| Wyoming                    | ✓                              |                         |   |
| # of states responding yes | 38                             | 26                      | 17  |
| Mean/Average               | Yes                            | No                      | No  |

Sources: NCSC September 2011, LAB 2011 Notes: Legend next page. (1) State uses a bicycle level of service or similar model to assess bicycling conditions of roads.

# City Policies

| City                       | Driver Enforcement |                       | Car parking requirements          |                                  | Bike parking requirements         |                              |                               | Complete streets policy (1) |
|----------------------------|--------------------|-----------------------|-----------------------------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|-----------------------------|
|                            | For not yielding?  | If yes, what is fine? | Min. # of spaces for new building | Max # of spaces for new building | Bike parking in buildings/garages | Bike parking in new building | Bike parking at public events |                             |
| Albuquerque                | ✓★                 | *                     | ✓★                                |                                  | ✓★                                | ✓★                           | ✓★                            |                             |
| Arlington, TX              | ✓★                 | *                     | ✓                                 | ✓★                               |                                   | ✓                            |                               |                             |
| Atlanta                    | ✓                  | (3)                   | ✓                                 | ✓                                | ✓                                 | ✓                            |                               |                             |
| Austin                     | ✓                  | *                     | ✓                                 |                                  | ✓                                 | ✓                            |                               | ✓★                          |
| Baltimore                  | ✓★                 | \$57                  | ✓                                 |                                  | ✓★                                | ✓                            |                               | ✓★                          |
| Boston                     | ✓★                 | *                     | ✓                                 |                                  |                                   | ✓★                           |                               |                             |
| Charlotte                  | ✓★                 | *                     | ✓                                 |                                  | ✓                                 | ✓                            |                               | ✓                           |
| Chicago                    | ✓                  | *                     | ✓★                                |                                  | ✓★                                | ✓                            |                               | ✓                           |
| Colorado Springs           | ✓★                 | *                     | ✓                                 |                                  |                                   |                              |                               | ✓                           |
| Columbus                   | *                  | ∅                     | ✓                                 | ✓                                | ✓★                                | ✓★                           |                               | ✓                           |
| Dallas                     | ✓                  | \$175 (4)             | ✓                                 |                                  | ✓★                                | ✓★                           |                               |                             |
| Denver                     |                    | ∅                     | ✓                                 |                                  | ✓★                                | ✓★                           | ✓★                            | ✓★                          |
| Detroit(2)                 | ✓                  | ∅                     | ✓                                 |                                  |                                   |                              |                               |                             |
| El Paso                    | ✓★                 | *                     | ✓★                                |                                  | ✓★                                | ✓★                           |                               |                             |
| Fort Worth                 |                    | ∅                     | ✓                                 |                                  | ✓★                                | ✓★                           |                               |                             |
| Fresno                     | ✓                  | \$300                 | ✓                                 |                                  | ✓★                                | ✓                            | ✓★                            |                             |
| Honolulu                   | ✓                  | \$97                  | ✓                                 |                                  |                                   |                              |                               | ✓                           |
| Houston                    | ✓                  | *                     | ✓                                 | ✓★                               | ✓★                                | ✓★                           |                               |                             |
| Indianapolis(2)            |                    | ∅                     |                                   |                                  |                                   |                              |                               |                             |
| Jacksonville               | ✓★                 | *                     | ✓★                                | ✓★                               | ✓★                                | ✓★                           | ✓★                            |                             |
| Kansas City, MO            | ✓                  | \$60                  | ✓                                 | ✓                                | ✓                                 | ✓                            |                               |                             |
| Las Vegas                  | ✓                  | \$300                 | ✓                                 |                                  |                                   |                              |                               | ✓★                          |
| Long Beach                 | ✓                  | \$159                 | ✓                                 |                                  |                                   |                              |                               |                             |
| Los Angeles                | ✓★                 | \$175                 | ✓                                 |                                  |                                   | ✓                            |                               |                             |
| Louisville                 | ✓★                 | \$60                  | ✓                                 | ✓                                | ✓★                                | ✓                            |                               | ✓                           |
| Memphis                    | ✓                  | *                     | ✓★                                |                                  |                                   | ✓★                           |                               |                             |
| Mesa                       | ✓                  | *                     | ✓                                 | ✓★                               | ✓★                                | ✓                            |                               |                             |
| Miami                      | ✓★                 | *                     | ✓                                 |                                  |                                   |                              |                               | ✓                           |
| Milwaukee                  | ✓                  | *                     | ✓                                 |                                  | ✓                                 | ✓                            |                               |                             |
| Minneapolis                | ✓                  | \$178                 | ✓                                 | ✓                                | ✓                                 | ✓                            |                               |                             |
| Nashville                  | ✓                  | \$50                  | ✓                                 |                                  |                                   | ✓★                           | ✓                             | ✓★                          |
| New Orleans                |                    | ∅                     | ✓                                 |                                  |                                   | ✓★                           |                               |                             |
| New York                   | ✓★                 |                       | ✓                                 | ✓★                               | ✓                                 | ✓★                           |                               | ✓                           |
| Oakland                    | ✓★                 | \$201                 | ✓                                 |                                  | ✓                                 | ✓                            | ✓                             |                             |
| Oklahoma City              | ✓★                 | \$94                  | ✓                                 |                                  |                                   |                              |                               |                             |
| Omaha                      | ✓★                 | \$73                  | ✓★                                |                                  |                                   | ✓★                           |                               |                             |
| Philadelphia               |                    | ∅                     | ✓                                 | ✓★                               | ✓★                                | ✓★                           |                               | ✓                           |
| Phoenix                    | ✓                  | *                     | ✓★                                |                                  |                                   |                              |                               |                             |
| Portland, OR               | ✓                  | \$287                 | ✓                                 |                                  | ✓                                 | ✓                            |                               |                             |
| Raleigh                    | ✓                  | *                     | ✓                                 |                                  |                                   | ✓                            |                               |                             |
| Sacramento                 | ✓★                 | *                     | ✓★                                |                                  |                                   | ✓★                           |                               | ✓                           |
| San Antonio                | ✓★                 | \$200                 | ✓★                                |                                  |                                   | ✓★                           |                               |                             |
| San Diego                  | ✓★                 | \$200                 | ✓                                 | ✓★                               | ✓                                 | ✓★                           |                               | ✓                           |
| San Francisco              | ✓★                 | \$149                 |                                   | ✓                                | ✓                                 | ✓                            | ✓                             | ✓                           |
| San Jose                   | ✓                  | *                     | ✓                                 |                                  | ✓★                                | ✓                            | ✓★                            |                             |
| Seattle                    | ✓★                 | \$124                 | ✓★                                | ✓★                               |                                   | ✓★                           |                               | ✓                           |
| Tucson                     | ✓                  | \$115                 | ✓                                 |                                  | ✓                                 | ✓                            | ✓                             |                             |
| Tulsa                      | ✓                  | *                     | ✓                                 |                                  |                                   |                              |                               |                             |
| Virginia Beach             | ✓★                 | \$35                  | ✓                                 | ✓★                               | ✓★                                | ✓                            |                               |                             |
| Washington, DC             | ✓                  | \$250                 | ✓                                 |                                  | ✓                                 | ✓                            |                               | ✓★                          |
| # of cities responding yes | 43                 | ∅                     | 47                                | 15                               | 28                                | 39                           | 9                             | 19                          |
| Mean/Average               | Yes                | \$152                 | Yes                               | No                               | Yes                               | Yes                          | No                            | No                          |

**Sources:** City surveys, NCSC September 2011 **Notes:** Answers marked as "unknown" on surveys were taken to mean "no." Cleveland did not provide data for the 2008/2009 or 2010/2011 surveys and is not included in this table. (1) Complete streets data from the National Complete Streets Coalition. (2) City did not respond to 2010/2011 survey; data from the 2008/2009 city survey. (3) varies. (4) answered "\$150-200."

## Legend: (this page and previous)

- ✓ = Yes/has legislation or policy
- ★ = New policy since 2010 Benchmarking Report
- ∅ = Not applicable
- \* = Officials could not access data



parking. Of the cities surveyed for this report, 76% (39 cities) require bicycle parking in new buildings. This is a 70% increase from 2 years ago when just 23 cities reported having this policy. Twenty-eight cities report that they require bicycle parking in buildings/garages—up from just 15 cities 2 years ago. Just nine cities require secure or valet bicycle parking at public events.

A 2002 comparison of bicycle parking requirements in 145 jurisdictions reveals that these policies typically require bicycle parking between 2% and 20% of car parking (Comparison of Bike Parking Policies). Some policies are triggered by minimum requirements such as the square footage of a building, the number of employees a business has, or the number of car parking spaces. In these cases, if the minimum is not met (such as a business having under 25 employees), a business is not required to install any bicycle parking.

### Car Parking Requirements

The Alliance also surveyed cities on policies requiring a minimum and/or maximum number of car parking spaces for new buildings. Ninety-two percent of responding cities (47 cities) reported having minimum car parking requirements. By masking the true cost of land and parking space, these policies can often negatively affect land-use development that promotes bicycling and walking and lead to sprawl (Shoup 2005). On the flip side, 15 cities (up from six as of the 2010 report) reported having policies that set a maximum number of car parking spaces for new buildings. These progressive policies require more dense development and land-use practices that can encourage

safer and more friendly environments for bicyclists and pedestrians.

### Driver Enforcement

Enforcement is one of the five Es for creating a bicycle and pedestrian friendly community. (Engineering, Education, Encouragement, and Evaluation are the other four.) Enforcement generally includes laws protecting both bicyclists and pedestrians and the enforcement of these laws. Although it is commendable to have laws that protect bicyclists, pedestrians, and other road users, these laws are less effective if not enforced. Whether it's ticketing speeding motorists or reminding bicyclists to stop at traffic lights, enforcement is critical to ensuring that safety rules keep road users safe.

For this report the Alliance collected data on a number of laws and policies. Relating to driver enforcement, surveys asked cities if they cite drivers for not yielding to bicyclists and pedestrians. Forty-three of the cities surveyed report that their city fines motorists for not yielding to bicyclists and pedestrians when nonmotorized users have the right of way. Of the cities that do enforce not yielding to bicycles and pedestrians, fines range from \$35 to \$300. The average fine for motorists is \$152.

### Safe Routes to School Policies

Through the 2005 federal transportation act, \$978 million was provided to fund Safe Routes to School programs in all 50 states and the District of Columbia. As part of this legislation, each state was mandated to hire a full-time Safe Routes to School Coordinator. As of March 2011 all states have a full-time Safe Routes

to School coordinator in place. Three of these states (Illinois, Maine, and South Dakota) have interim coordinators.

States were asked what percentage of their schools participate in Safe Routes to School programs. According to this survey, on average, 14% of public schools are engaged in a Safe Routes to School program. Nevada has the highest participation rate with 39% of schools involved with Safe Routes programs. Oklahoma reported the lowest participation rate with just 1% of schools involved with Safe Routes.

### **Funding SRTS**

The Alliance asked states if they use any additional funding sources for SRTS besides federal SRTS dollars. Eighteen states reported using additional funding sources for SRTS. Among the other funding sources used by states are state funds, Transportation Enhancement, state license plate sales, and private foundation funding.

### **School Siting Policies**

The Alliance also asked cities and states whether they have a policy setting minimum acreage requirements for school siting. These requirements can often lead to sprawl by forcing new schools to be built far away from urban and suburban centers, and create poor conditions for bicycling and walking to school (McDonald 2007). These same conditions may negatively influence participation in after school and weekend activities at the school grounds (such as science club, scouts, arts and cultural enrichment, sports, etc.). Twenty-five states have minimum acreage policies for school siting. These policies vary but on average require a minimum



Photo courtesy of the Missouri Bicycle and Pedestrian Federation

**Eighteen states  
provide  
additional  
funding for  
Safe Routes to  
School beyond  
federal funding.**

of 10 acres for elementary schools, 20 acres for middle schools, and 30 acres for high schools, plus 1 acre for every 100 students. Thirty cities reported having a policy that places children in schools for other reasons besides prox-  
(Continued page 78)

# State Safe Routes to School Policies

| States                     | Full-time SRTS coordinator? | Standard SRTS curriculum for all schools | Training for all instructors on curriculum | Percentage of state's schools participating in SRTS program? | Policy requiring minimum acreage for school siting? <sup>(1)</sup> | State provides additional funding above and beyond fed SRTS funds? |
|----------------------------|-----------------------------|--|--|--|--|--|
| Alabama                    | ✓                           |  | ✓  | *  | ✓  |  |
| Alaska                     | ✓                           | ✓  |  | *  | ✓  |  |
| Arizona                    | ✓                           | ✓  | ✓  | 12%  | ✓  |  |
| Arkansas                   | ✓                           |  |  | *  |  |  |
| California                 | ✓                           |  |  | 25%  | ✓  | ✓  |
| Colorado                   | ✓                           | ✓  | ✓  | *  |  |  |
| Connecticut                | ✓                           |  |  | 5%   | ✓  | *  |
| Delaware                   | ✓                           | ✓  | ✓  | 20%  | ✓  | ✓  |
| Florida                    | ✓                           | ✓  | ✓  | 30%  |  |  |
| Georgia                    | ✓                           | ✓  | ✓  | 14%  | ✓  |  |
| Hawaii                     | ✓                           |  |  | 17%  | ✓  |  |
| Idaho                      | ✓                           |  |  | 13%  | ✓  | ✓  |
| Illinois                   | ✓ <sup>(2)</sup>            |  |  | 10%  |  | ✓★   |
| Indiana                    | ✓                           |  |  | 25%  | ✓  | ✓★   |
| Iowa                       | ✓                           | ✓  | ✓  | 18%  |  |  |
| Kansas                     | ✓                           |  |  | 8%   |  | ✓  |
| Kentucky                   | ✓                           | ✓  |  | 13%  | ✓  | ✓  |
| Louisiana                  | ✓                           |  |  | *  |  |  |
| Maine                      | ✓ <sup>(2)</sup>            | ✓  | ✓  | 25%  | ✓  | ✓  |
| Maryland                   | ✓                           | ✓  | ✓  | 8%   |  | ✓★   |
| Massachusetts              | ✓                           | ✓  | ✓  | 26%  |  |  |
| Michigan                   | ✓                           | ✓  | ✓  | 14%  |  | ✓★   |
| Minnesota                  | ✓                           |  |  | 5%   |  | ✓★   |
| Mississippi                | ✓                           | ✓  | ✓  | 10%  | ✓  |  |
| Missouri                   | ✓                           | ✓  |  | 13%  | ✓  | ✓★   |
| Montana                    | ✓                           |  |  | *  |  | *  |
| Nebraska                   | ✓                           |  |  | *  |  |  |
| Nevada                     | ✓                           |  | ✓  | 39%  |  | ✓  |
| New Hampshire              | ✓                           | ✓  | ✓  | 5%   | ✓  |  |
| New Jersey                 | ✓                           | ✓  | ✓  | *  |  | ✓  |
| New Mexico                 | ✓                           |  |  | *  |  | *  |
| New York                   | ✓                           | ✓  |  | *  | ✓  |  |
| North Carolina             | ✓                           |  |  | 7%   | ✓  |  |
| North Dakota               | ✓                           |  |  | 5%   |  | ✓  |
| Ohio                       | ✓                           |  |  | *  | ✓  |  |
| Oklahoma                   | ✓                           | ✓  |  | 1%   | ✓  | ✓  |
| Oregon                     | ✓                           | ✓  | ✓  | 12%  |  |  |
| Pennsylvania               | ✓                           |  |  | *  |  |  |
| Rhode Island               | ✓                           |  |  | 16%  | ✓  |  |
| South Carolina             | ✓                           |  |  | 14%  |  |  |
| South Dakota               | ✓ <sup>(2)</sup>            |  |  | *  |  |  |
| Tennessee                  | ✓                           |  |  | 10%  |  |  |
| Texas                      | ✓                           | ✓  | ✓  | 16%  |  | ✓  |
| Utah                       | ✓                           | ✓  | ✓  | 15%  | ✓  |  |
| Vermont                    | ✓                           | ✓  | ✓  | 20%  |  |  |
| Virginia                   | ✓                           |  |  | *  | ✓  |  |
| Washington                 | ✓                           | ✓  | ✓  | 5%   | ✓  | ✓  |
| West Virginia              | ✓                           |  |  | 10%  | ✓  |  |
| Wisconsin                  | ✓                           | ✓  | ✓  | 14%  |  |  |
| Wyoming                    | ✓                           | ✓  | ✓  | *  | ✓  |  |
| # of states responding yes | 46                          | 25                                       | 22   | 0  | 25   | 18   |
| Mean/Average               | Yes                         | 0  | No   | 14%  | 0  | No   |

Source: State surveys, 2010/2011, LAB 2011, SRTSNP September 2011, Council on Educational Facility Planners International 2003 Brief on Educational Facilities Issues **Notes:** Legend next page. (1) Policies requiring minimum acreage for school siting often promote sprawl by forcing new schools to locate away from denser population centers resulting in schools that are not walkable and bikeable. (2) Interim coordinator.

# Safe Routes to School in Cities

| Cities           | Total number of students (K-12) (1) | # of bike parking spaces at public schools | # of bike parking spaces per 1,000 students | Existence of policy:                            |   |
|------------------|-------------------------------------|--|---|---|---|
|                  |                                     |  |   | requiring minimum acreage for school siting (2) | placing children in schools for any reason other than proximity to home |
| Albuquerque      | *                                   | *  | *   | *   | *   |
| Arlington, TX    | 62,500                              | *  | *   | ✓   | ✓   |
| Atlanta          | *                                   | *  | *   | ✓   |   |
| Austin           | *                                   | *  | *   | *   | *   |
| Baltimore        | *                                   | *  | *   | *   | *   |
| Boston           | 55,000                              | *  | *   | *   | ✓   |
| Charlotte        | *                                   | 1,700                                      | *   | ✓   | ✓   |
| Chicago          | 384,909                             | *  | *   |   | ✓   |
| Colorado Springs | *                                   | *  | *   | ✓   | *   |
| Columbus         | 49,861                              | *  | *   | ✓   | ✓   |
| Dallas           | 107,000                             | 900  | 8   | ✓   | ✓   |
| Denver           | 79,423                              | 644  | 8   | *   | ✓   |
| El Paso          | *                                   | *  | *   | *   | *   |
| Fort Worth       | 120,000                             | *  | *   |   |   |
| Fresno           | 220,000                             | 150  | 1   | ✓   | ✓   |
| Honolulu         | *                                   | *  | *   | *   | *   |
| Houston          | *                                   | *  | *   | *   | *   |
| Jacksonville     | 93,346                              | 5,000                                      | 54  | ✓   | ✓   |
| Kansas City, MO  | 32,497                              | 270  | 8   | ✓   | ✓   |
| Las Vegas        | *                                   | *  | *   |   | ✓   |
| Long Beach       | 88,186                              | *  | *   | *   | *   |
| Los Angeles      | 578,524                             | *  | *   |   | ✓   |
| Louisville       | 99,819                              | *  | *   | ✓   | ✓   |
| Memphis          | *                                   | *  | *   |   |   |
| Mesa             | 65,500                              | 5,700                                      | 87  |   |   |
| Miami            | 30,565                              | *  | *   |   | ✓   |
| Milwaukee        | 87,000                              | *  | *   |   | ✓   |
| Minneapolis      | 35,453                              | 1,656                                      | 47  | *   | ✓   |
| Nashville        | 73,653                              | *  | *   | ✓   | ✓   |
| New Orleans      | 38,000                              | *  | *   |   | ✓   |
| New York         | 873,512                             | *  | *   |   | ✓   |
| Oakland          | 46,900                              | *  | *   |   | ✓   |
| Oklahoma City    | *                                   | *  | *   | *   | *   |
| Omaha            | 75,000                              | 475  | 6   |   | ✓   |
| Philadelphia     | 154,500                             | *  | *   |   | ✓   |
| Phoenix          | 285,700                             | 16,000                                     | 56  |   |   |
| Portland, OR     | *                                   | *  | *   |   | ✓   |
| Raleigh          | 143,710                             | 100  | 1   | ✓   | ✓   |
| Sacramento       | *                                   | *  | *   | *   | *   |
| San Antonio      | *                                   | *  | *   | *   | ✓   |
| San Diego        | 125,571                             | *  | *   | ✓   | ✓   |
| San Francisco    | *                                   | 100  | *   |   | ✓   |
| San Jose         | 163,000                             | *  | *   |   |   |
| Seattle          | 46,522                              | 1,200                                      | 26  | ✓   | ✓   |
| Tucson           | *                                   | *  | *   | *   | *   |
| Tulsa            | *                                   | *  | *   | *   | ✓   |
| Virginia Beach   | 69,365                              | *  | *   | ✓   | ✓   |
| Washington, DC   | 72,327                              | 350  | 5   |   |   |
| Mean/Average     | 145,245                             | 2,446                                      | 26  | No  | Yes   |
| Median           | 83,212                              | 772  | 8   | No  | Yes   |
| High             | 873,512                             | 16,000                                     | 87  | ∅   | ∅   |
| Low              | 30,565                              | 100  | 1   | ∅   | ∅   |

**Legend (this page and previous):**  
 ✓ = Yes/has policy  
 ★ = New policy since 2010  
 Benchmarking Report  
 ∅ = Not applicable  
 \* = Officials could not access data

**Source:** City surveys.  
**2010/2011 Notes:** Cleveland, Detroit, and Indianapolis did not respond to requests for data and are not included in this table. (1) Number refers to all public school students, not number of SRTS participants. (2) Policies requiring minimum acreage for school siting often promote sprawl by forcing new schools to locate away from denser population centers resulting in schools that are not walkable or bikeable.





Photo courtesy of the Safe Routes to School National Partnership

imity to their homes. Desegregation busing, the practice of assigning and busing students to schools to diversify student demographics, is one common policy that forces children to attend schools outside of their neighborhood consequently making walking and biking to school more difficult.

### **Bike Parking at Schools**

The Alliance also asked cities how many bike parking spaces were at public schools. Cities averaged 26 school bike parking spaces per 1,000 students. Phoenix reported 16,000 bicycle parking spaces at schools—more than any other city. Mesa, AZ, had the highest rate of bicycle parking at schools with 87 spots per 1,000 students.

### **Spending Targets**

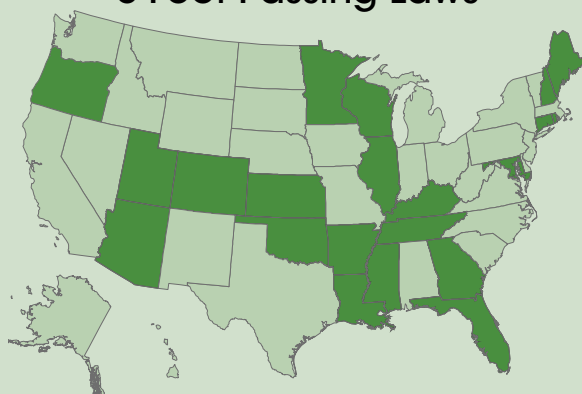
Spending targets are goals set by states and cities for how much money, or what

percentage of transportation spending, will be allocated to bicycling and walking. Most states and cities report that they do not have spending targets for bicycling and walking. Just 11 states (Connecticut, Hawaii, Iowa, Maine, Michigan, North Carolina, Oklahoma, Oregon, South Carolina, Virginia, and Washington) report having spending targets—up from eight states as of the 2010 report. Thirteen cities (Albuquerque, Austin, Cleveland, Colorado Springs, Columbus, Fresno, Honolulu, Las Vegas, Louisville, Nashville, Phoenix, Portland, and Washington, DC) report having spending targets—up from seven cities as of the 2010 Benchmarking Report. Some spending targets are based on percentage of transportation spending (Hawaii 2%, Rhode Island 4%). Columbus's target is over a 20-year period. Other states and cities set dollar amounts as annual spending targets.

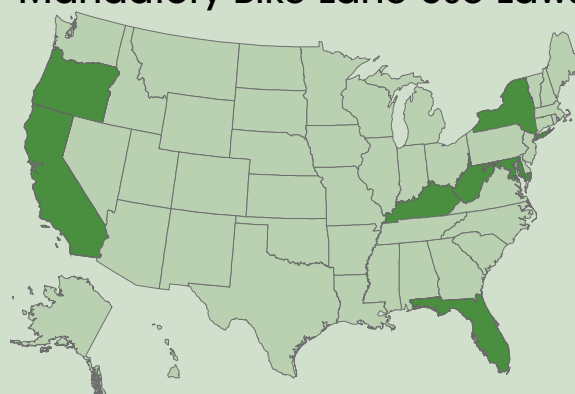
(Continued page 81)

# State Bicycle Policies

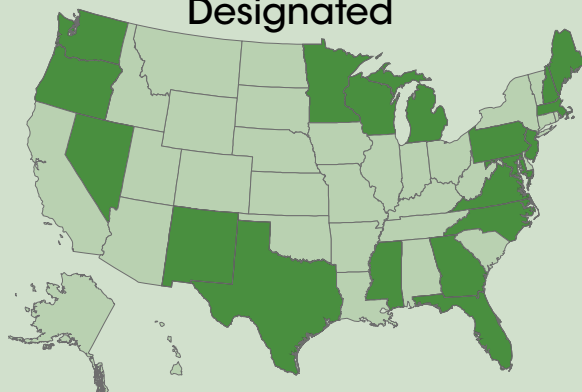
## 3-Foot Passing Laws



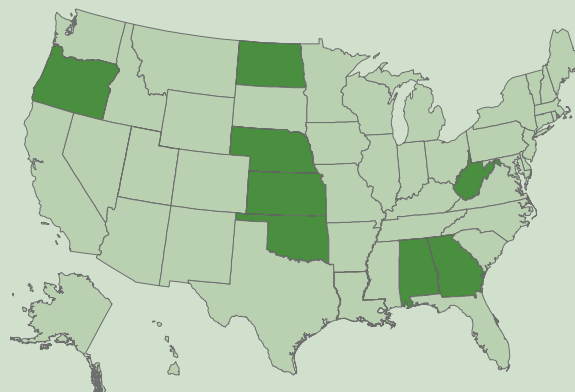
## Mandatory Bike Lane Use Laws



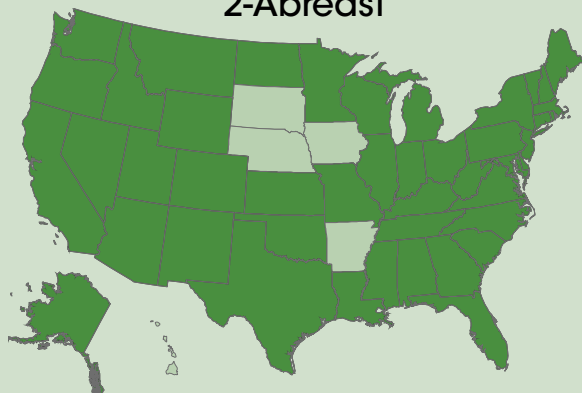
## U.S. Bike Routes Officially Designated



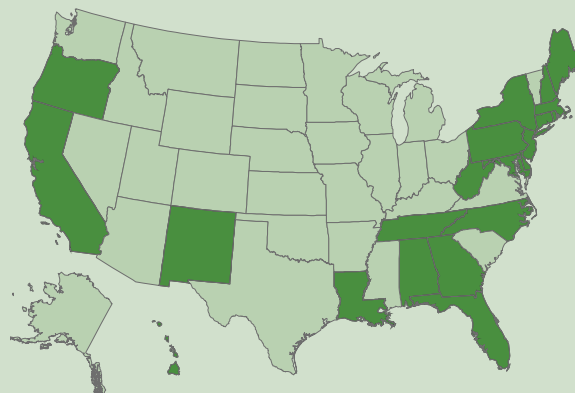
## Mandatory Sidepath Use Law



## Bicycles Can Legally Ride 2-Abreast



## Mandatory Youth Helmet Laws



### Legend:

- = Policy in existence in this state
- = State does not have this policy

Source: LAB 2011

# State Legislation Relating to Bicycling

| State                      | Legal 2-abreast riding for bicycles | 3-foot passing distance for cars | Legally signal w/ right hand | Text messaging banned | Handheld cell phones banned | Bicyclist allowed full use of lane in presence of: |           | Mandatory youth helmet policy | Age? |
|----------------------------|-------------------------------------|----------------------------------|------------------------------|-----------------------|-----------------------------|--|-----------|-------------------------------|------|
|                            |                                     |                                  |                              |                       |                             | Sidepath   | Bike lane |                               |      |
| Alabama                    | ✓                                   |                                  |                              |                       |                             |  | ✓         | ✓                             | < 6  |
| Alaska                     | ✓                                   |                                  |                              | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Arizona                    | ✓                                   | ✓                                | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Arkansas                   |                                     | ✓                                |                              | ✓                     | (1)                         | ✓  | ✓         |                               | Ø    |
| California                 | ✓                                   |                                  | ✓                            | ✓                     | ✓                           | ✓  |           | ✓                             | < 18 |
| Colorado                   | ✓                                   | ✓                                | ✓                            | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Connecticut                | ✓                                   | ✓                                | ✓                            | ✓                     | ✓                           | ✓  | ✓         | ✓                             | < 16 |
| Delaware                   | ✓                                   |                                  | ✓                            | ✓                     | ✓                           | ✓  |           | ✓                             | < 18 |
| Florida                    | ✓                                   | ✓                                | ✓                            |                       |                             | ✓  |           | ✓                             | < 16 |
| Georgia                    | ✓                                   | ✓                                | ✓                            | ✓                     |                             |  | ✓         | ✓                             | < 16 |
| Hawaii                     |                                     |                                  |                              |                       | (2)                         | ✓  | ✓         | ✓                             | < 17 |
| Idaho                      | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Illinois                   | ✓                                   | ✓                                | ✓                            | ✓                     | (3)                         | ✓  | ✓         |                               | Ø    |
| Indiana                    | ✓                                   |                                  | ✓                            | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Iowa                       |                                     |                                  |                              | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Kansas                     | ✓                                   | ✓                                | ✓                            | ✓                     |                             |  | ✓         |                               | Ø    |
| Kentucky                   | ✓                                   | ✓                                | ✓                            | ✓                     |                             | ✓  |           |                               | Ø    |
| Louisiana                  | ✓                                   | ✓                                | ✓                            | ✓                     | (4)                         | ✓  | ✓         | ✓                             | < 12 |
| Maine                      | ✓                                   | ✓                                | ✓                            | ✓                     |                             | ✓  | ✓         | ✓                             | < 16 |
| Maryland                   | ✓                                   | ✓                                | ✓                            | ✓                     | ✓                           | ✓  |           | ✓                             | < 16 |
| Massachusetts              | ✓                                   |                                  | ✓                            | ✓                     |                             | ✓  | ✓         | ✓                             | < 17 |
| Michigan                   | ✓                                   |                                  |                              | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Minnesota                  | ✓                                   | ✓                                | ✓                            | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Mississippi                | ✓                                   | ✓                                | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Missouri                   | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Montana                    | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Nebraska                   |                                     |                                  | ✓                            | ✓                     |                             |  | ✓         |                               | Ø    |
| Nevada                     | ✓                                   |                                  | ✓                            | ✓                     | ✓                           | ✓  | ✓         |                               | Ø    |
| New Hampshire              | ✓                                   | ✓                                | ✓                            | ✓                     |                             | ✓  | ✓         | ✓                             | < 16 |
| New Jersey                 | ✓                                   |                                  | ✓                            | ✓                     | ✓                           | ✓  | ✓         | ✓                             | < 17 |
| New Mexico                 | ✓                                   |                                  |                              |                       | (5)                         | ✓  | ✓         | ✓                             | < 18 |
| New York                   | ✓                                   |                                  | ✓                            | ✓                     | ✓                           | ✓  |           | ✓                             | < 14 |
| North Carolina             | ✓                                   |                                  |                              | ✓                     |                             | ✓  | ✓         | ✓                             | < 16 |
| North Dakota               | ✓                                   |                                  | ✓                            | ✓                     |                             |  | ✓         |                               | Ø    |
| Ohio                       | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Oklahoma                   | ✓                                   | ✓                                |                              |                       | (4)                         |  | ✓         |                               | Ø    |
| Oregon                     | ✓                                   | ✓ (7)                            | ✓                            | ✓                     | ✓                           |  |           | ✓                             | < 16 |
| Pennsylvania               | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         | ✓                             | 0-11 |
| Rhode Island               | ✓                                   | ✓                                | ✓                            | ✓                     |                             | ✓  | ✓         | ✓                             | < 15 |
| South Carolina             | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| South Dakota               |                                     |                                  |                              |                       |                             | ✓  | ✓         |                               | Ø    |
| Tennessee                  | ✓                                   | ✓                                |                              | ✓                     |                             | ✓  | ✓         | ✓                             | < 16 |
| Texas                      | ✓                                   |                                  | ✓                            |                       |                             | ✓  | ✓         |                               | Ø    |
| Utah                       | ✓                                   | ✓                                | ✓                            | ✓                     | (6)                         | ✓  | ✓         |                               | Ø    |
| Vermont                    | ✓                                   |                                  | ✓                            | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Virginia                   | ✓                                   |                                  | ✓                            | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Washington                 | ✓                                   |                                  | ✓                            | ✓                     | ✓                           | ✓  | ✓         |                               | Ø    |
| West Virginia              | ✓                                   |                                  |                              |                       |                             |  |           | ✓                             | < 15 |
| Wisconsin                  | ✓                                   | ✓                                |                              | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| Wyoming                    | ✓                                   |                                  | ✓                            | ✓                     |                             | ✓  | ✓         |                               | Ø    |
| # of states responding yes | 45                                  | 21                               | 37                           | 34                    | 9                           | 42   | 42        | 21                            | Ø    |
| Mean/Average               | Yes                                 | No                               | Yes                          | Yes                   | No                          | Yes  | Yes       | No                            | < 16 |

**Sources:** LAB 2011, Governors Highway Safety Association 2011 **Notes:** (1) Has handheld cell phone ban for 18-20 yrs old. (2) Hawaii does not have a state law banning the use of handheld cell phones. However, all of the state's counties have enacted distracted driving ordinances. (3) Illinois bans the use of handheld cell phones while driving in a school zone or in a highway construction zone. (4) Yes with learner or intermediate license. (5) Yes in state vehicles. (6) Utah's law defines careless driving as committing a moving violation (other than speeding) while distracted by use of a handheld cell phone or other activities not related to driving. (7) Oregon's safe passing law does not specify 3-feet, but defines a safe distance as: "distance that is sufficient to prevent contact with the person operating the bicycle if the person were to fall into the driver's lane of traffic vehicle."

**Legend:**

✓ = Yes/has legislation  
Ø = not applicable

## State Legislation

### Can Bicyclists Legally Ride Two Abreast?

Most states have laws that allow bicyclists to ride side by side or "two abreast" as long as they are not impeding traffic. Riding two abreast is often preferred for bicyclists riding with a companion and can make bicycling a more enjoyable experience, like sitting beside a friend in a bus, train, or car. Forty-five states have legislation allowing bicyclists to ride two abreast. Hawaii, Iowa, Montana, Nebraska, and South Dakota are the only states where there is no legislation allowing bicyclists to ride side by side.

### Safe Passing Laws

In recent years many states have successfully pursued legislation that requires motorists to pass bicyclists at a set "safe" distance. These "Safe Passing" or "3-Feet" laws, as they're often called, are primarily aimed at educating motorists how to safely pass bicyclists. Motorists may believe that just avoiding contact with bicyclists is all that is required when passing. Many motorists are unaware of the dangers of passing a bicyclist too closely which may lead to the bicyclist being hit or startled resulting in a crash. The other benefit of safe passing laws is to give police the authority to charge drivers who hit cyclists. If a motorist hits a cyclist, by definition he or she failed to give three feet. Twenty-one states now have safe passing laws on the books (up from 14 as of the 2010 Benchmarking Report).

### Distracted Driving Laws

Distracted driving has received increased attention in recent years, especially as cell phones and texting have become more prominent. In 2009, distracted driving was responsible for

roughly 16% of traffic fatalities (nearly 5,500 victims) (USDOT 2011). Recent research has shown that strong laws with strong enforcement can significantly reduce distracted driving and save lives (Cosgrove et al., 2011). As of this report, only nine states ban handheld cell phone use by all motorists. Thirty-four states ban text messaging while driving.

### Mandatory Bike Lane and Sidepath Use Laws

Although most state laws define bicycles as vehicles with the same rights and responsibilities as other vehicles on roadways, some states and municipalities have laws that prohibit bicyclists from full use of roadways when a bike lane or adjacent pathway is present. These "mandatory bike lane use" and "mandatory sidepath" laws can make it illegal for bicyclists to navigate traffic with the best vehicular tactics (such as merging left to avoid an obstruction, merging into the left lane to turn left, or not riding to the right of traffic in a turn lane) and restrict bicyclists' access to businesses or residences.

Most states, however, do allow bicyclists full use of the lane in traffic. Forty-two states allow the full use of the lane by bicyclists when a bike lane is present, and 42 allow use of the full lane in the presence of a sidepath. States that have mandatory bike lane use laws include California, Delaware, Florida, Kentucky, Maryland, New York, Oregon, and West Virginia. States that have mandatory sidepath laws include Alabama, Georgia, Kansas, Nebraska, North Dakota, Oklahoma, Oregon, and West Virginia.

### Mandatory Helmet Laws

Although there is no federal law in the United States requiring helmet use for



bicyclists, starting in 1987, states and local jurisdictions began passing their own laws requiring helmet use. Twenty-one states report having a mandatory youth helmet policy. Typically these policies apply to youth under age 16. Mandatory helmet laws are controversial among bicycling proponents. For more information on these laws and the controversy around them, see Appendix 5, page 215.

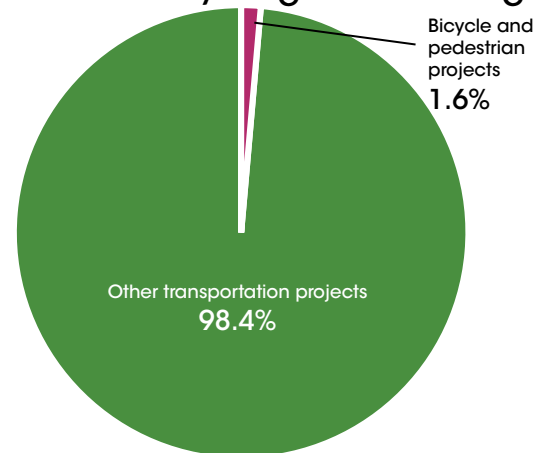
## Funding Bicycling and Walking

The most accurate uniform data on federal funding for bicycling and walking comes from the FHWA's FMIS accounting system. The funding data in this report (unless otherwise noted) depict a 5-year average of federal funds obligated to projects, and are not necessarily the actual amount spent in these years. Tables on pages 86-87 show both the federal dollars per capita for each state and city, and the percent of federal transportation dollars to bicycling and walking in each state and city.

The reliability of federal funding data is limited by the way various states report transportation spending to the FHWA. It is likely that bicycle and pedestrian spending is underreported when a larger road project has a bicycle or pedestrian component. Often, the entire project is coded as a highway project and therefore that state is not credited with spending the funds on bicycling and walking. This is becoming more of an issue for tracking and comparing spending by states with the rise in complete streets policies. With more states including bicycling and walking in all projects, it is increasingly difficult

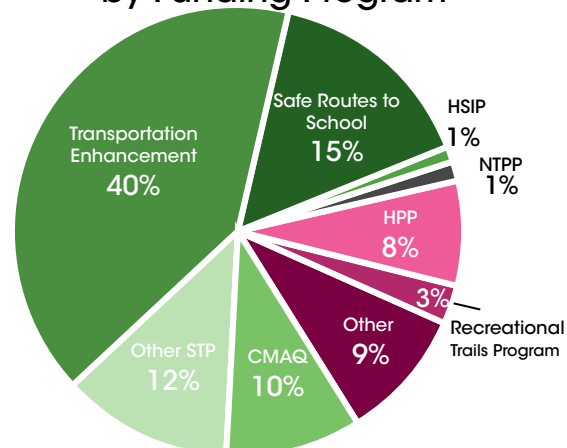
**Only 1.6% of federal transportation dollars are spent on bicycling and walking.**

**Percent of Federal Transportation Dollars to Bicycling and Walking**



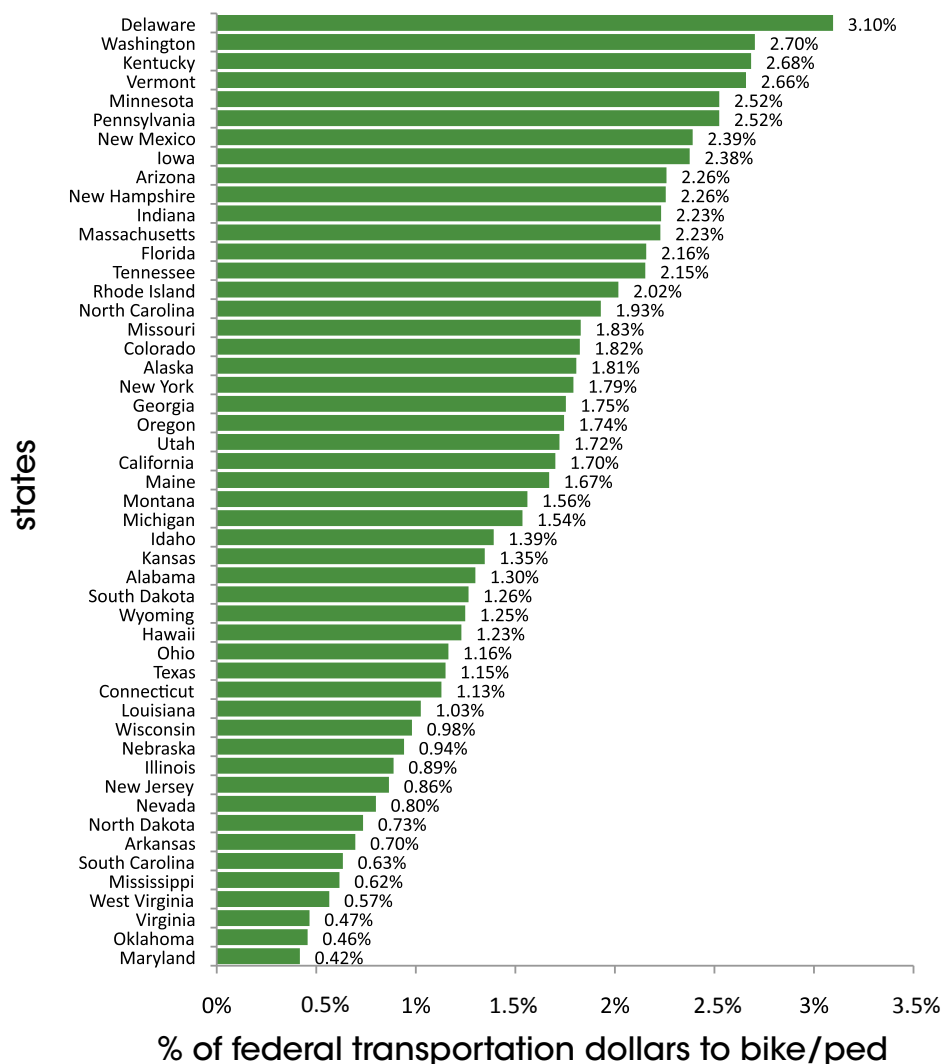
Source: FHWA FMIS 2006-2010 Note: Data are based on funds obligated to projects between 2006-2010 and are not necessarily the amount spent in these years.

**Bicycle and Pedestrian Dollars by Funding Program**



Source: FHWA FMIS 2010 Abbreviations: CMAQ = Congestion Mitigation and Air Quality Improvement Program; HSIP = Highway Safety Improvement Program; HPP = High Priority Projects; NTPP = Nonmotorized Transportation Pilot Program; Other STP = Surface Transportation Program (STP except Transportation Enhancement). Note: Data are based on funds obligated in 2010 and do not necessarily represent funds that were spent in this year. Figures are rounded to nearest whole percentage point and do not include American Recovery and Reinvestment Act funds.

## Percent of Transportation Dollars to Bike/Ped



**Source:** FHWA FMIS 2006-2010 **Note:** Data are based on a 5-year average of funds obligated to projects between 2006-2010 and are not necessarily the amount spent in these years. Please note that this chart only reports state obligations of federal funding for bicycle and pedestrian projects. As states may utilize other sources of funding for bicycle and pedestrian programs as well, it is important not to assume that federal funding is the only source of funding for bicycle and pedestrian programs in any particular state. See disclaimer regarding differences in funding reporting on page 82 of this report.

According to data from the FHWA, Delaware and Washington spent the highest percentage on bicycling and walking among states—3.1% and 2.7%, respectively. Maryland, Oklahoma, and Virginia spent the lowest percentage on bicycle and pedestrian projects among states.

**Delaware spends the greatest percentage of transportation dollars on bicycling and walking projects.**

to track if states do not code the bike/ped portions of the project. When asked how their state reports projects, 29 states responded that they report stand-alone bicycle and pedestrian projects. Twenty-eight states responded that they report facilities that are part of larger projects. Five states did not respond or could not access this information.

Also, this report only includes obligations of federal funding for bicycle and pedestrian projects. As states and cities may utilize other sources of funding for bicycle and pedestrian programs as well, it is important not to assume that federal funding amounts included in this report are the only funding for bicycle and pedestrian programs in any particular state or city.

The variation in federal funding sources to bicycle and pedestrian projects is

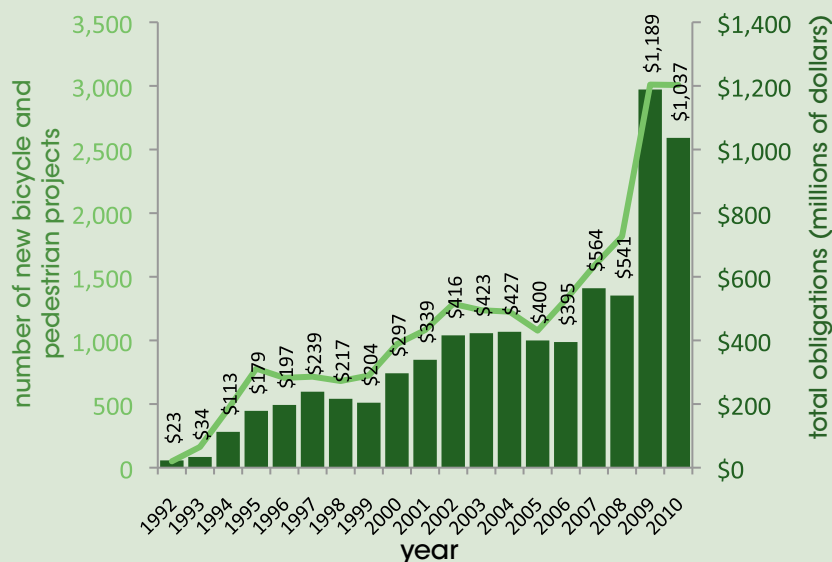
relatively small, with the Transportation Enhancement (TE) program typically responsible for roughly half of all bike/ped obligations. (The American Recovery and Reinvestment Act, a temporary funding program, was the leading funding source for bicycle and pedestrian projects in FY 2010.) More than 50 additional federal funding programs have been used for bicycle and pedestrian projects, most at relatively small amounts. Overall, states spend just 1.6% of their federal transportation dollars on bike/ped projects (based on the 5-year funding period from 2006-2010). This amounts to just \$2.17 per capita for bicycling and walking each year. The variation in per capita funding and the percentage of transportation dollars spent on bicycle and pedestrian projects are great among both cities and states. This fact indicates that states and local

(Continued page 88)



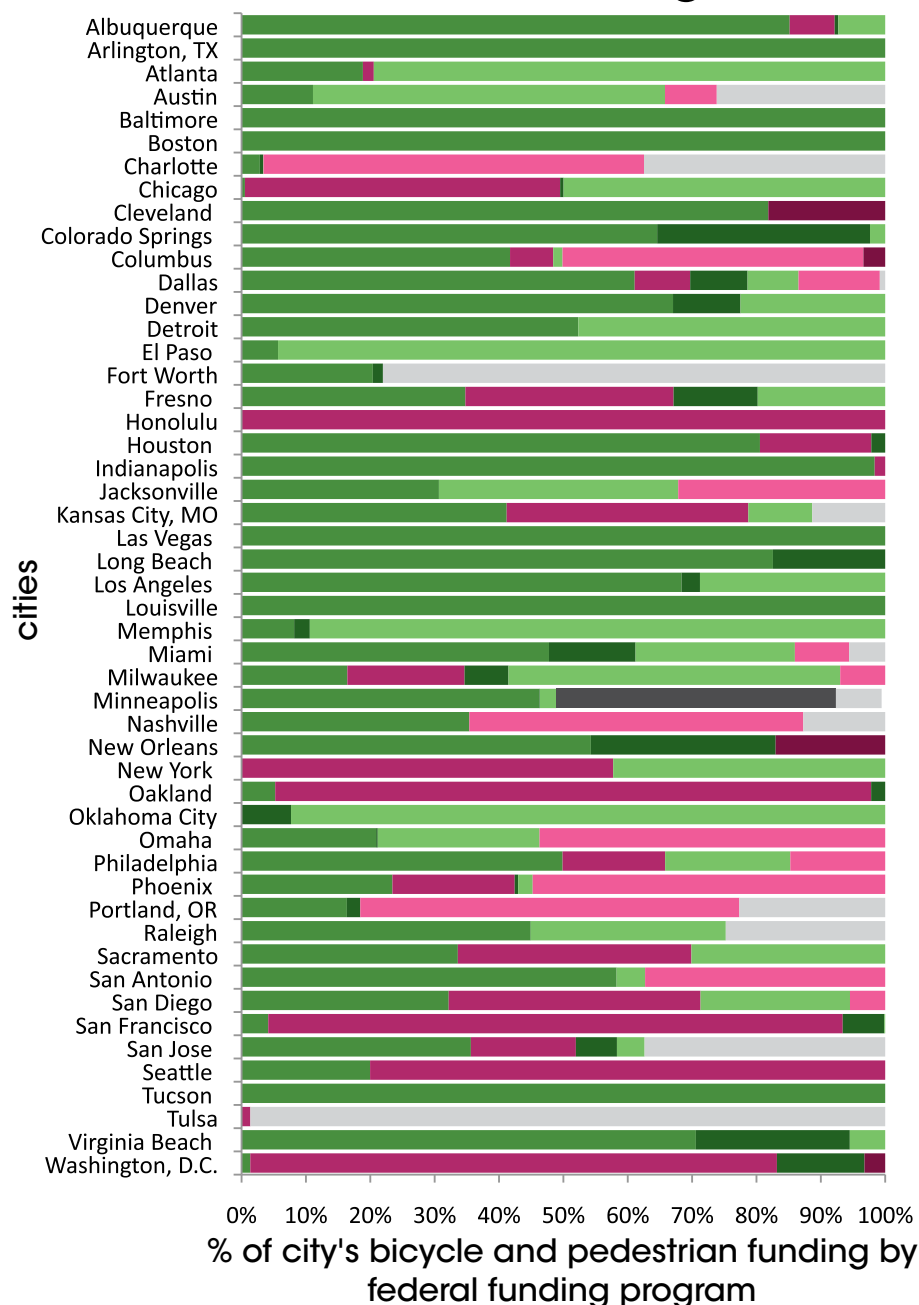
Photo courtesy of NHTSA

## Trend in Bicycle and Pedestrian Projects and Spending 1992-2010



**Source:** FHWA FMIS 1992-2010 **Note:** Values are nominal dollars. The American Recovery and Reinvestment Act of 2009 contributed \$425 million to bicycling and walking TE projects as of June 2009 (America Bikes) and is responsible, in part, for the spike in projects and spending in 2009 and 2010.

# Composition of Federal Funding for Bike/ Ped Provisions in Largest U.S. Cities



**Legend:**

- Transportation Enhancement/Surface Transportation Program
- Congestion Mitigation and Air Quality Improvement Program
- Safe Routes to School
- Highway Safety Improvement Program
- National Transportation Pilot Program
- High Priority Projects
- Recreational Trails Program
- Other

**Source:** FHWA FMIS 2006-2010 **Note:** Data are based on funds obligated to projects between 2006-2010 and are not necessarily the amount spent in these years. This illustration does not include funding from the American Recovery and Reinvestment Act. In some cases, deobligated funds during the 5-year period cause negative values to occur. Deobligated funds were not included for the purpose of this illustration. Mesa is not shown because only deobligated funds from the categories included were reported.



# Bike/Ped Funding in States

| State          | State spending target for bicycling and walking? |               | Federal transportation funds (5-year average) |            |  |                           | How state reports obligated funds to FMIS (6) |   |
|----------------|--|---------------|---|------------|--|---------------------------|---|---|
|                | ✓ = Yes (6)                                      | Amount        | Obligated to bike/ped projects/yr.            | Per capita | % of federal transportation \$ to bike/ped | % of TE funds to bike/ped | Stand-alone bike/ped projects?                | Include facilities part of larger projects? |
| Alabama        |  | 0             | \$10,917,294                                  | \$2.32     | 1.3%                                       | 72%                       | ✓   |   |
| Alaska         |  | 0             | \$7,663,661                                   | \$10.97    | 1.8%                                       | 62%                       |   | ✓   |
| Arizona        |  | 0             | \$17,073,366                                  | \$2.59     | 2.3%                                       | 31%                       | ✓   |   |
| Arkansas       |  | 0             | \$3,565,034                                   | \$1.23     | 0.7%                                       | 21%                       | ✓   |   |
| California (7) |  | 0             | \$65,053,542                                  | \$1.76     | 1.7%                                       | 44%                       |   | ✓   |
| Colorado       |  | 0             | \$10,807,434                                  | \$2.15     | 1.8%                                       | 72%                       | ✓   |   |
| Connecticut    | ✓★   | 1%            | \$6,076,840                                   | \$1.73     | 1.1%                                       | 49%                       |   | ✓   |
| Delaware       |  | 0             | \$5,440,744                                   | \$6.15     | 3.1%                                       | 63%                       |   | ✓   |
| Florida        |  | 0             | \$48,156,272                                  | \$2.60     | 2.2%                                       | 47%                       | ✓   | ✓   |
| Georgia        |  | 0             | \$24,573,747                                  | \$2.50     | 1.8%                                       | 81%                       | *   | *   |
| Hawaii         | ✓  | 2% (1)        | \$2,460,733                                   | \$1.90     | 1.2%                                       | 79%                       | ✓   |   |
| Idaho          |  | 0             | \$4,434,702                                   | \$2.87     | 1.4%                                       | 57%                       | ✓   |   |
| Illinois       |  | 0             | \$13,169,732                                  | \$1.02     | 0.9%                                       | 30%                       | ✓   |   |
| Indiana        |  | 0             | \$23,000,937                                  | \$3.58     | 2.2%                                       | 48%                       | ✓   | ✓   |
| Iowa           | ✓★   | *             | \$12,325,209                                  | \$4.10     | 2.4%                                       | 54%                       | ✓   | ✓   |
| Kansas         |  | 0             | \$6,327,800                                   | \$2.24     | 1.3%                                       | 36%                       |   | ✓   |
| Kentucky       |  | 0             | \$18,791,311                                  | \$4.36     | 2.7%                                       | 43%                       |   | ✓   |
| Louisiana      |  | 0             | \$10,263,292                                  | \$2.28     | 1.0%                                       | 66%                       |   | ✓   |
| Maine          | ✓  | \$6 MM        | \$3,524,070                                   | \$2.67     | 1.7%                                       | 47%                       | ✓   |   |
| Maryland       |  | 0             | \$2,599,141                                   | \$0.46     | 0.4%                                       | 21%                       | ✓   | ✓   |
| Massachusetts  |  | 0             | \$15,539,345                                  | \$2.36     | 2.2%                                       | 7%                        |   | ✓   |
| Michigan       | ✓★   | 1% (2)        | \$18,771,116                                  | \$1.88     | 1.5%                                       | 45%                       | ✓   | ✓   |
| Minnesota (7)  |  | 0             | \$19,460,128                                  | \$3.70     | 2.5%                                       | 79%                       | ✓   |   |
| Mississippi    |  | 0             | \$4,636,451                                   | \$1.57     | 0.6%                                       | 36%                       |   | ✓   |
| Missouri (7)   |  | 0             | \$18,769,533                                  | \$3.13     | 1.8%                                       | 49%                       | ✓   |   |
| Montana        | *  | *             | \$6,462,998                                   | \$6.63     | 1.6%                                       | 64%                       | *   | *   |
| Nebraska       |  | 0             | \$2,991,042                                   | \$1.66     | 0.9%                                       | 49%                       | ✓   |   |
| Nevada         |  | 0             | \$2,969,071                                   | \$1.12     | 0.8%                                       | 46%                       | *   | *   |
| New Hampshire  |  | 0             | \$4,444,213                                   | \$3.36     | 2.3%                                       | 88%                       |   | ✓   |
| New Jersey     |  | 0             | \$8,007,568                                   | \$0.92     | 0.9%                                       | 24%                       | ✓   |   |
| New Mexico     | *  | *             | \$9,481,589                                   | \$4.72     | 2.4%                                       | 74%                       | *   | *   |
| New York       |  | 0             | \$31,163,146                                  | \$1.59     | 1.8%                                       | 35%                       |   | ✓   |
| North Carolina | ✓  | \$6.45 MM (3) | \$21,760,070                                  | \$2.32     | 1.9%                                       | 45%                       | ✓   |   |
| North Dakota   |  | 0             | \$2,342,827                                   | \$3.62     | 0.7%                                       | 42%                       | ✓   | ✓   |
| Ohio           |  | 0             | \$17,269,871                                  | \$1.50     | 1.2%                                       | 41%                       |   | ✓   |
| Oklahoma       | ✓★   | \$4.4 MM      | \$3,300,893                                   | \$0.90     | 0.5%                                       | 1%                        | ✓   |   |
| Oregon         | ✓  | 1% (4)        | \$9,048,618                                   | \$2.37     | 1.7%                                       | 30%                       | *   | *   |
| Pennsylvania   |  | 0             | \$43,102,354                                  | \$3.42     | 2.5%                                       | 60%                       |   | ✓   |
| Rhode Island   | ✓  | *             | \$4,631,632                                   | \$4.40     | 2.0%                                       | 48%                       | ✓   | ✓   |
| South Carolina | ✓  | 0             | \$4,351,629                                   | \$0.95     | 0.6%                                       | 26%                       | ✓   | ✓   |
| South Dakota   |  | 0             | \$3,790,725                                   | \$4.67     | 1.3%                                       | 30%                       | ✓   | ✓   |
| Tennessee      | ✓  | 0             | \$19,063,292                                  | \$3.03     | 2.2%                                       | 73%                       | ✓   |   |
| Texas          |  | 0             | \$38,248,550                                  | \$1.54     | 1.1%                                       | 51%                       |   | ✓   |
| Utah           |  | 0             | \$5,947,421                                   | \$2.14     | 1.7%                                       | 45%                       |   | ✓   |
| Vermont        |  | 0             | \$5,262,557                                   | \$8.46     | 2.7%                                       | 74%                       | ✓   |   |
| Virginia       | ✓★   | *             | \$4,505,240                                   | \$0.57     | 0.5%                                       | 21%                       |   | ✓   |
| Washington     | ✓  | \$20 MM       | \$23,591,191                                  | \$3.54     | 2.7%                                       | 64%                       | ✓   | ✓   |
| West Virginia  |  | 0             | \$2,824,872                                   | \$1.55     | 0.6%                                       | 8%                        | ✓   | ✓   |
| Wisconsin (7)  |  | 0             | \$8,199,904                                   | \$1.45     | 1.0%                                       | 42%                       | ✓   |   |
| Wyoming        |  | 0             | \$3,425,707                                   | \$6.29     | 1.2%                                       | 55%                       | ✓   | ✓   |
| Mean/Average   | No   | 0             | \$13,191,768                                  | \$2.17     | 1.6%                                       | 48%                       | Yes   | Yes   |
| Median         | No   | 0             | \$8,007,568                                   | \$2.32     | 1.6%                                       | 47%                       | Yes   | Yes   |
| High           | 0  | 0             | \$65,053,542                                  | \$10.97    | 3.1%                                       | 88%                       | 0   | 0   |
| Low            | 0  | 0             | \$2,342,827                                   | \$0.46     | 0.4%                                       | 1%                        | 0   | 0   |

Source: State Surveys 2010/2011, FHWA FMIS 2006-2011 Notes: Legend next page. All data except % of TE to bike/ped are based on a 5-year average of funds obligated to projects between 2006-2010 and are not necessarily the amount spent in these years. See disclaimer regarding differences in funding reporting on page 82 of this report. (1) Of eligible federal funds. (2) of state transportation funds. (3) \$6 million of TIP funds; \$450 for admin budget from state. (4) 1% State Highway Fund, >\$6 million/yr. (5) under some specific funding programs only. (6) Blank cells should be understood to mean a "no" response. (7) This state has one of four communities nationwide selected as part of the Nonmotorized Transportation Pilot Program to receive \$25 million for bicycling and walking and therefore may reflect higher than typical funding.

# Bike/Ped Funding in Cities

| City             | City spending target for bicycling and walking? |           | Dedicated city budget funds in 2010 | Federal transportation funds (5-year average) (2) |            |               |
|------------------|---|-----------|-------------------------------------|---|------------|---------------|
|                  | ✓ = Yes (1)                                     | Amount    |                                     | Obligated to bike/ped projects/yr.                | Per capita | % to bike/ped |
| Albuquerque      | ✓★  | 5%        | \$2,500,000                         | \$2,718,956                                       | \$5.14     | 14.5%         |
| Arlington, TX    |   | Ø         | *                                   | \$53,968  | \$0.14     | 0.3%          |
| Atlanta          | *   | *         | *                                   | \$2,448,939                                       | \$4.53     | 1.0%          |
| Austin           | ✓★  | \$10 MM   | \$12,135,216                        | \$1,404,496                                       | \$1.78     | 3.0%          |
| Baltimore        |   | Ø         | \$750,000                           | \$139,188   | \$0.22     | 0.3%          |
| Boston           | *   | *         | \$600,000                           | \$252,717   | \$0.39     | 0.2%          |
| Charlotte        | ✓   | Ø         | \$9,500,000                         | \$1,461,961                                       | \$2.08     | 1.8%          |
| Chicago          |   | Ø         | *                                   | \$561,871   | \$0.20     | 0.2%          |
| Cleveland        | ✓(5)  | *         | *                                   | \$256,637   | \$0.59     | 0.7%          |
| Colorado Springs | ✓★  | *         | *                                   | \$319,104   | \$0.80     | 0.7%          |
| Columbus         | ✓   | \$9.3 MM  | \$4,800,000                         | \$583,575   | \$0.75     | 1.7%          |
| Dallas           |   | Ø         | \$4,000,000                         | \$9,072,771 (6)                                   | \$6.98     | 9.8%          |
| Denver           |   | Ø         | \$4,700,000                         | \$1,122,056                                       | \$1.84     | 0.9%          |
| Detroit          | *   | *         | *                                   | \$758,446   | \$0.83     | 0.4%          |
| El Paso          |   | Ø         | \$3,500,000                         | \$559,145   | \$0.90     | 1.0%          |
| Fort Worth       |   | Ø         | \$150,000                           | \$264,717   | \$0.36     | 0.2%          |
| Fresno           | ✓   | \$1.25 MM | \$1,750,000                         | \$437,165   | \$0.91     | 1.2%          |
| Honolulu         | ✓★  | \$1 MM    | \$1,000,000                         | \$204,692   | \$0.55     | 8.6%          |
| Houston          |   | Ø         | *                                   | \$4,871,182                                       | \$2.15     | 2.1%          |
| Indianapolis     | *   | *         | *                                   | \$1,837,493                                       | \$2.28     | 2.7%          |
| Jacksonville     |   | Ø         | *                                   | \$1,270,316                                       | \$1.56     | 0.9%          |
| Kansas City, MO  |   | Ø         | \$6,866,000                         | \$1,799,489                                       | \$3.73     | 11.0%         |
| Las Vegas        | ✓   | \$500 M   | \$100,000                           | \$52,687  | \$0.09     | 0.1%          |
| Long Beach       |   | Ø         | *                                   | \$684,781   | \$1.48     | 0.9%          |
| Los Angeles      | *   | *         | \$0                                 | \$1,654,322                                       | \$0.43     | 0.6%          |
| Louisville       | ✓★  | \$5 MM    | \$513,000                           | \$430,233   | \$0.76     | 1.0%          |
| Memphis          |   | Ø         | \$415,716                           | \$1,032,425                                       | \$1.53     | 1.2%          |
| Mesa             |   | Ø         | *                                   | \$132,906   | \$0.28     | 0.2%          |
| Miami            |   | Ø         | *                                   | \$3,310,209                                       | \$7.64     | 1.6%          |
| Milwaukee        |   | Ø         | *                                   | \$1,029,258                                       | \$1.70     | 1.0%          |
| Minneapolis      |   | Ø         | \$15,132,173                        | \$3,651,179                                       | \$9.47     | 2.0%          |
| Nashville        | ✓★  | \$25 MM   | \$6,100,000                         | \$3,085,067                                       | \$5.10     | 4.7%          |
| New Orleans      |   | Ø         | \$100,000                           | \$2,459,000                                       | \$6.93     | 1.5%          |
| New York         |   | Ø         | *                                   | \$288,483   | \$0.03     | 0.1%          |
| Oakland          |   | Ø         | \$7,980,000                         | \$2,025,967                                       | \$4.95     | 3.4%          |
| Oklahoma City    |   | Ø         | \$2,100,000                         | (4)   | (4)        | (4)           |
| Omaha            |   | Ø         | *                                   | \$1,501,627                                       | \$3.30     | 2.8%          |
| Philadelphia     |   | Ø         | *                                   | \$4,335,976                                       | \$2.80     | 3.6%          |
| Phoenix          | ✓   | \$50 M    | \$0                                 | \$1,500,697                                       | \$0.94     | 1.6%          |
| Portland, OR     | ✓★  | \$30 MM   | \$7,000,000                         | \$1,945,975                                       | \$3.43     | 6.8%          |
| Raleigh          |   | Ø         | \$855,000                           | \$1,132,890                                       | \$2.80     | 3.7%          |
| Sacramento       |   | Ø         | *                                   | \$3,944,689                                       | \$8.45     | 3.9%          |
| San Antonio      | *   | *         | *                                   | \$2,874,715                                       | \$2.09     | 4.2%          |
| San Diego        |   | Ø         | *                                   | \$3,760,317                                       | \$2.88     | 2.8%          |
| San Francisco    | ✓   | *         | *                                   | \$2,082,907                                       | \$2.55     | 0.7%          |
| San Jose         |   | Ø         | \$1,600,000                         | \$2,031,048                                       | \$2.11     | 4.9%          |
| Seattle          |   | Ø         | *                                   | \$531,577   | \$0.86     | 0.9%          |
| Tucson           |   | Ø         | \$200,000                           | \$3,922,873                                       | \$7.21     | 5.9%          |
| Tulsa            |   | Ø         | *                                   | \$231,272   | \$0.59     | 0.2%          |
| Virginia Beach   |   | Ø         | \$200,000                           | \$70,618  | \$0.16     | 0.1%          |
| Washington, DC   | ✓★  | 5%        | \$1,500,000                         | \$5,890,475                                       | \$9.82     | 3.4%          |
| Mean/Average     | No  | Ø         | \$3,311,969                         | \$1,713,189                                       | \$1.80 (3) | 1.6% (3)      |
| Median           | No  | Ø         | \$1,600,000                         | \$1,270,316                                       | \$1.70     | 1.2%          |
| High             | Ø   | Ø         | \$15,132,172                        | \$9,072,771                                       | \$9.82     | 14.5%         |
| Low              | Ø   | Ø         | \$0                                 | \$52,687  | \$0.03     | 0.1%          |

## Legend: (this page and previous)

✓ = Yes/has policy

★ = New since 2010

Benchmarking Report

Ø = Not applicable

\* = Data unavailable

High value

Low value

Sources: City Surveys, FHWA FMIS 2006-2010

Notes: See disclaimer regarding differences in funding reporting on page 82 of this report.

(1) Blank cells should be understood to mean a "no" response. (2) Data are based on the 5-year average of funds obligated to projects between 2006-2010 and are not necessarily the amount spent in these years. FHWA projects are coded by "urbanized area," county, and "standard place code." Data were sorted by urbanized area, standard place code, and then county code to most accurately capture a particular city's funding amount. Because not all projects include all codes, these figures should be seen as approximate estimates for each city. (3) Weighted average. (4) Due to large amounts of deobligated funds in the 5-year period between 2006-2010, accurate funding estimates could not be obtained for this city. (5) City did not respond to 2010/2011 survey, data from previous year. (6) In 2009 Dallas obligated \$16.7 million from ARRA toward "The Park," a major bicycle/pedestrian/open space project. Another \$20 million will come from state and federal highway funds, which may explain the large amount of funding to bike/ped in this period.

jurisdictions play a significant role in determining how their federal transportation dollars are spent.

Unfortunately, this has meant that often bicycle and pedestrian projects not only receive a smaller than fair share of funds, but are also disproportionately targeted for rescissions. Since 2002, Congress has enacted rescissions, removal of apportioned funding before the funding is set to expire, that have affected transportation funding. In most years, states have had discretion as to how much to rescind from programs such as the Transportation Enhancement program as opposed to other federal-aid highway programs.

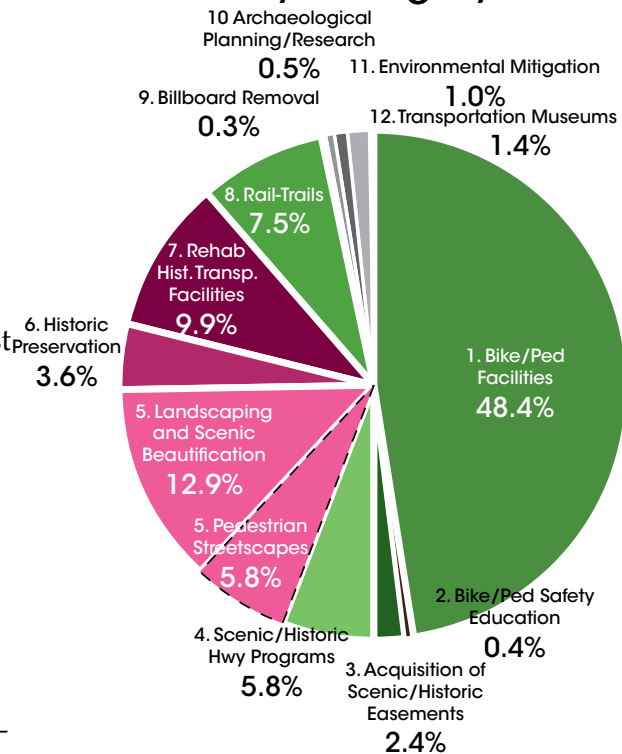
### Transportation Enhancements

The Transportation Enhancement (TE) program is the best known funding source for bicycle and pedestrian infrastructure improvements. Of Transportation Enhancements funding, \$265 million, or 48%, is allocated to biking and walking infrastructure and programs annually, making it the most important federal funding program to track.

Bicycle and pedestrian projects are disproportionately affected by rescissions when states choose to rescind a greater percentage of TE funds than in other transportation funding programs. \$2.6 billion, or 21% of apportioned TE funding, has been rescinded since 1992.

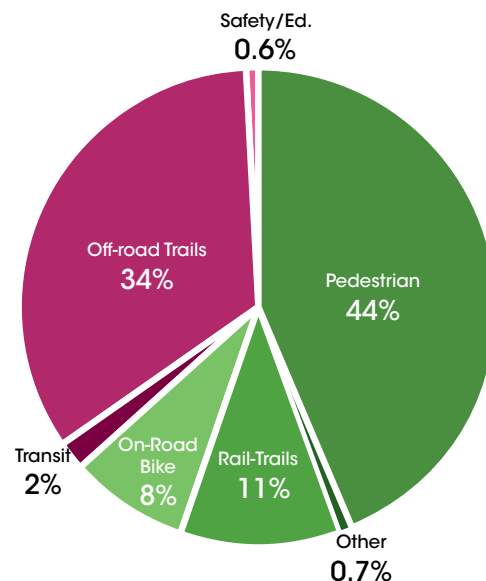
In 2010, TE comprised 2.3% of apportionments but 26.4% of rescissions. This disparity was greatest in Nebraska where 100% of rescinded funds were TE. Texas, Nevada, and Arkansas also lead for disproportionately rescinding TE funds with 78.8%, 62.1%, and 54.5% of funds rescinded from TE, respectively. (Continued page 91)

### Distribution of TE Funding by Category



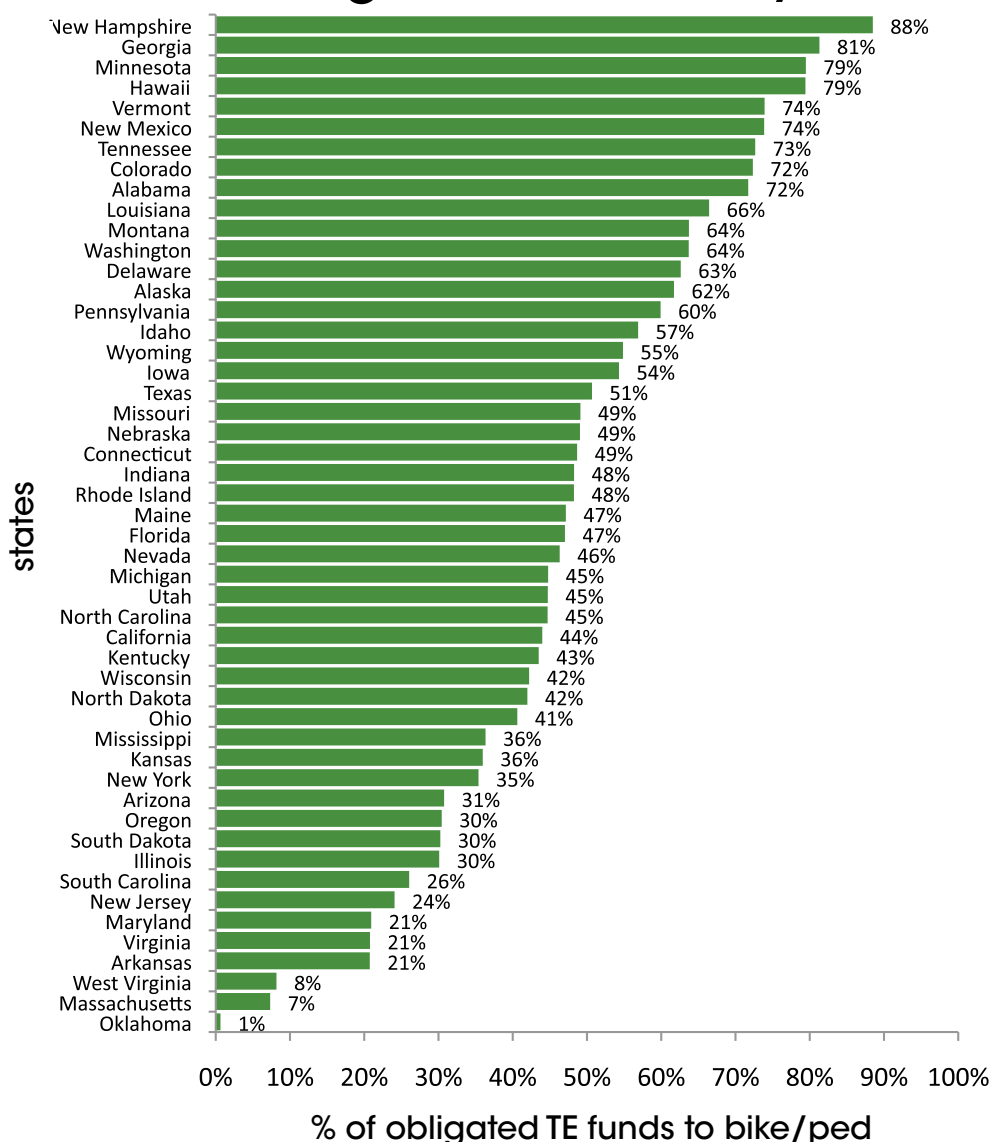
Source: NTEC 2010 Note: (1) Numbers round up and so appear to add to less than 100%.

### Distribution of TE Funding across Bicycle and Pedestrian Projects



Source: NTEC 2010 Note: (1) Numbers round up and so appear to add to more than 100%.

# Percent of Transportation Enhancement Funding to Bike/Ped by State



Source: FHWA FMIS 2006-2010 Note: (1) Figures for this graph are based on a 5-year average of funds obligated to projects between 2006-2010 and are not necessarily the amount spent in these years.

Most TE funding (48%) goes toward bicycling and walking facilities, education, and safety. States vary greatly on how they spend their TE dollars. New Hampshire dedicates the greatest percentage of TE funds to bicycling and walking (88%); Oklahoma dedicates the smallest share to bicycling and walking (1%).

**48% of TE  
funding goes  
to bicycling  
and walking.**



# Transportation Enhancement Rescissions

## What are rescissions?

Periodically, Congress rescinds, or cancels, unspent transportation funds from State DOTs. Rescissions are essentially a bookkeeping measure, which allows the USDOT to take long unspent funds off the books. However, some state DOTs have disproportionately drained bicycle and walking funding sources to build more highways.

## What is at stake for bicycle and pedestrian projects?

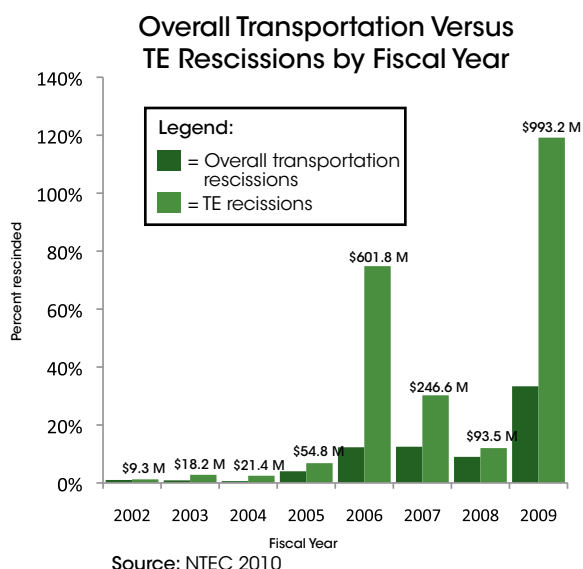
The USDOT tells states how much money they have to give back, but state DOTs decide which unspent funds they will send back first. Historically, some of the strongest programs for bicycle and pedestrian projects—Transportation Enhancements (TE) and Congestion Mitigation & Air Quality (CMAQ)—suffer dramatically higher rescission rates than other programs. For example, TE and CMAQ made up just 7.3 percent of a state DOT's 2010 transportation apportionments, but they made up a much larger share of what a state sends back. In August 2010, out of the \$2.2 billion rescinded, \$968 million (44%) came from CMAQ and TE. (America Bikes 2011).

### Legend:

- ∅ = Not applicable
- \* = Officials could not access data
- = High value
- = Low value

Source: NTEC, 9/24/10 Notes: The District of Columbia is included in this chart for comparison purposes although in most state charts in this report it is not included. (1) All percent averages are weighted.

| State             | 2009                      |                                       |                                       | 2010                      |                                  |
|-------------------|---------------------------|---------------------------------------|---------------------------------------|---------------------------|----------------------------------|
|                   | TE as % of apportionments | TE as % of rescissions (Rescission 1) | TE as % of rescissions (Rescission 2) | TE as % of apportionments | TE as % of rescissions (8.13.10) |
| Alabama           | 2.4%                      | 27.0%                                 | 0.5%                                  | 2.3%                      | 16.3%                            |
| Alaska            | 2.1%                      | 14.4%                                 | 0.0%                                  | 2.1%                      | 0.9%                             |
| Arizona           | 2.4%                      | 0.0%                                  | 2.9%                                  | 2.4%                      | 33.2%                            |
| Arkansas          | 2.5%                      | 42.1%                                 | 2.8%                                  | 2.4%                      | 54.5%                            |
| California        | 2.3%                      | 36.8%                                 | 5.3%                                  | 2.2%                      | 43.0%                            |
| Colorado          | 2.5%                      | 23.0%                                 | 12.2%                                 | 2.5%                      | 20.1%                            |
| Connecticut       | 1.9%                      | 12.7%                                 | 3.4%                                  | 1.8%                      | 22.3%                            |
| Delaware          | 2.6%                      | 2.4%                                  | 2.7%                                  | 2.6%                      | 0.4%                             |
| Dist. of Columbia | 2.4%                      | 44.0%                                 | 3.8%                                  | 2.4%                      | 0.0%                             |
| Florida           | 2.7%                      | 22.3%                                 | 5.6%                                  | 2.8%                      | 21.9%                            |
| Georgia           | 2.7%                      | 23.9%                                 | 10.4%                                 | 2.6%                      | 44.6%                            |
| Hawaii            | 2.5%                      | 26.1%                                 | 2.8%                                  | 2.3%                      | 2.4%                             |
| Idaho             | 2.1%                      | 5.0%                                  | 7.0%                                  | 2.1%                      | 44.2%                            |
| Illinois          | 2.4%                      | 9.8%                                  | 8.8%                                  | 2.4%                      | 0.0%                             |
| Indiana           | 2.4%                      | 0.1%                                  | 6.9%                                  | 2.5%                      | 0.0%                             |
| Iowa              | 2.5%                      | 0.0%                                  | 3.7%                                  | 2.6%                      | 0.0%                             |
| Kansas            | 3.0%                      | 0.0%                                  | 3.1%                                  | 2.9%                      | 3.0%                             |
| Kentucky          | 2.1%                      | 0.0%                                  | 7.1%                                  | 2.2%                      | 16.4%                            |
| Louisiana         | 2.0%                      | 71.7%                                 | 3.9%                                  | 2.0%                      | 12.8%                            |
| Maine             | 2.3%                      | 0.0%                                  | 2.9%                                  | 2.1%                      | 0.0%                             |
| Maryland          | 2.2%                      | 17.4%                                 | 2.5%                                  | 2.1%                      | 2.7%                             |
| Massachusetts     | 2.1%                      | 12.6%                                 | 0.0%                                  | 2.0%                      | 20.8%                            |
| Michigan          | 2.7%                      | 29.7%                                 | 8.0%                                  | 2.6%                      | 33.5%                            |
| Minnesota         | 3.0%                      | 27.6%                                 | 4.5%                                  | 2.9%                      | 0.1%                             |
| Mississippi       | 2.6%                      | 0.0%                                  | 10.8%                                 | 2.5%                      | 3.8%                             |
| Missouri          | 2.4%                      | 3.0%                                  | 8.0%                                  | 2.4%                      | 2.4%                             |
| Montana           | 1.7%                      | 0.0%                                  | 2.1%                                  | 1.8%                      | 22.5%                            |
| Nebraska          | 2.6%                      | 0.2%                                  | 9.4%                                  | 2.6%                      | 100.0%                           |
| Nevada            | 2.3%                      | 20.0%                                 | 15.8%                                 | 2.3%                      | 62.1%                            |
| New Hampshire     | 2.5%                      | 17.6%                                 | 6.5%                                  | 2.4%                      | 0.0%                             |
| New Jersey        | 1.9%                      | 22.2%                                 | 2.2%                                  | 1.9%                      | 11.1%                            |
| New Mexico        | 2.2%                      | 2.3%                                  | 2.7%                                  | 2.2%                      | 24.2%                            |
| New York          | 1.8%                      | 16.9%                                 | 8.5%                                  | 1.7%                      | 20.1%                            |
| North Carolina    | 2.3%                      | 12.1%                                 | 10.3%                                 | 2.4%                      | 31.7%                            |
| North Dakota      | 2.0%                      | 0.8%                                  | 3.1%                                  | 2.0%                      | 30.2%                            |
| Ohio              | 2.3%                      | 0.0%                                  | 2.8%                                  | 2.3%                      | 12.9%                            |
| Oklahoma          | 2.7%                      | 37.2%                                 | 3.8%                                  | 2.7%                      | 24.0%                            |
| Oregon            | 2.3%                      | 0.0%                                  | 7.0%                                  | 2.3%                      | 39.7%                            |
| Pennsylvania      | 1.8%                      | 0.7%                                  | 1.9%                                  | 1.7%                      | 6.9%                             |
| Rhode Island      | 1.8%                      | 2.0%                                  | 2.1%                                  | 1.8%                      | 3.5%                             |
| South Carolina    | 2.7%                      | 100.0%                                | 4.8%                                  | 2.7%                      | 0.0%                             |
| South Dakota      | 2.3%                      | 19.9%                                 | 4.4%                                  | 2.3%                      | 43.3%                            |
| Tennessee         | 2.4%                      | 5.6%                                  | 10.5%                                 | 2.4%                      | 47.4%                            |
| Texas             | 2.6%                      | 0.3%                                  | 4.8%                                  | 2.6%                      | 78.8%                            |
| Utah              | 2.3%                      | 0.0%                                  | 0.0%                                  | 2.4%                      | 0.0%                             |
| Vermont           | 2.2%                      | 0.0%                                  | 3.7%                                  | 2.2%                      | 0.0%                             |
| Virginia          | 2.4%                      | 3.2%                                  | 6.9%                                  | 2.4%                      | 3.3%                             |
| Washington        | 2.1%                      | 9.1%                                  | 7.2%                                  | 2.1%                      | 34.6%                            |
| West Virginia     | 1.8%                      | 5.8%                                  | 1.9%                                  | 1.9%                      | 4.5%                             |
| Wisconsin         | 2.7%                      | 49.2%                                 | 3.1%                                  | 2.8%                      | 37.5%                            |
| Wyoming           | 1.6%                      | 0.0%                                  | 1.6%                                  | 1.5%                      | 0.0%                             |
| Mean/Average (1)  | 2.3%                      | 16.5%                                 | 5.4%                                  | 2.3%                      | 26.4%                            |
| Median            | 2.3%                      | 7.5%                                  | 3.8%                                  | 2.3%                      | 14.6%                            |
| High              | 3.0%                      | 100.0%                                | 15.8%                                 | 2.9%                      | 100.0%                           |
| Low               | 1.6%                      | 0.0%                                  | 0.0%                                  | 1.5%                      | 0.0%                             |



### Safe Routes to School

Safe Routes to School (SRTS) is the newest federally funded program that is 100% dedicated to funding bicycle and pedestrian capital, education, promotion, and enforcement projects. The National SRTS program was signed into law, under the federal transportation legislation SAFETEA-LU, in 2005. Because the program is new, data are still sparse. The Safe Routes to School National Partnership and the National Center for Safe Routes to School have compiled data to measure the progress of states' Safe Routes to School programs. Data presented in this report include each state's number of schools funded, total funding awarded to and obligated by each state, percent of funding awarded based on requests, and percent of applications funded.

As of September 2011, approximately \$453 million has been obligated to 11,163 schools or programs through the federal Safe Routes to School (SRTS) program. This amounts to \$9.37 per public school student, roughly \$1.34/year/student.



Participants in the Bicycle Transportation Alliance (Oregon) Bike Walk Challenge.  
Photo by Amanda Conde.

# Safe Routes to School Funding

| States            | Funded Schools/<br>Programs<br>(2,6) | Announced Funds FY 2005-2011 (1,3,4) |                 |                   | Obligated Funds FY 2005-2011 (1,3,5) |                 |                   | Percent of requests awarded (2) |
|-------------------|--------------------------------------|--------------------------------------|-----------------|-------------------|--------------------------------------|-----------------|-------------------|---------------------------------|
|                   |                                      | Total                                | Per Student (7) | Percent Announced | Total                                | Per Student (7) | Percent Obligated |                                 |
| Alabama           | 107                                  | \$14,286,240                         | \$19            | 97%               | \$6,142,416                          | \$8             | 42%               | 57%                             |
| Alaska            | 115                                  | \$1,138,121                          | \$9             | 15%               | \$4,990,000                          | \$39            | 66%               | 80%                             |
| Arizona           | 180                                  | \$12,415,000                         | \$12            | 67%               | \$5,290,562                          | \$5             | 28%               | 42%                             |
| Arkansas          | 69                                   | \$5,274,235                          | \$11            | 56%               | \$5,575,253                          | \$12            | 59%               | 51%                             |
| California        | 2,448                                | \$157,514,967                        | \$25            | 136%              | \$56,641,466                         | \$9             | 49%               | 27%                             |
| Colorado          | 571                                  | \$9,842,533                          | \$12            | 68%               | \$7,460,789                          | \$9             | 52%               | 45%                             |
| Connecticut       | 36                                   | \$5,767,324                          | \$10            | 51%               | \$4,575,499                          | \$8             | 41%               | 36%                             |
| Delaware          | 31                                   | \$3,168,366                          | \$27            | 44%               | \$4,908,569                          | \$42            | 68%               | 100%                            |
| Dist. of Columbia | 22                                   | \$3,811,699                          | \$49            | 53%               | \$4,392,500                          | \$56            | 61%               | 100%                            |
| Florida           | 1,000                                | \$87,179,272                         | \$33            | 177%              | \$39,977,902                         | \$15            | 81%               | *                               |
| Georgia           | 380                                  | \$20,059,080                         | \$12            | 70%               | \$9,338,481                          | \$6             | 32%               | 40%                             |
| Hawaii            | 5                                    | \$549,133                            | \$3             | 8%                | \$1,882,023                          | \$10            | 26%               | 45%                             |
| Idaho             | 180                                  | \$5,125,770                          | \$19            | 72%               | \$4,314,712                          | \$16            | 61%               | 69%                             |
| Illinois          | 284                                  | \$22,039,071                         | \$10            | 55%               | \$9,818,881                          | \$5             | 25%               | 20%                             |
| Indiana           | 223                                  | \$13,571,634                         | \$13            | 68%               | \$5,111,679                          | \$5             | 26%               | 37%                             |
| Iowa              | 84                                   | \$8,662,776                          | \$18            | 88%               | \$6,477,573                          | \$14            | 66%               | 30%                             |
| Kansas            | 55                                   | \$8,611,074                          | \$42            | 91%               | \$4,788,264                          | \$23            | 50%               | 40%                             |
| Kentucky          | 126                                  | \$9,526,165                          | \$14            | 74%               | \$5,333,836                          | \$8             | 41%               | 35%                             |
| Louisiana         | 64                                   | \$10,960,261                         | \$24            | 75%               | \$7,472,726                          | \$16            | 51%               | 59%                             |
| Maine             | 170                                  | \$5,369,500                          | \$28            | 74%               | \$2,980,094                          | \$15            | 41%               | 49%                             |
| Maryland          | 290                                  | \$16,972,302                         | \$20            | 100%              | \$10,376,049                         | \$12            | 61%               | 72%                             |
| Massachusetts     | 389                                  | \$5,968,143                          | \$6             | 32%               | \$11,762,910                         | \$12            | 63%               | 100%                            |
| Michigan          | 84                                   | \$21,542,334                         | \$13            | 69%               | \$20,330,571                         | \$12            | 65%               | 87%                             |
| Minnesota         | 115                                  | \$15,206,670                         | \$19            | 96%               | \$6,578,649                          | \$8             | 41%               | 23%                             |
| Mississippi       | 80                                   | \$8,347,030                          | \$17            | 79%               | \$2,511,482                          | \$5             | 24%               | 49%                             |
| Missouri          | 192                                  | \$17,787,140                         | \$20            | 99%               | \$7,485,073                          | \$9             | 42%               | 52%                             |
| Montana           | 81                                   | \$4,223,552                          | \$30            | 58%               | \$4,648,710                          | \$33            | 64%               | 68%                             |
| Nebraska          | 82                                   | \$4,997,174                          | \$17            | 69%               | \$2,565,017                          | \$9             | 36%               | 21%                             |
| Nevada            | 248                                  | \$2,209,127                          | \$5             | 24%               | \$5,484,183                          | \$13            | 61%               | 92%                             |
| New Hampshire     | 147                                  | \$5,138,888                          | \$26            | 73%               | \$1,811,280                          | \$9             | 26%               | 82%                             |
| New Jersey        | 192                                  | \$15,195,900                         | \$11            | 57%               | \$9,988,463                          | \$7             | 38%               | 19%                             |
| New Mexico        | 44                                   | \$3,710,787                          | \$11            | 50%               | \$2,960,314                          | \$9             | 40%               | 72%                             |
| New York          | 181                                  | \$27,956,276                         | \$10            | 52%               | \$19,615,550                         | \$7             | 37%               | 40%                             |
| North Carolina    | 135                                  | \$9,724,194                          | \$7             | 37%               | \$6,219,658                          | \$4             | 24%               | 35%                             |
| North Dakota      | 145                                  | \$5,540,862                          | \$59            | 78%               | \$4,355,397                          | \$46            | 61%               | 28%                             |
| Ohio              | 415                                  | \$33,920,000                         | \$20            | 99%               | \$11,160,794                         | \$7             | 33%               | 90%                             |
| Oklahoma          | 71                                   | \$6,454,970                          | \$10            | 55%               | \$4,845,200                          | \$7             | 41%               | 58%                             |
| Oregon            | 116                                  | \$12,653,513                         | \$22            | 113%              | \$7,014,373                          | \$12            | 63%               | 70%                             |
| Pennsylvania      | 126                                  | \$21,013,336                         | \$12            | 60%               | \$6,230,137                          | \$4             | 18%               | 41%                             |
| Rhode Island      | 40                                   | \$4,600,000                          | \$31            | 63%               | \$2,659,174                          | \$18            | 37%               | 44%                             |
| South Carolina    | 26                                   | \$5,152,000                          | \$7             | 39%               | \$7,114,331                          | \$10            | 54%               | 45%                             |
| South Dakota      | 33                                   | \$3,317,615                          | \$27            | 46%               | \$2,169,349                          | \$18            | 30%               | 65%                             |
| Tennessee         | 80                                   | \$8,836,252                          | \$9             | 49%               | \$5,636,410                          | \$6             | 31%               | 31%                             |
| Texas             | 853                                  | \$54,939,830                         | \$11            | 72%               | \$34,363,113                         | \$7             | 45%               | 80%                             |
| Utah              | 50                                   | \$8,526,885                          | \$15            | 86%               | \$8,005,168                          | \$14            | 81%               | 46%                             |
| Vermont           | 60                                   | \$5,465,338                          | \$59            | 74%               | \$4,412,766                          | \$47            | 59%               | 63%                             |
| Virginia          | 166                                  | \$12,058,892                         | \$10            | 54%               | \$14,615,766                         | \$12            | 65%               | 59%                             |
| Washington        | 86                                   | \$21,133,086                         | \$21            | 110%              | \$9,069,335                          | \$9             | 47%               | 22%                             |
| West Virginia     | 72                                   | \$5,798,087                          | \$21            | 81%               | \$5,482,427                          | \$19            | 77%               | 47%                             |
| Wisconsin         | 350                                  | \$13,617,768                         | \$16            | 82%               | \$10,180,323                         | \$12            | 61%               | 35%                             |
| Wyoming           | 64                                   | \$6,607,496                          | \$76            | 93%               | \$6,027,210                          | \$70            | 85%               | 77%                             |
| Average/Total (8) | 11,163                               | \$727,555,485                        | \$15            | 74%               | \$453,152,407                        | \$9.37          | 46%               | 44%                             |
| Median            | 115                                  | \$8,662,776                          | \$17            | 69%               | \$6,027,210                          | \$10            | 47%               | 48%                             |
| High              | 2,448                                | \$157,514,967                        | \$76            | 177%              | \$56,641,466                         | \$70            | 85%               | 100%                            |
| Low               | 5                                    | \$549,133                            | \$3             | 8%                | \$1,811,280                          | \$4             | 18%               | 19%                             |

Note: Sources and notes for this table on following page.

Legend:   = High value   = Low value  
\* = Data unavailable



The National Center for Safe Routes to School also collects data to track demand for Safe Routes to School programs. Data show that nationwide, just 44% of funding requests have been awarded (based on total funds requested). States vary on how they are meeting the demand for Safe Routes to School programs and projects, but in almost all cases funding requests exceed available funding. New Jersey and Illinois have the largest gaps between supply and demand and are able to fund just 19% and 20% of the total funds requested, respectively. Delaware, Washington DC, and Massachusetts best meet demand with current funding.

One hundred percent of funds requested have been awarded in these states. The Safe Routes to School National Partnership and the National Center for Safe Routes to School have leading roles in benchmarking Safe Routes to School performance and publish regular progress reports. See Appendix 5, page 216, for links to their websites and the most up-to-date measurements for Safe Routes to School.

**Stimulus Bill Boosts Biking and Walking**  
In February 2009 the American Recovery and Reinvestment Act (ARRA) was signed into law. Known as the "stimulus bill," this legislation pumped money

**(Table Page 92) Sources:** (1) SRTSNP September 2011 (2) NCSRTS 2011 (3) STN 2011 (3) Total pupil data from STN 2011 takes into account grades K-12 whereas Safe Routes to School (SRTS) funding can only be spent on grades K-8. **Notes:** The District of Columbia is included in this table for comparison, although it is not compared to states in most other areas of the report; all dollar figures cited are as of September 2011. (4) "Announced" columns measure the amount of funding each state has announced for local grants and statewide spending—not including administrative expenses. These are the funds that will ultimately help local communities create safer routes to school. (5) "Obligated" columns reflect the amount that the state has expended or contracted to expend on Safe Routes to School, including local grants, statewide spending, and administrative expenses. Obligation is important as it demonstrates what level of funding has been or will soon be spent to build infrastructure projects, support noninfrastructure activities, and implement the program. (6) "Funded Schools/Programs" shows the number of schools in the state that are receiving SRTS funds or the number of state-funded SRTS activities. If the number of schools is not known, the number of SRTS programs is used. This number will usually be an estimate, because many funding recipients will conduct programs in numerous schools. Fund awards are typically made through a competitive process, but in some instances the state may directly select local programs to fund. (7) Total pupil data are representative of public schools only. (8) All averages are weighted except for number of funded schools/programs, total awarded funds, and total obligated funds.



Photo courtesy of NHTSA



# Stimulus Bill Funding

| States            | ARRA Funds to Bike/Ped       |                       |                   | TE ARRA to Bike/Ped          |                    | Percent of 09-10 Bike/Ped Funds from ARRA |
|-------------------|------------------------------|-----------------------|-------------------|------------------------------|--------------------|---|
|                   | Total                        | Amt. per capita       | % of ARRA Funds   | Total                        | % of TE ARRA       |   |
| Alabama           | \$13,117,979                 | \$2.79                | 3%                | \$11,469,152                 | 74%                | 42%                                       |
| Alaska            | \$3,996,444                  | \$5.72                | 2%                | \$2,503,757                  | 54%                | 18%                                       |
| Arizona           | \$9,880,158                  | \$1.50                | 2%                | \$8,078,813                  | 52%                | 24%                                       |
| Arkansas          | \$113,093                    | \$0.04                | 0.03%             | \$0                          | 0%                 | 1%  |
| California        | \$64,130,045                 | \$1.74                | 3%                | \$40,436,650                 | 58%                | 34%                                       |
| Colorado          | \$10,135,937                 | \$2.02                | 3%                | \$8,328,697                  | 69%                | 26%                                       |
| Connecticut       | \$14,564,992                 | \$4.14                | 5%                | \$5,318,006                  | 59%                | 84%                                       |
| Delaware          | \$8,969,970                  | \$10.13               | 7%                | \$2,629,853                  | 72%                | 48%                                       |
| Dist. of Columbia | \$4,081,938                  | \$3.47                | 3%                | \$3,705,235                  | 100%               | 22%                                       |
| Florida           | \$50,223,541                 | \$2.71                | 4%                | \$35,763,214                 | 89%                | 27%                                       |
| Georgia           | \$44,776,536                 | \$4.56                | 5%                | \$20,588,471                 | 74%                | 54%                                       |
| Hawaii            | \$4,919,776                  | \$3.80                | 4%                | \$3,772,391                  | 100%               | 77%                                       |
| Idaho             | \$5,974,347                  | \$3.86                | 3%                | \$759,129                    | 32%                | 54%                                       |
| Illinois          | \$17,506,261                 | \$1.36                | 2%                | \$14,995,129                 | 53%                | 40%                                       |
| Indiana           | \$29,632,284                 | \$4.61                | 4%                | \$14,293,288                 | 72%                | 40%                                       |
| Iowa              | \$10,907,982                 | \$3.63                | 3%                | \$9,964,058                  | 93%                | 28%                                       |
| Kansas            | \$4,900,624                  | \$1.74                | 1%                | \$4,900,624                  | 47%                | 34%                                       |
| Kentucky          | \$22,043,752                 | \$5.11                | 5%                | \$8,035,000                  | 64%                | 30%                                       |
| Louisiana         | \$13,322,767                 | \$2.97                | 3%                | \$12,373,698                 | 96%                | 38%                                       |
| Maine             | \$2,007,979                  | \$1.52                | 1%                | \$2,007,979                  | 51%                | 19%                                       |
| Maryland          | \$640,505                    | \$0.11                | 0.2%              | \$640,505                    | 5%                 | 10%                                       |
| Massachusetts     | \$41,373,513                 | \$6.27                | 11%               | \$8,162,624                  | 62%                | 74%                                       |
| Michigan          | \$18,478,035                 | \$1.85                | 2%                | \$17,968,035                 | 71%                | 36%                                       |
| Minnesota         | \$13,820,869                 | \$2.62                | 3%                | \$6,201,824                  | 41%                | 23%                                       |
| Mississippi       | \$1,284,116                  | \$0.43                | 0.4%              | \$1,284,116                  | 12%                | 7%  |
| Missouri          | \$22,991,527                 | \$3.84                | 4%                | \$11,535,614                 | 60%                | 36%                                       |
| Montana           | \$8,489,571                  | \$8.71                | 4%                | \$5,642,172                  | 89%                | 47%                                       |
| Nebraska          | \$1,695,334                  | \$0.94                | 1%                | \$1,695,334                  | 50%                | 15%                                       |
| Nevada            | \$3,999,344                  | \$1.51                | 2%                | \$2,540,000                  | 42%                | 53%                                       |
| New Hampshire     | \$3,685,239                  | \$2.78                | 3%                | \$3,685,239                  | 95%                | 53%                                       |
| New Jersey        | \$13,982,716                 | \$1.61                | 2%                | \$12,330,516                 | 63%                | 49%                                       |
| New Mexico        | \$15,240,891                 | \$7.58                | 5%                | \$5,530,903                  | 73%                | 53%                                       |
| New York          | \$29,840,320                 | \$1.53                | 3%                | \$16,640,698                 | 49%                | 27%                                       |
| North Carolina    | \$26,384,864                 | \$2.81                | 4%                | \$13,947,001                 | 63%                | 37%                                       |
| North Dakota      | \$3,123,374                  | \$4.83                | 2%                | \$3,123,374                  | 61%                | 44%                                       |
| Ohio              | \$11,883,677                 | \$1.03                | 1%                | \$4,376,083                  | 16%                | 25%                                       |
| Oklahoma          | \$15,488,071                 | \$4.20                | 3%                | \$13,939,657                 | 100%               | 75%                                       |
| Oregon            | \$9,387,747                  | \$2.45                | 3%                | \$2,477,971                  | 25%                | 27%                                       |
| Pennsylvania      | \$34,918,915                 | \$2.77                | 3%                | \$25,150,853                 | 82%                | 26%                                       |
| Rhode Island      | \$5,490,008                  | \$5.21                | 4%                | \$3,881,492                  | 94%                | 54%                                       |
| South Carolina    | \$12,775,817                 | \$2.80                | 3%                | \$12,775,817                 | 92%                | 88%                                       |
| South Dakota      | \$8,309,940                  | \$10.23               | 4%                | \$7,807,946                  | 85%                | 58%                                       |
| Tennessee         | \$18,431,994                 | \$2.93                | 3%                | \$7,942,162                  | 46%                | 36%                                       |
| Texas             | \$43,502,001                 | \$1.76                | 2%                | \$38,699,978                 | 57%                | 38%                                       |
| Utah              | \$2,039,744                  | \$0.73                | 1%                | \$2,039,744                  | 32%                | 12%                                       |
| Vermont           | \$1,787,334                  | \$2.87                | 1%                | \$1,787,334                  | 47%                | 19%                                       |
| Virginia          | \$1,607,263                  | \$0.20                | 0.3%              | \$0                          | 0%                 | 8%  |
| Washington        | \$18,038,552                 | \$2.71                | 3%                | \$4,114,369                  | 28%                | 28%                                       |
| West Virginia     | \$5,948,867                  | \$3.27                | 3%                | \$5,529,353                  | 87%                | 55%                                       |
| Wisconsin         | \$9,618,944                  | \$1.70                | 2%                | \$9,141,758                  | 58%                | 40%                                       |
| Wyoming           | \$2,940,296                  | \$5.40                | 2%                | \$2,429,179                  | 51%                | 33%                                       |
| Average/Total     | \$742,405,794 <sup>(1)</sup> | \$2.42 <sup>(2)</sup> | 3% <sup>(2)</sup> | \$462,944,793 <sup>(1)</sup> | 59% <sup>(2)</sup> | 35% <sup>(2)</sup>                        |
| Median            | \$10,135,937                 | \$2.79                | 3%                | \$5,642,172                  | 60%                | 36%                                       |
| High              | \$64,130,045                 | \$10.23               | 11%               | \$40,436,650                 | 100%               | 88%                                       |
| Low               | \$113,093                    | \$0.04                | 0.3%              | \$0                          | 0%                 | 1%  |

Source: FHWA FMIS 2009-2010 Notes: The District of Columbia is included in this table for comparison, although it is not compared to states in most other areas of the report; (1) Total value (2) Weighted average (3) "TE ARRA" refers to ARRA funds that were directed toward the Transportation Enhancements program.

Legend:  = High value  = Low value

and jobs into the U.S. economy. Transportation is one sector that benefited from a large influx of funds in 2009 and 2010, and bicycling and walking also benefited.

The nearly \$750 million in stimulus funds that were obligated to bicycle and pedestrian projects in FY 2009 and 2010 is likely a large underestimate. It is common for bicycle and pedestrian projects to be coded incorrectly, thus undercounting spending rates. America Bikes explains:

*For example, the state of Maryland obligated \$12.3 million, almost 100 percent of its ARRA TE money, to making sidewalks accessible, but it did not record this as a bicycle or pedestrian project. (America Bikes 2011).*

This project would therefore not appear as dollars spent on bicycling and walking. Variation in how states record projects can dramatically affect how they appear to obligate funds to bicycling and walking.

Recognizing this, FMIS data indicate that bicycle and pedestrian projects accounted for 3% of all ARRA transportation funds in 2009 and 2010. In these years, over \$460 million in ARRA funding went to Transportation Enhancements, 59% of which were bicycle and pedestrian projects. Thirty-five percent of all bicycle and pedestrian funding in 2009 and 2010 was ARRA funds, accounting for a large spike in bike/ped funding compared to previous years.

States vary widely on how they chose to spend ARRA transportation funds. Massachusetts reported spending 11% of its ARRA transportation funds on bicycling and walking, the highest rate among states. Arkansas reported just 0.03% spent on bicycling and walking, amounting to just four cents per capita, the lowest among states. The District of Columbia, Hawaii, and Oklahoma spent 100% of ARRA TE funds on bicycling and walking projects while Arkansas and Virginia spent no ARRA TE funds on these modes.

## Infrastructure

Just as road infrastructure has been implemented to facilitate safe and accessible routes for motorized vehicles, so too is appropriate infrastructure critical for safe and accessible routes for bicycling and walking (Hopkinson and Wardman 1996, McClintock and Cleary 1996, Reynolds et al., 2009, Rietveld 2000). To see how cities compared to one another on infrastructure for bicycling and walking, they were asked to

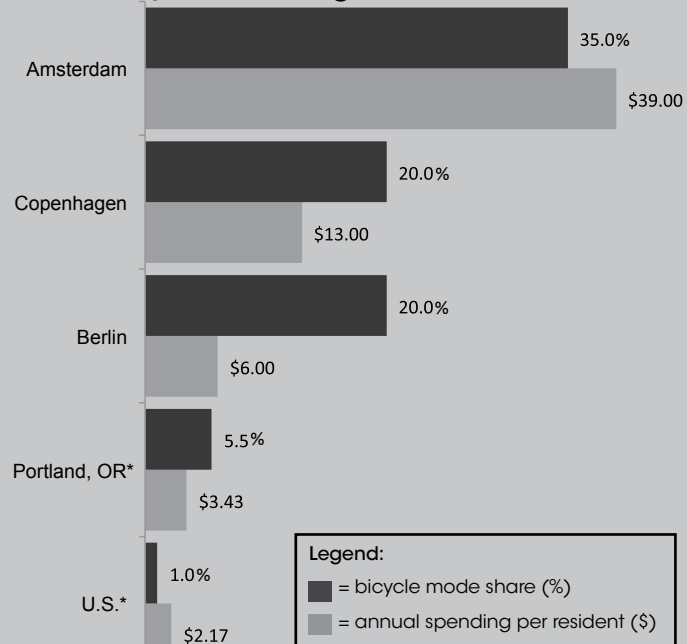


# Looking Outside the Borders

## Investing in Bicycling and Walking

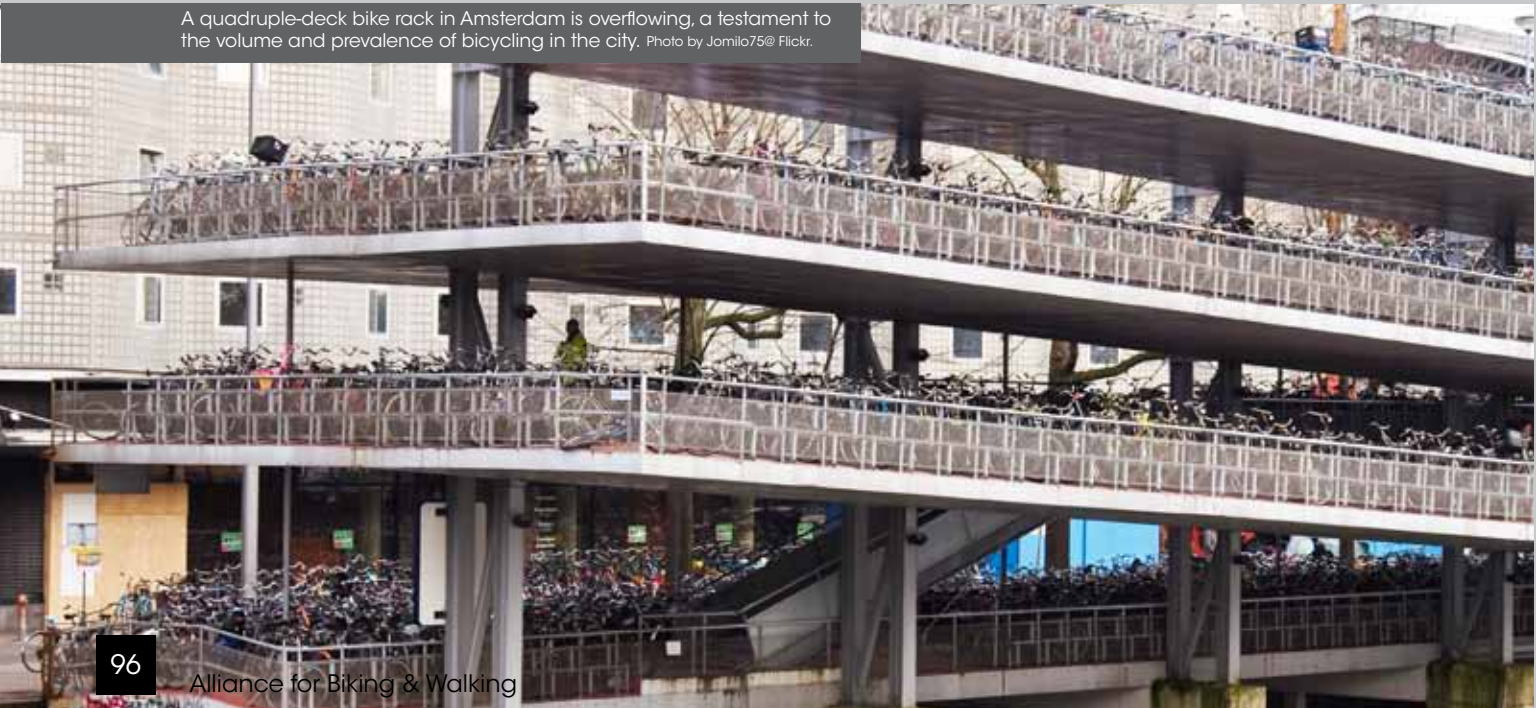
Case studies show that the countries and cities that invest the most in bicycling and walking have higher bicycling and walking mode share, and are safer places to bicycle and walk (Pucher et al., 2010; Pucher and Buehler, 2007 and 2008). An international comparison of bicycle funding and mode share by Gotschi and Mills and Rails-to-Trails Conservancy (2008; chart this page) demonstrates that European cities that invest greater amounts per capita into bicycling have greater levels of bicycling. These cities provide strong evidence that in order to increase active transportation, the United States must make a much greater investment in infrastructure and programs encouraging bicycling and walking.

**Bicycle Funding and Mode Share**



**Sources:** This graph is modified with permission from Thomas Gotschi and Kevin Mills, *Active Transportation for America—The Case for Increased Federal Investment in Bicycling and Walking*, Rails-to-Trails Conservancy, 2008. [www.railstotrails.org/atfa](http://www.railstotrails.org/atfa); modified from J. Pucher et al., 2007. "At the Frontiers of Cycling: Policy Innovations in the Netherlands, Denmark, and Germany," *World Transport Policy & Practice*; ACS 2007-2009, FHWA FMIS 2006-2010. **Note:** \*Spending data for the United States and Portland are for bicycling and walking combined.

A quadruple-deck bike rack in Amsterdam is overflowing, a testament to the volume and prevalence of bicycling in the city. Photo by Jomilo75@ Flickr.





report on miles of existing and planned facilities including on-street striped bike lanes, multi-use paths, and signed bicycle routes. Cities averaged 1.8 miles of bicycle facilities (bike lanes, multi-use paths, and signed bicycle routes combined) per square mile. On the high end of the range is San Francisco, with 5.6 miles of bicycle facilities per square mile. Austin and Long Beach rank second and third, with 4.5 miles of facilities per square mile.

Cities average 19.2 miles of sidewalk per square mile. New York reported having 12,750 miles of sidewalk, more than any other city. Baltimore has the densest sidewalk network with 44.4 miles of sidewalk per square mile.

Cities were also asked to report on miles of planned bicycle and pedestrian facilities. Cities who responded reported that 20,908 miles of bicycle facilities and 7,079 miles of pedestrian facilities are planned for the coming years. New York has more planned bicycle facilities than any other cities (1,800 miles). Austin has 3,500 planned miles of pedestrian facilities, more than any other city (see chart page 99).

### Innovative Facilities for Bicycling and Walking

A century of planning roads for cars means that planning for bicyclists, pedestrians, and other users will often require innovative designs and treatments to retrofit existing infrastructure. For the 2012 Benchmarking Report, the Alliance asked cities which, if any, of five innovative treatments they have used or adopted. (For data on innovative facilities, see page 104; for definitions of these facilities, see page 105.)

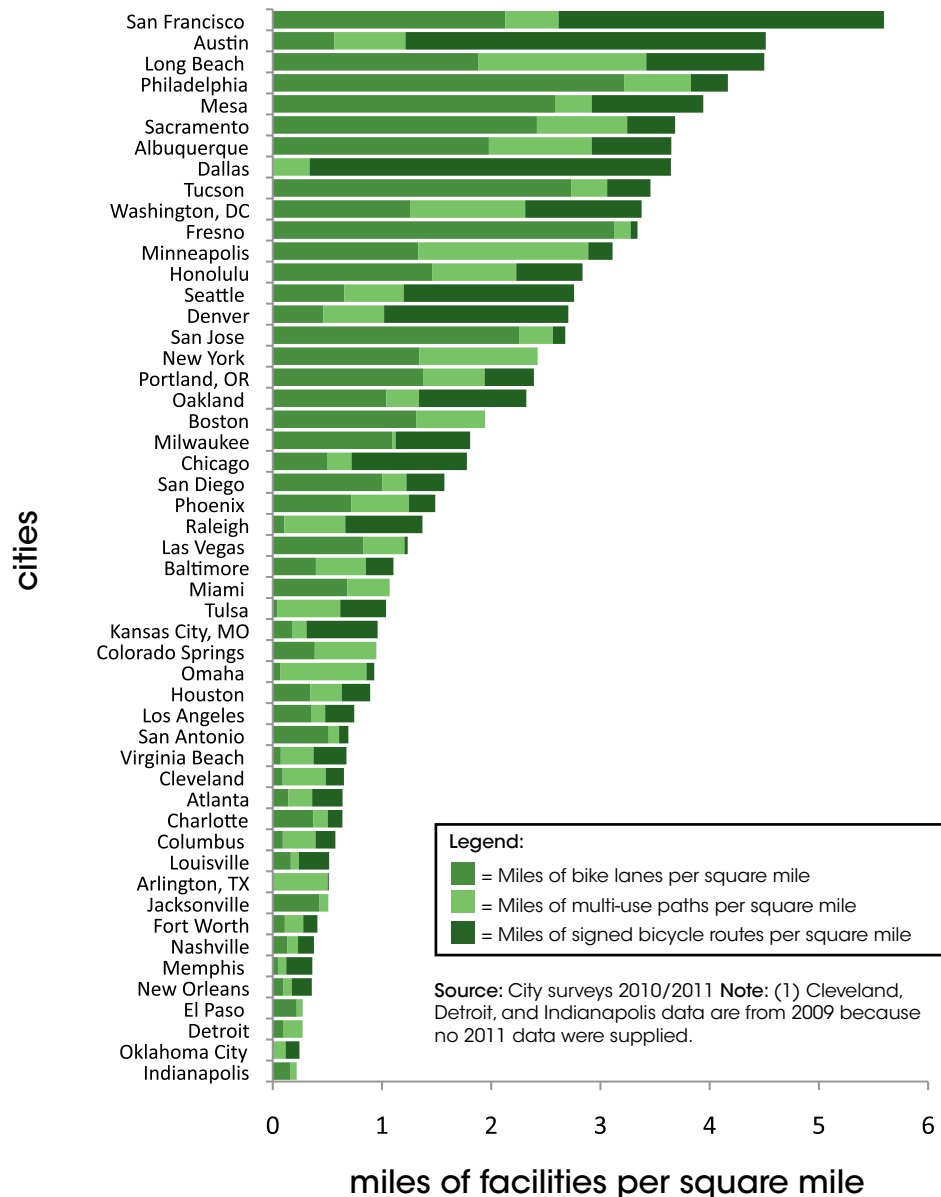


Photo by Frank Chen, San Francisco Bicycle Coalition

Shared lane markings, also called "sharrows," are the most common innovative treatment in use today. Thirty-seven cities report that they have used shared lane markings, up 95% from 19 cities two years ago. Ten cities report that they have implemented bicycle boulevards (up from five 2 years ago). Six more cities reported bicycle boulevards are currently under development or have been proposed. Nine cities have implemented bicycle traffic lights. Sixteen cities have used colored bike lane (Continued page 103)



## Existing Bicycle Facilities in Major U.S. Cities



**Cities average  
1.8 miles of  
bicycle facilities  
per square mile.**

San Francisco and Austin have the most miles of bicycle facilities per square mile among the largest U.S. cities. Fresno, Tucson, and Philadelphia rank highest for miles of bike lanes per square mile. Indianapolis, Oklahoma City, and Detroit have the fewest miles of bicycle facilities per square mile.

# Bike/Ped Infrastructure in Cities

| City             | Current miles of bicycle facilities |                   |                       |                    | Miles of sidewalk |                     | Planned facilities <sup>(3)</sup> |                      |              |                      | City adopted goal              |                             |
|------------------|-------------------------------------|-------------------|-----------------------|--------------------|-------------------|---------------------|-----------------------------------|----------------------|--------------|----------------------|--------------------------------|-----------------------------|
|                  | On-street bike lanes <sup>(2)</sup> | Multi-use paths   | Signed bicycle routes | Total/sq. mile     | Total             | Total/sq. mile      | Bicycle (miles)                   | Over how many years? | Ped. (miles) | Over how many years? | To increase bicycle facilities | To increase ped. facilities |
| Albuquerque      | 372                                 | 177               | 137                   | 3.7                | *                 | *                   | *                                 | 25                   | *            | *                    | ✓                              | ✓                           |
| Arlington, TX    | 1                                   | 47                | 1                     | 0.5                | 1,100             | 11.5                | 272                               | 20                   | 145          | 20                   | ✓                              | ✓                           |
| Atlanta          | 19                                  | 29                | 37                    | 0.6                | 2,160             | 16.2                | 250                               | 25                   | 900          | 25                   |                                |                             |
| Austin           | 168                                 | 194               | 983                   | 4.5                | 2,144             | 7.2                 | 1,100                             | 19                   | 3,500        | <sup>(5)</sup>       | ✓                              | ✓                           |
| Baltimore        | 32                                  | 37                | 20.5                  | 1.1                | 3,600             | 44.4                | 150                               | 10                   | 0            | ∅                    | ✓                              | ✓                           |
| Boston           | 63                                  | 30.3              | 0                     | 1.9                | *                 | *                   | 150                               | 8                    | 0            | ∅                    | ✓                              |                             |
| Charlotte        | 111                                 | 39                | 40                    | 0.6                | 1,927             | 6.5                 | 783                               | 25                   | 650          | 25                   | ✓                              | ✓                           |
| Chicago          | 115                                 | 50                | 241                   | 1.8                | *                 | *                   | 650                               |                      | *            | *                    | ✓                              | *                           |
| Cleveland        | 7 <sup>(4)</sup>                    | 31 <sup>(4)</sup> | 13 <sup>(4)</sup>     | 0.7                | *                 | *                   | *                                 | *                    | *            | *                    | *                              | *                           |
| Colorado Springs | 75                                  | 110               | *                     | 1.0                | 2,304             | 11.8                | 15                                | 25                   | *            | *                    | ✓                              | ✓                           |
| Columbus         | 20                                  | 65                | 39.4                  | 0.6                | 2,081             | 9.6                 | 536                               | 17                   | 50           | 5                    | ✓                              | ✓                           |
| Dallas           | 0                                   | 115               | 1,128                 | 3.7                | 4,750             | 13.9                | 1,296                             | 10                   | 340          | 10                   | ✓                              |                             |
| Denver           | 71                                  | 85                | 258                   | 2.7                | 2,700             | 17.6                | 162                               | *                    | 54           | *                    | ✓                              | ✓                           |
| Detroit          | 13.8 <sup>(4)</sup>                 | 25 <sup>(4)</sup> | 0 <sup>(4)</sup>      | 0.4                | *                 | *                   | *                                 | *                    | *            | *                    | *                              | *                           |
| El Paso          | 56                                  | 14                | *                     | 0.3                | *                 | *                   | 250                               | 15                   | 100          | 15                   | ✓                              | ✓                           |
| Fort Worth       | 37.6                                | 57.3              | 44                    | 0.3                | *                 | *                   | 480.3                             | 25                   | 0            | ∅                    | ✓                              | ✓                           |
| Fresno           | 350                                 | 17                | 7                     | 3.3                | 1,870             | 16.7                | 905                               | 75                   | *            | *                    | ✓                              |                             |
| Honolulu         | 89                                  | 47                | 37                    | 2.8                | *                 | *                   | 568                               | 20                   | *            | *                    | ✓                              |                             |
| Houston          | 206                                 | 173               | 156                   | 0.9                | *                 | *                   | 43                                | 5                    | *            | *                    | ✓                              |                             |
| Indianapolis     | 59 <sup>(4)</sup>                   | 20 <sup>(4)</sup> | *                     | 0.2                | *                 | *                   | *                                 | *                    | *            | *                    | *                              | *                           |
| Jacksonville     | 320                                 | 60                | *                     | 0.5                | 4,350             | 5.8                 | 100.8                             | *                    | 68.4         | *                    | ✓                              | ✓                           |
| Kansas City, MO  | 55.4                                | 42                | 205                   | 1.0                | 2,192             | 7.0                 | 600                               | 15                   | *            | *                    | ✓                              | ✓                           |
| Las Vegas        | 113                                 | 51                | 4                     | 1.2                | *                 | *                   | 331                               | 25                   | 143          | 25                   |                                |                             |
| Long Beach       | 94                                  | 77                | 54                    | 4.5                | 1,587             | 31.7                | *                                 | 10                   | *            | *                    | ✓                              | ✓                           |
| Los Angeles      | 167                                 | 58                | 125                   | 0.8                | 10,750            | 22.9                | 1,680                             | 35                   | *            | *                    | ✓                              |                             |
| Louisville       | 53.7                                | 24.3              | 89.8                  | 0.5                | 2,500             | 7.7                 | 550                               | 20                   | 20           | 20                   | ✓                              | ✓                           |
| Memphis          | 15                                  | 24                | 75                    | 0.4                | 3,588             | 11.4                | 600                               | 10                   | *            | 10                   |                                |                             |
| Mesa             | 354                                 | 46                | 140                   | 3.9                | 4,370             | 31.9                | 20                                | 5                    | 8            | 5                    | ✓                              | ✓                           |
| Miami            | 24.6                                | 14.0              | 0                     | 1.1                | 1,050             | 29.2                | 276.4                             | 20                   | 30.2         | 20                   | ✓                              | ✓                           |
| Milwaukee        | 104.9                               | 3.1               | 65.5                  | 1.8                | 3,000             | 31.3                | 393.8                             | 10                   | *            | *                    | ✓                              | ✓                           |
| Minneapolis      | 72                                  | 84                | 12                    | 3.1                | 2,000             | 37.0                | 275                               | 30                   | 108          | 50                   | ✓                              | ✓                           |
| Nashville        | 64                                  | 46                | 69                    | 0.4                | 1,066             | 2.2                 | 858                               | 15                   | 607          | 15                   | ✓                              | ✓                           |
| New Orleans      | 16                                  | 13                | 31                    | 0.4                | 2,650             | 15.7                | 1,002                             | 20                   | *            | 20                   | ✓                              | ✓                           |
| New York         | 407                                 | 328               | *                     | 2.4                | 12,750            | 42.1                | 1,800                             | 20                   | *            | *                    | ✓                              | ✓                           |
| Oakland          | 58.2                                | 16.8              | 55                    | 2.3                | 1,120             | 20.0                | 221.8                             | 20                   | *            | 20                   | ✓                              | ✓                           |
| Oklahoma City    | 6.6                                 | 64.7              | 76.8                  | 0.2                | *                 | *                   | 409                               | 8                    | *            | *                    | ✓                              |                             |
| Omaha            | 9                                   | 100               | 9                     | 0.9                | *                 | *                   | 31                                | 2                    | *            | *                    | ✓                              | ✓                           |
| Philadelphia     | 431                                 | 82                | 45.4                  | 4.2                | 4,500             | 33.6                | *                                 | *                    | *            | *                    | ✓                              | ✓                           |
| Phoenix          | 371                                 | 274               | 124                   | 1.5                | *                 | *                   | 0                                 | ∅                    | 0            | ∅                    | ✓                              | ✓                           |
| Portland, OR     | 183                                 | 75                | 60                    | 2.4                | *                 | *                   | 962                               | 20                   | *            | *                    | ✓                              | ✓                           |
| Raleigh          | 15                                  | 80                | 101                   | 1.4                | 1,150             | 8.0                 | 447                               | 20                   | 38           | 25                   | ✓                              | ✓                           |
| Sacramento       | 237                                 | 81                | 43                    | 3.7                | *                 | *                   | 272                               | *                    | *            | 15                   | ✓                              | ✓                           |
| San Antonio      | 236                                 | 44                | 39                    | 0.7                | 7,840             | 17.0                | 45                                | 1                    | 0            | ∅                    | ✓                              | ✓                           |
| San Diego        | 325.5                               | 72.3              | 112.9                 | 1.6                | *                 | *                   | 549.5                             | *                    | *            | *                    | ✓                              | ✓                           |
| San Francisco    | 100                                 | 23                | 140                   | 5.6                | *                 | *                   | 33                                | 1                    | *            | *                    | ✓                              |                             |
| San Jose         | 400                                 | 54                | 20                    | 2.7                | *                 | *                   | 500                               | 10                   | *            | *                    | ✓                              | ✓                           |
| Seattle          | 55                                  | 45.7              | 131                   | 2.8                | *                 | *                   | 454.7                             | 10                   | *            | 6                    | ✓                              | ✓                           |
| Tucson           | 620                                 | 75                | 90                    | 3.5                | *                 | *                   | 157                               | 30                   | 25           | 15                   | ✓                              | ✓                           |
| Tulsa            | 8.6                                 | 113.1             | 82.6                  | 1.0                | *                 | *                   | 270.2                             | 5                    | 270.2        | 5                    | ✓                              | ✓                           |
| Virginia Beach   | 18.3                                | 74.7              | 75                    | 0.7                | *                 | *                   | 328                               | 10                   | 2.3          | 10                   | ✓                              | ✓                           |
| Washington, DC   | 77                                  | 64                | 65                    | 3.4                | 1,600             | 26.2                | 130                               | 5                    | 20           | 10                   | ✓                              | ✓                           |
| Mean/Average     | 135                                 | 70                | 115                   | 1.8 <sup>(1)</sup> | 3,311             | 19.2 <sup>(1)</sup> | 460                               | 17                   | 283          | 17                   | Yes                            | Yes                         |
| Median           | 72                                  | 54                | 63                    | 1.2                | 2,248             | 16.5                | 331                               | 17                   | 50           | 15                   | Yes                            | Yes                         |
| High             | 620                                 | 328               | 1,128                 | 5.6                | 12,750            | 44.4                | 1,800                             | 75                   | 3,500        | 50                   | ∅                              | ∅                           |
| Low              | 0                                   | 3.1               | 0                     | 0.2                | 1,050             | 2.2                 | 0                                 | 1                    | 0            | 5                    | ∅                              | ∅                           |

**Source:** City surveys 2010/2011, Census 2010 **Notes:** A survey response of "na" was taken to mean "0" for this table. (1) Weighted average. (2) Bicycle lane miles count both directions when bike lanes are on both sides of two-lane street. (3) Planned facilities includes only miles of new facilities and does not represent a combined value of existing and planned facilities. (4) Did not provide these data for 2010/2011 survey; value represents miles as of 2008/2009 Benchmarking survey. (5) Open-ended.

**Legend:**  
 = High value      = Low value  
 = Not applicable  
 \* = Officials could not access data

# CLOSER LOOK

## San Francisco's Burgeoning Bicycle Network

by Kit Hodge, San Francisco Bicycle Coalition



San Francisco, a hilly city 7 miles long by 7 miles wide (and roughly 800,000 people), has the highest density of biking infrastructure in the United States. And not coincidentally, it boasts seven in ten San Franciscans riding a bike in the city. Though the city still has a long way to go, with only about 8% of locals riding every week, San Francisco is an unexpected success story in the United States. After all, the city was prohibited by a local court case from adding any new bicycle infrastructure—even bike parking racks—for 4 years, from 2006 to 2010.

These were four very long years, during which bicycling in the city nevertheless grew at huge rates.

The success of the city can be boiled down to culture, expressed in two areas: a strong, member-driven advocacy organization and the culture of the city. The San Francisco Bicycle Coalition (SFBC) serves 12,000 members, as of July 2011. Members are the heart and soul of the organization, leading local bike infrastructure campaigns, staffing the nonprofit's

Despite its hilly terrain, San Francisco has the fourth highest share of commuters who bike to work among major U.S. cities. Photo by Frank Chan, San Francisco Bicycle Coalition.







Green bike lane on Market Street in San Francisco. Photo by Tanya Duefi, San Francisco Bicycle Coalition

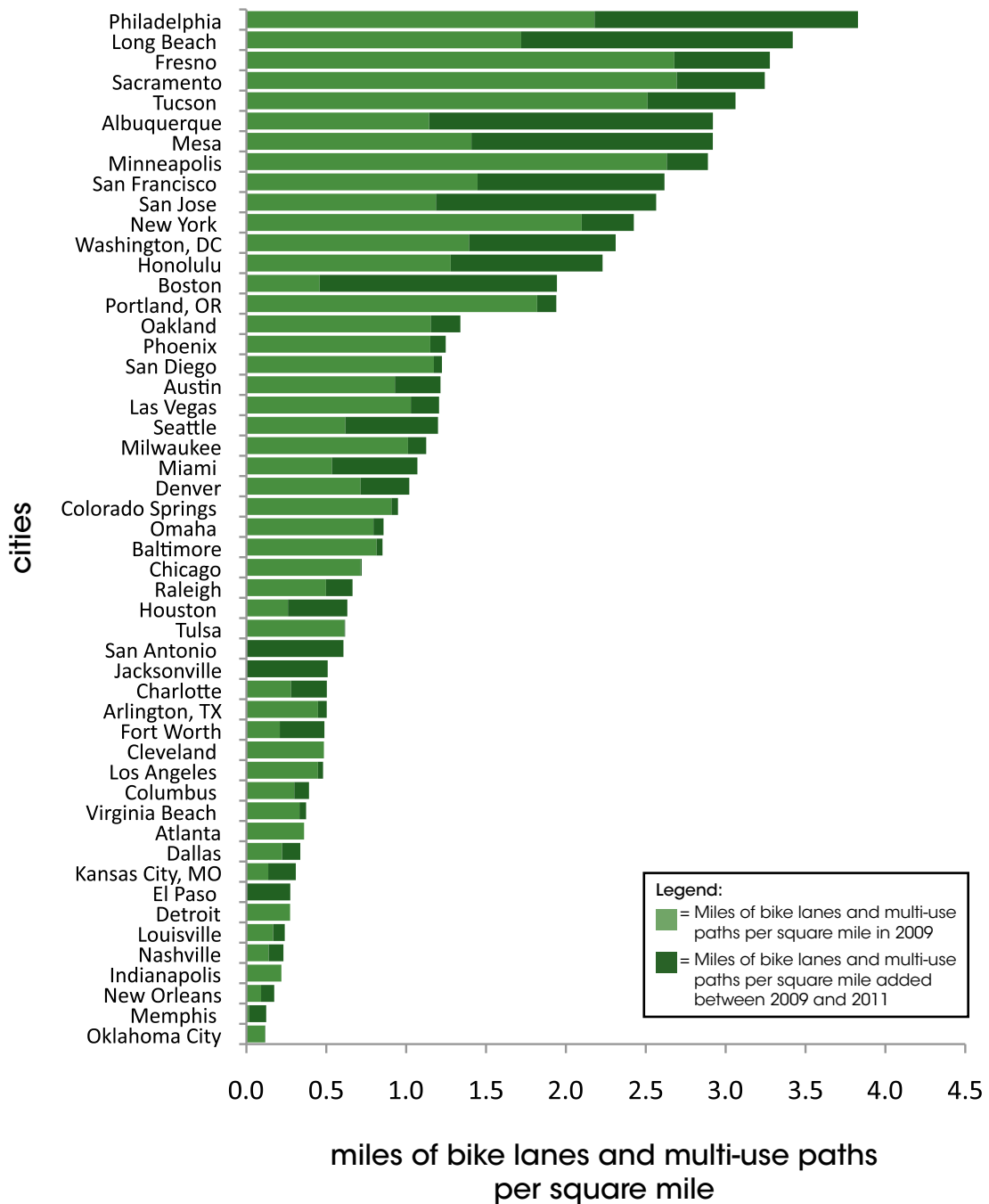
huge numbers of volunteer opportunities each year, voting in local elections, and providing the funding that it needs to do its work. The SFBC is hard to miss around town. Coalition members are out pretty much every week knocking on doors, parking bikes at events, tabling on street corners, and doing trainings in places of business. The city is just small enough to make this doable. As a result, it is hard to ignore the organization at City Hall.

City Hall is perhaps also primed to hear bicycle advocates even more than many other cities because of the unique culture of the city. San Francisco prides itself on its green policies, innovations, and culture of inclusion. These attributes can make it easier to sell newer ideas, such as innovative bicycle infrastructure, to elected officials. Though San Francisco is an ethnically diverse city, it is less economically diverse and can feel more culturally homogeneous than other big U.S. cities. This may make it more likely that the idealism, and values of sustainability, innovation, and inclusion are prevalent around the city.

Going forward, San Francisco is poised for an explosion in new bicycle infrastructure and ridership. And not surprisingly, the SFBC's bold plan for 100 miles of crosstown, 8-to-80 bikeways by 2020, called Connecting the City, is expected to be driven by the organization's members. Many of the projects called for to create these bikeways are long-desired street safety initiatives that local advocates have clamored for for years. The organization collects and tells their stories to decision makers, and ensures that they are invited to community meetings, have design input, and are empowered to speak at key hearings and in the media.



# Growth in Bicycle Facilities<sup>(1)</sup> in Major U.S. Cities 2009-2011



**Source:** City surveys 2010/2011 **Notes:** Cleveland, Detroit, and Indianapolis only have 2009 data because no 2011 data were supplied. (1) For the purpose of this chart, bicycle facilities include bike lanes and multi-use paths.

treatments, up 100% from eight cities as of the 2010 Benchmarking Report. Eight cities report implementing home zones, or woonerfs (only San Jose previously reported experimenting with home zones).

New to the 2012 Benchmarking Report, cities were also asked about additional innovative treatments including bike boxes, cycle tracks, and contra flow bike lanes. Twenty cities report having installed bike boxes, or advanced stop lines, which prioritize cyclists at red lights. Eleven cities have installed cycle tracks and ten cities have contra flow bike lanes.

Portland has used more innovative treatments than any other major U.S. city having implemented every innovation surveyed. San Francisco is close behind only lacking bicycle boulevard implementation. Long Beach, Minneapolis, New York, and Seattle also lead for innovative facilities with six of eight innovative facilities surveyed.

### U.S. Bicycle Route System

Also new to the 2012 Benchmarking Report are data about state involvement with the U.S. Bicycle Route System. The U.S. Bicycle Route System (USBRS) is a proposed national network of bicycle routes. These routes link urban, suburban, and rural areas with appropriate bicycle friendly routes including trails, bike paths, roads with shoulders, and low-traffic routes. For a route to be designated as part of the USBRS it must either connect two or more states, a state and an international border, or one or more U.S. Bicycle Routes.

The first two U.S. Bicycle Routes were designated in 1982 and then no ad-

ditional routes were nominated. In 2003 the American Association of State Highway and Transportation Officials (AASHTO) revived the USBRS with an official task force. An inventory of existing bicycle routes (see map on page 106) throughout the United States was created as a first step in drafting a national bicycle network plan. In 2008, AASHTO passed a resolution in support of the National Corridor Plan. An application for route designation was completed in May 2009 (Adventure Cycling Association, 2009).

According to data from Adventure Cycling Association, 34 states have an active USBRS program. Thirty-one states have identified potential USBRs in state or local bicycle plans. Routes have been officially designated as part of the USBRS in nine states, and three states have posted and signed USBRs.

### Bike-Transit Integration

The last bicycling provision measured was bike-transit integration. This report sought to measure how well cities provide for bicyclists on transit. While most cities are successfully integrating bicycles with buses, many fall behind in regard to providing parking for bicyclists at transit (Pucher and Buehler 2009). Almost all cities surveyed have 100% of their city bus fleet equipped with bicycle racks. When it comes to bicycle parking, cities report that only 27% of transit stops have bike parking on average. According to the American Public Transportation Association, this amounts to just 2.5 bicycle parking spaces at bus stops per 10,000 residents (APTA 2011).

# Innovative Facilities in Cities

| City                       | Shared lane markings | Bicycle boulevards | Home zones/woonerfs | Colored bike lanes | Bike boxes | Cycle tracks | Contra flow bike lane | Bicycle traffic light |
|----------------------------|----------------------|--------------------|---------------------|--------------------|------------|--------------|-----------------------|-----------------------|
| Albuquerque                | ✓★                   | ✓★                 |                     |                    | ✓          |              |                       |                       |
| Arlington, TX              |                      |                    |                     |                    |            |              |                       |                       |
| Atlanta                    | ✓★                   |                    |                     |                    |            |              |                       |                       |
| Austin                     | ✓★                   | (3)                |                     | ✓★                 | ✓          | ✓            | (3)                   | (3)                   |
| Baltimore                  | ✓                    | (2)                |                     | ✓★                 | ✓          |              | ✓                     |                       |
| Boston                     | ✓                    |                    |                     | ✓★                 | ✓          | ✓            |                       |                       |
| Charlotte                  | ✓★                   |                    |                     |                    |            |              |                       |                       |
| Chicago                    | ✓                    |                    | ✓★                  | ✓                  |            |              | ✓                     |                       |
| Cleveland (1)              |                      |                    |                     |                    |            |              |                       |                       |
| Colorado Springs           | ✓★                   | ✓★                 | ✓★                  |                    |            |              |                       |                       |
| Columbus                   | ✓★                   | ✓                  |                     | ✓★                 | ✓          |              |                       |                       |
| Dallas                     |                      |                    |                     |                    |            |              |                       |                       |
| Denver                     | ✓                    | (3)                |                     |                    | ✓          | ✓            |                       | ✓★                    |
| Detroit (1)                |                      |                    |                     |                    |            |              |                       |                       |
| El Paso                    |                      |                    |                     |                    | ✓          |              |                       |                       |
| Fort Worth                 | ✓                    |                    |                     |                    |            |              |                       |                       |
| Fresno                     |                      |                    |                     |                    |            |              |                       |                       |
| Honolulu                   | ✓★                   |                    |                     |                    | ✓          |              |                       |                       |
| Houston                    | ✓                    |                    |                     |                    |            |              | ✓                     |                       |
| Indianapolis (1)           |                      |                    |                     |                    |            |              |                       |                       |
| Jacksonville               | ✓★                   |                    |                     |                    |            |              |                       |                       |
| Kansas City, MO            | ✓★                   |                    |                     | ✓★                 | (2)        |              |                       |                       |
| Las Vegas                  |                      | ✓★                 |                     |                    |            |              |                       |                       |
| Long Beach                 | ✓                    | ✓                  |                     | ✓                  | ✓          | ✓            |                       | ✓                     |
| Los Angeles                | ✓★                   |                    |                     |                    |            |              |                       |                       |
| Louisville                 | ✓                    |                    | ✓★                  |                    |            |              |                       |                       |
| Memphis                    |                      |                    |                     |                    |            |              |                       |                       |
| Mesa                       |                      |                    |                     |                    |            |              |                       | ✓★                    |
| Miami                      | ✓★                   |                    |                     |                    |            |              |                       |                       |
| Milwaukee                  |                      |                    |                     |                    |            |              |                       |                       |
| Minneapolis                | ✓                    | ✓★                 |                     | ✓                  | ✓          | ✓            | ✓                     |                       |
| Nashville                  | ✓                    |                    |                     |                    |            |              |                       |                       |
| New Orleans                | ✓                    |                    |                     |                    |            |              |                       |                       |
| New York                   | ✓                    |                    |                     | ✓                  | ✓          | ✓            | ✓                     | ✓                     |
| Oakland                    | ✓                    | ✓★                 |                     |                    |            | ✓            |                       |                       |
| Oklahoma City              | ✓                    |                    |                     | ✓★                 | ✓          |              |                       |                       |
| Omaha                      | ✓★                   |                    |                     |                    | ✓          |              |                       |                       |
| Philadelphia               | ✓★                   |                    | ✓★                  | ✓                  | ✓          |              | ✓                     |                       |
| Phoenix                    | ✓★                   | (2)                |                     |                    | ✓          |              |                       |                       |
| Portland, OR               | ✓                    | ✓                  | ✓★                  | ✓                  | ✓          | ✓            | ✓                     | ✓                     |
| Raleigh                    | ✓★                   |                    |                     |                    |            |              |                       |                       |
| Sacramento                 | ✓★                   |                    |                     |                    |            |              |                       |                       |
| San Antonio                | ✓★                   | (2)                | (2)                 | ✓★                 |            | ✓            |                       |                       |
| San Diego                  |                      |                    |                     |                    |            |              |                       |                       |
| San Francisco              | ✓                    |                    | ✓★                  | ✓★                 | ✓          | ✓            | ✓                     | ✓                     |
| San Jose                   | ✓                    | (2)                | ✓                   | (2)                |            | (2)          |                       |                       |
| Seattle                    | ✓                    | ✓                  | ✓★                  | ✓★                 | ✓          |              | ✓                     | ✓★                    |
| Tucson                     | ✓★                   | ✓                  |                     | ✓                  | ✓          |              |                       | ✓                     |
| Tulsa                      |                      |                    |                     |                    |            |              |                       |                       |
| Virginia Beach             |                      |                    |                     |                    |            |              |                       |                       |
| Washington, DC             | ✓                    |                    |                     |                    | ✓          | ✓            | ✓                     | ✓★                    |
| # of cities responding yes | 37                   | 10                 | 8                   | 16                 | 20         | 11           | 10                    | 9                     |
| Mean/Average               | Yes                  | No                 | No                  | No                 | No         | No           | No                    | No                    |

**Legend:**

- ✓ = Yes/has implemented innovative facility
- ★ = New since 2010 Benchmarking Report

**Source:** City surveys 2010/2011 **Notes:** Responses of "unknown" were taken to mean "no." (1) Unanswered survey. (2) Planned or proposed. (3) Under development at time of survey.

# Innovative Facilities Defined



**Shared lane markings**—Often called “sharrows,” these are markings which resemble a bicycle and an arrow painted on a roadway to indicate the direction of travel for bicycles as well as motorized vehicles.



**Bike box**—A pavement marking that utilizes two stop lines: an advanced stop line for motor vehicles, and a stop line closer to the intersection for bicyclists. This allows bicyclists to get a headstart when the light turns green to more safely proceed ahead or make a left turn.



**Bicycle boulevards**—A shared roadway which is intended to give priority to bicyclists by optimizing it for bicycle traffic (through traffic calming) and discouraging some motor vehicle traffic. Many of these routes have no bike lanes so bicyclists are allowed use of full lane.



**Cycle track**—An exclusive bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane.



**Home zones (woonerf zones)**—These streets are designated as “shared streets” and do not prioritize the needs of motor vehicles. Rather, it is a space where pedestrians and bicyclists are the priority and motor vehicles are kept at low speeds.



**Contra flow bike lane**—A designated bicycle lane marked to allow bicyclists to travel against the flow of traffic on a one-way street.



**Colored bike lanes**—Bike lanes which have special coloring to provide a distinct visual definition that the space is designated for bicyclists.

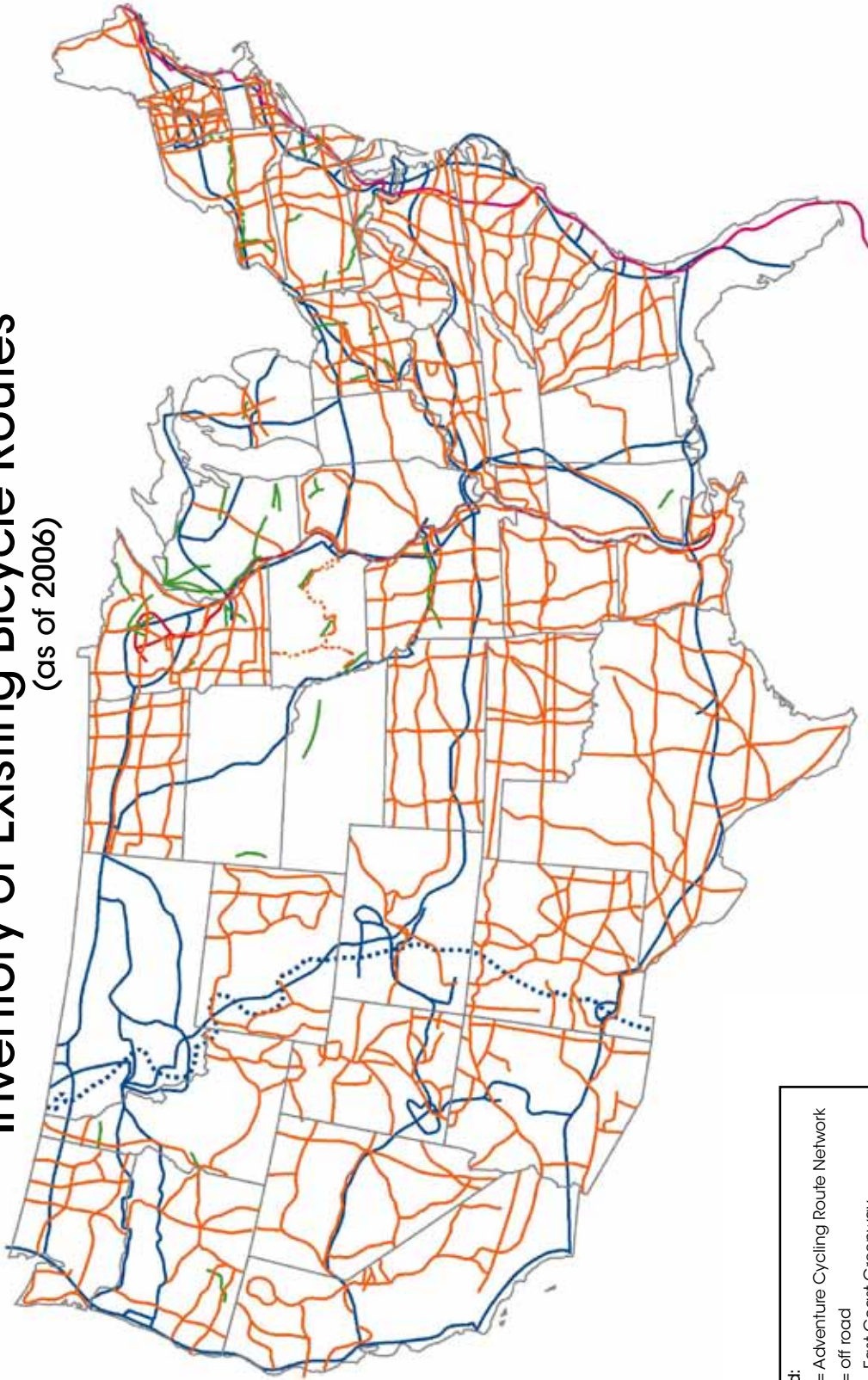


**Bicycle traffic light**—Lights on roadways which have specific bicycle symbols that illuminate to direct bicycle traffic.

Photos top to bottom: (left) John Luton, Payton Chung, La-Citta-Vita@Flickr, Tanya Dueri—San Francisco Bicycle Coalition (right) Alrthur Wendall, New York City DOT, John Luton, Roland Tanglao



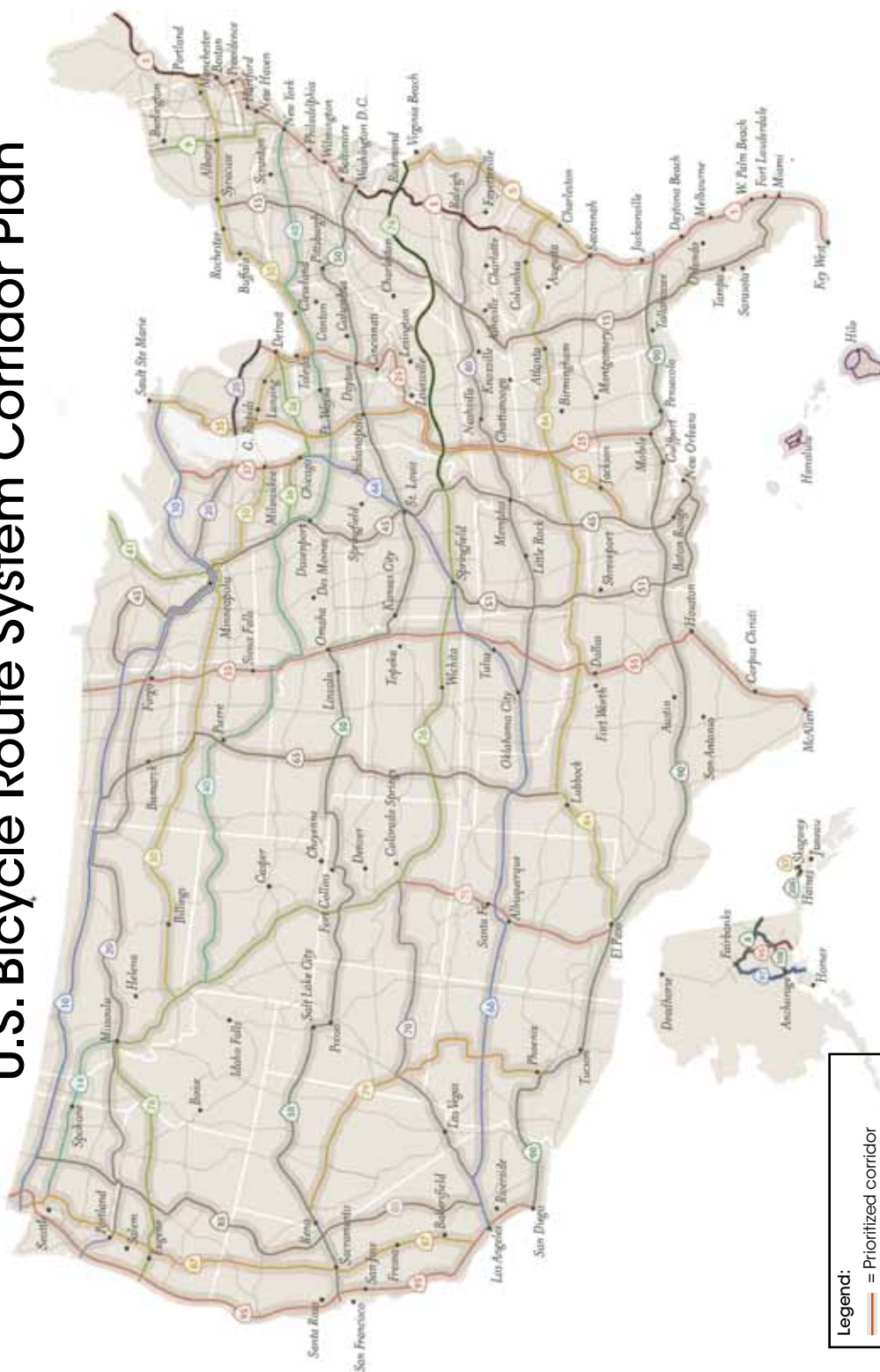
# Inventory of Existing Bicycle Routes (as of 2006)



- Legend:**
- = Adventure Cycling Route Network
  - ⋯ = off road
  - = East Coast Greenway
  - = Mississippi River Trail
  - = State and locally identified routes
  - = Rail trails (50+ miles)

**Source:** Adventure Cycling Association **Note:** The inventory of existing bicycle routes, developed in 2006, served as the base layer for creating the National Corridor Map, a system-level plan for states to use when planning and designating interstate bicycle routes. This map is current as of 2006.

# U.S. Bicycle Route System Corridor Plan



**Source:** Map courtesy of Adventure Cycling Association, September 2011 **Notes:** Prioritized corridors are not routes, but 50-mile-wide areas where a route may be developed. These corridors have been assigned route numbers. Alternate corridors provide additional consideration for interstate routing. These corridors have not been assigned route numbers but may be added or existing corridors shifted as needed. Established U.S. Bicycle Routes designated by AASHTO appear as defined lines on the Corridor Map. For specific route information visit [www.adventurecycling.org/routes/usbrs](http://www.adventurecycling.org/routes/usbrs).



# U.S. Bicycle Route Policy

| State                      | Active USBR program | USBRS recognized in state or local bike plan | One or more USBR(s) in state received official AASHTO designation | Has one or more signed USBRs |
|----------------------------|---------------------|--|---|------------------------------|
| Alabama                    |                     | ✓  |   |                              |
| Alaska                     | ✓                   |  | ✓   |                              |
| Arizona                    | ✓                   |  |   |                              |
| Arkansas                   |                     | ✓  |   |                              |
| California                 |                     |  |   |                              |
| Colorado                   |                     |  |   |                              |
| Connecticut                | ✓                   | ✓  |   |                              |
| Delaware                   | ✓                   | ✓  |   |                              |
| Florida                    | ✓                   | ✓  | ✓   |                              |
| Georgia                    | ✓                   | ✓  |   |                              |
| Hawaii                     |                     |  |   |                              |
| Idaho                      |                     |  |   |                              |
| Illinois                   | ✓                   | ✓  | ✓   |                              |
| Indiana                    |                     | ✓  |   |                              |
| Iowa                       | ✓                   | ✓  |   |                              |
| Kansas                     |                     |  |   |                              |
| Kentucky                   | ✓                   | ✓  | ✓   | ✓                            |
| Louisiana                  | ✓                   | ✓  |   |                              |
| Maine                      | ✓                   | ✓  | ✓   |                              |
| Maryland                   | ✓                   | ✓  |   |                              |
| Massachusetts              | ✓                   | ✓  |   |                              |
| Michigan                   | ✓                   | ✓  | ✓   |                              |
| Minnesota                  | ✓                   | ✓  |   |                              |
| Mississippi                | ✓                   |  |   |                              |
| Missouri                   | ✓                   | ✓  |   |                              |
| Montana                    |                     |  |   |                              |
| Nebraska                   |                     |  |   |                              |
| Nevada                     | ✓                   | ✓  |   |                              |
| New Hampshire              | ✓                   |  | ✓   |                              |
| New Jersey                 |                     |  |   |                              |
| New Mexico                 | ✓                   | ✓  |   |                              |
| New York                   | ✓                   | ✓  |   |                              |
| North Carolina             | ✓                   | ✓  | ✓   | ✓                            |
| North Dakota               | ✓                   | ✓  |   |                              |
| Ohio                       | ✓                   | ✓  |   |                              |
| Oklahoma                   |                     |  |   |                              |
| Oregon                     | ✓                   |  |   |                              |
| Pennsylvania               | ✓                   | ✓  |   |                              |
| Rhode Island               | ✓                   | ✓  |   |                              |
| South Carolina             |                     | ✓  |   |                              |
| South Dakota               | ✓                   | ✓  |   |                              |
| Tennessee                  | ✓                   | ✓  |   |                              |
| Texas                      |                     |  |   |                              |
| Utah                       |                     | ✓  |   |                              |
| Vermont                    |                     |  |   |                              |
| Virginia                   | ✓                   | ✓  | ✓   | ✓                            |
| Washington                 | ✓                   |  |   |                              |
| West Virginia              | ✓                   |  |   |                              |
| Wisconsin                  | ✓                   | ✓  |   |                              |
| Wyoming                    | ✓                   |  |   |                              |
| # of states responding yes | 34                  | 31   | 9   | 3                            |
| Mean/Average               | Yes                 | Yes  | No  | No                           |

Sources: Adventure Cycling Association October 2011  
 Photo: A rare duplex of US Bike Routes 1 and 76, in downtown Ashland, VA.  
 Photo by Will Weaver.

**Legend:**

✓ = Yes/has policy



Photo by Metro Cincinnati Metro Bus

## Most bus fleets in major cities are equipped for bicycles.

Forty-three cities report that 100% of their city buses are equipped with bicycle racks. This is up 43% from 2007 when just 30 cities reported that 100% of their buses had racks. New York remains the only major U.S. city with no bicycle racks on buses. Regarding bicycle parking at bus stops, cities average 1.3 bicycle parking spaces for every 10,000 residents. This is up 8% since the 2010 Benchmarking Report.

### Legend:

∅ = Not applicable  
 \* = Officials could not access data  
 ■ = High value   ■ = Low value

## Bike-Transit Integration

| City             | % of buses with bicycle racks | Hrs bikes allowed on trains/ hrs trains operated | Bike parking at transit                     |  |   |
|------------------|-------------------------------|--|---|--|---|
|                  |                               |  | # of bicycle parking spaces at bus stops(1) | Bike parking spaces per 10,000 people(1) | % of transit stops with bicycle parking |
| Albuquerque      | 100%                          | 105/105  | *   | *  | 100.0%                                  |
| Arlington, TX    | ∅                             | ∅  | *   | *  | ∅                                       |
| Atlanta          | 100%                          | 139.25/139.25                                    | *   | *  | *                                       |
| Austin           | 100%                          | 40/40  | 156   | 1.97                                     | 1.0%                                    |
| Baltimore        | 100%                          | 168/168  | *   | *  | *                                       |
| Boston           | 50%                           | 98/140   | 0   | 0.00                                     | *                                       |
| Charlotte        | 100%                          | 137/137  | 51  | 0.72                                     | *                                       |
| Chicago          | 100%                          | 148/168  | *   | *  | 92.0%                                   |
| Cleveland        | *                             | *  | 6   | 0.14                                     | *                                       |
| Colorado Springs | 100%                          | ∅  | 0   | 0.00                                     | *                                       |
| Columbus         | 100%                          | ∅  | 54  | 0.70                                     | 0.6%                                    |
| Dallas           | 100%                          | 140/140  | 15  | 0.12                                     | *                                       |
| Denver           | 99%                           | 168/168  | 682   | 11.17                                    | 15.0%                                   |
| Detroit          | 25%                           | *  | *   | *  | 0.0%                                    |
| El Paso          | 100%                          | *  | 74  | 1.19                                     | *                                       |
| Fort Worth       | 100%                          | 107.5/107.5                                      | 18  | 0.25                                     | 0.2%                                    |
| Fresno           | 100%                          | ∅  | 30  | 0.63                                     | 5.0%                                    |
| Honolulu         | 100%                          | ∅  | 18  | 0.48                                     | 0.5%                                    |
| Houston          | 95%                           | *  | 442   | 1.95                                     | 90.0%                                   |
| Indianapolis     | 100%                          | *  | *   | *  | *                                       |
| Jacksonville     | 100%                          | ∅  | 131   | 1.61                                     | 12.0%                                   |
| Kansas City, MO  | 98%                           | ∅  | 18  | 0.37                                     | 0.0%                                    |
| Las Vegas        | 100%                          | ∅  | *   | *  | *                                       |
| Long Beach       | 100%                          | 140/*  | 28  | 0.61                                     | *                                       |
| Los Angeles      | 100%                          | 130/150  | 272   | 0.71                                     | 83.5%                                   |
| Louisville       | 100%                          | ∅  | 0   | 0.00                                     | *                                       |
| Memphis          | 100%                          | 107/107  | 0   | 0.00                                     | 0.1%                                    |
| Mesa             | 100%                          | 100/100  | 0   | 0.00                                     | 60.0%                                   |
| Miami            | 100%                          | 113/113  | 0   | 0.00                                     | *                                       |
| Milwaukee        | 100%                          | 0/60   | *   | *  | *                                       |
| Minneapolis      | 100%                          | 168/168  | 301   | 7.81                                     | *                                       |
| Nashville        | 100%                          | 34/34  | 0   | 0.00                                     | 25.0%                                   |
| New Orleans      | 100%                          | ∅  | *   | *  | 1.0%                                    |
| New York         | 0%                            | 168/168  | 8   | 0.01                                     | 8.9%                                    |
| Oakland          | 100%                          | 120/140  | 0   | 0.00                                     | 92.0%                                   |
| Oklahoma City    | 100%                          | ∅  | 0   | 0.00                                     | *                                       |
| Omaha            | 100%                          | ∅  | *   | *  | 0.0%                                    |
| Philadelphia     | 100%                          | 103/133  | *   | *  | *                                       |
| Phoenix          | 100%                          | 140/140  | 54  | 0.34                                     | *                                       |
| Portland, OR     | 100%                          | 140/140  | 420   | 7.41                                     | 6.0%                                    |
| Raleigh          | 100%                          | ∅  | *   | *  | 0.5%                                    |
| Sacramento       | 100%                          | *  | *   | *  | *                                       |
| San Antonio      | 100%                          | ∅  | 8   | 0.06                                     | 0.8%                                    |
| San Diego        | 100%                          | 152/152  | 0   | 0.00                                     | *                                       |
| San Francisco    | 100%                          | 100/120  | 544   | 6.67                                     | *                                       |
| San Jose         | 100%                          | 145/145  | 259   | 2.68                                     | *                                       |
| Seattle          | 100%                          | 131/131  | 2,390                                       | 38.76                                    | *                                       |
| Tucson           | 100%                          | ∅  | 59  | 1.08                                     | *                                       |
| Tulsa            | 100%                          | ∅  | *   | *  | 1.0%                                    |
| Virginia Beach   | 100%                          | ∅  | *   | *  | 1.0%                                    |
| Washington, DC   | 100%                          | 105/135  | *   | *  | 100.0%(3)                               |
| Mean/Average     | 95%                           | 91%  | 173   | 2.5 (2)                                  | 26.8%                                   |
| Median           | 100%                          | 100%   | 18  | 0.3                                      | 3.0%                                    |
| High             | 100%                          | 100%   | 2,390                                       | 61.4                                     | 100.0%                                  |
| Low              | 0%                            | 0%   | 0   | 0.0                                      | 0.0%                                    |

Sources: City surveys 2010/2011 (1) APTA 2011 Note: (2) Average weighted. (3) 100% of rail stops have bike parking; percentage for bus stops unknown.





Children line up for a kids' bicycle race. Photo courtesy of Paul Dineen

# 5: EDUCATION AND ENCOURAGEMENT

## 2 of the "5 Es"

**E**ducation and encouragement are two of the often cited "5 Es" needed for making a community bicycle and pedestrian friendly. Both bicyclists and motorists need education on how to safely share the road and navigate traffic. Wide-spread education efforts can contribute to safer roadways for all. Encouragement is also needed to promote the spread of bicycling and walking as means of transport, recreation, and physical activity.

The 2010 Benchmarking Report was the first to establish benchmarks for bicycle and pedestrian education and encouragement efforts. Many states and cities

have implemented programs and events with these aims but have had no way to evaluate their success compared to others. This report builds on data from the previous report to track progress of these efforts.

### The "5 Es"

1. Engineering
2. **Education**
3. **Encouragement**
4. Enforcement
5. Evaluation

## Educating Professionals

This report measured education efforts in two areas: professional education and public education. The first refers to the education professionals receive that contributes to the promotion and safety of bicycling and walking. Included is

# Bike/Ped Professional Education in States

| State                      | Bicycling enforcement police academy requirement | Bicycling enforcement police continuing training | Annual statewide bike/ped conference (1) |
|----------------------------|--|--|--|
| Alabama                    |  | ✓  |  |
| Alaska                     |  |  |  |
| Arizona                    |  | ✓  |  |
| Arkansas                   |  |  |  |
| California                 | ✓  | ✓  | ✓ (3)                                    |
| Colorado                   |  |  | ✓ ★ (2,4)                                |
| Connecticut                |  | ✓  |  |
| Delaware                   |  |  | ✓ (2)                                    |
| Florida                    |  | ✓  | ✓ (5)                                    |
| Georgia                    |  | ✓  | ✓ ★ (2)                                  |
| Hawaii                     |  |  |  |
| Idaho                      |  |  |  |
| Illinois                   | ✓  | ✓  |  |
| Indiana                    | ✓  | ✓  | ✓ (2)                                    |
| Iowa                       | ✓  | ✓  | ✓ (2)                                    |
| Kansas                     |  | ✓  | ✓ ★                                      |
| Kentucky                   | ✓  | ✓  | ✓ ★                                      |
| Louisiana                  | ✓  | ✓  |  |
| Maine                      |  | ✓  | ✓  |
| Maryland                   |  | ✓  | ✓  |
| Massachusetts              | ✓  | ✓  | ✓  |
| Michigan                   |  | ✓  | ✓ (2)                                    |
| Minnesota                  |  | ✓  | ✓ (2)                                    |
| Mississippi                | ✓  |  |  |
| Missouri                   | ✓  | ✓  | (7)                                      |
| Montana                    |  |  |  |
| Nebraska                   |  | ✓  |  |
| Nevada                     |  | ✓  | ✓  |
| New Hampshire              | ✓  |  |  |
| New Jersey                 | ✓  |  | ✓ ★                                      |
| New Mexico                 |  | ✓  |  |
| New York                   |  | ✓  |  |
| North Carolina             |  | ✓  |  |
| North Dakota               |  |  |  |
| Ohio                       | ✓  | ✓  | ✓ ★                                      |
| Oklahoma                   |  | ✓  |  |
| Oregon                     | ✓  | ✓  | ✓ ★                                      |
| Pennsylvania               |  | ✓  | ✓ ★                                      |
| Rhode Island               | ✓  | ✓  | ✓ ★                                      |
| South Carolina             | ✓  | ✓  | (7)                                      |
| South Dakota               |  |  | ✓ ★ (2)                                  |
| Tennessee                  |  | ✓  |  |
| Texas                      | ✓  | ✓  | ✓ ★ (3)                                  |
| Utah                       |  | ✓  | ✓ ★ (2)                                  |
| Vermont                    | ✓  |  |  |
| Virginia                   |  | ✓  |  |
| Washington                 | ✓  | ✓  | ✓ ★ (3,6)                                |
| West Virginia              |  | ✓  | (7)                                      |
| Wisconsin                  | ✓  | ✓  | ✓ (3)                                    |
| Wyoming                    | ✓  |  |  |
| # of states responding yes | 20   | 36   | 25                                       |
| Mean/Average               | No   | Yes  | ø  |

## Professional education on bicycling and walking is growing.

Twenty states (40%) report that bicycling enforcement is a police academy requirement. This is up from just 11 states as of the 2010 Benchmarking Report. Twenty-five states report having a statewide bicycle and pedestrian conference (up from 16).

**Sources:** State surveys 2010/2011, LAB 2011

**Notes:** (1) Statewide bike/ped conference refers to an educational and networking event that brings together professionals working on bicycle and pedestrian issues including government officials, planners, educators, and advocates. (2) Bicycle conference only. (3) Biennial. (4) Hosted by Bicycle Colorado. (5) Annual conference 2005-2010; is not planned for 2011 because of budget cuts; may be reconsidered in future. (6) Trails conference includes bicycle and pedestrian issues. (7) Former conference no longer active.

### Legend:

✓ = Yes

ø = Not applicable

★ = New since 2010 Benchmarking Report

the education of police officers in bicycle laws and safety and the education of government employees and other professionals working to promote, plan, and implement policies and provisions for bicycling and walking.

## Police Training

Police officers without training in bicycle laws may not understand or uphold bicyclists' or pedestrians' rights in traffic crashes, incorrectly stop or ticket bicyclists, or set a bad example of the law for other motorists. Education of law enforcement in bicycle safety and laws pertaining to bicycling is critical to furthering bicycling safety and rights.

Data on police officer education come from the League of American Bicyclists' Bicycle Friendly State surveys. According to these surveys, 20 include bicycling enforcement as a Police Academy requirement and 36 states include bicycling enforcement in their police continuing education training.

## Bicycle and Pedestrian Conferences

Bicycle and pedestrian professionals need opportunities for continuing edu-

cation, networking, and collaboration to further their work and profession. Many states now hold annual bicycle and pedestrian conferences or summits that provide bicycle and pedestrian professionals an opportunity for learning, networking, and planning. Sixteen states report having hosted a statewide bicycle and pedestrian conference and another nine have hosted a statewide bicycle conference. Of these, 21 are annual and four are biennial. Colorado and Texas noted that their conferences are coordinated by statewide advocacy organizations.

## Educating the Public

Educating the public is a critical component of creating bicycling and walking friendly communities. From street-side messages of share-the-road campaigns to driver's test questions, states and cities are working to promote the safety of the most vulnerable road users. For this section we relied on data from state surveys, the League of American Bicyclists' Bicycle Friendly States Program, and the National Center for Safe Routes to School. State benchmarks include whether states have a public safety (or

(Continued page 115)

A Kansas City bus wrapped with a "Bike there, walk there" advertisement.  
Photo courtesy of Mid-America Regional Council, Kansas City, MO





# Public Education and Events in States

| State                      | Share the Road/<br>public safety campaign | Info on bicycling in driver's manual | Driver's test questions on bicycling | State-sponsored ride to promote bicycling/activity | # of schools participating in Walk to School Day |
|----------------------------|---|--------------------------------------|--------------------------------------|--|--|
| Alabama                    |   | ✓                                    |                                      |  | 23   |
| Alaska                     | ✓   | ✓                                    | ✓                                    |  | 9  |
| Arizona                    | ✓   | ✓                                    | ✓                                    |  | 116  |
| Arkansas                   |   |                                      |                                      |  | 9  |
| California                 |   | ✓                                    |                                      | ✓  | 429  |
| Colorado                   | ✓   | ✓                                    | ✓                                    |  | 215  |
| Connecticut                | ✓   | ✓                                    | ✓                                    |  | 17   |
| Delaware                   | ✓   | ✓                                    |                                      | ✓  | 10   |
| Florida                    | ✓   | ✓                                    | ✓                                    | ✓  | 225  |
| Georgia                    | ✓   | ✓                                    |                                      |  | 111  |
| Hawaii                     | ✓   | ✓                                    | ✓                                    |  | 1  |
| Idaho                      | ✓   | ✓                                    |                                      |  | 47   |
| Illinois                   | ✓   | ✓                                    | ✓                                    |  | 186  |
| Indiana                    | ✓   | ✓                                    | ✓                                    |  | 28   |
| Iowa                       | ✓   | ✓                                    | ✓                                    |  | 41   |
| Kansas                     | ✓   | ✓                                    |                                      | ✓  | 56   |
| Kentucky                   | ✓   | ✓                                    |                                      | ✓  | 12   |
| Louisiana                  | ✓   | ✓                                    | ✓                                    |  | 28   |
| Maine                      | ✓   | ✓                                    | ✓                                    |  | 7  |
| Maryland                   | ✓   | ✓                                    | ✓                                    | ✓  | 81   |
| Massachusetts              | ✓   | ✓                                    | ✓                                    | ✓  | 147  |
| Michigan                   |   | ✓                                    |                                      |  | 164  |
| Minnesota                  | ✓   | ✓                                    | ✓                                    | ✓  | 27   |
| Mississippi                | ✓   | ✓                                    | ✓                                    |  | 130  |
| Missouri                   |   | ✓                                    | ✓                                    | ✓  | 44   |
| Montana                    |   | ✓                                    |                                      | *  | 27   |
| Nebraska                   |   | ✓                                    | ✓                                    |  | 27   |
| Nevada                     | ✓   | ✓                                    | ✓                                    |  | 37   |
| New Hampshire              | ✓   | ✓                                    | ✓                                    | ✓  | 18   |
| New Jersey                 | ✓   | ✓                                    |                                      |  | 80   |
| New Mexico                 |   | ✓                                    | ✓                                    | *  | 78   |
| New York                   | ✓   | ✓                                    |                                      |  | 81   |
| North Carolina             | ✓   | ✓                                    | ✓                                    |  | 84   |
| North Dakota               |   | ✓                                    |                                      |  | 6  |
| Ohio                       | ✓   | ✓                                    |                                      | ✓  | 108  |
| Oklahoma                   | ✓   | ✓                                    | ✓                                    |  | 85   |
| Oregon                     | ✓   | ✓                                    |                                      |  | 164  |
| Pennsylvania               |   | ✓                                    |                                      |  | 58   |
| Rhode Island               | ✓   | ✓                                    | ✓                                    | ✓  | 18   |
| South Carolina             | ✓   | ✓                                    | ✓                                    |  | 129  |
| South Dakota               |   | ✓                                    | ✓                                    | ✓  | 7  |
| Tennessee                  | ✓   | ✓                                    |                                      | ✓  | 49   |
| Texas                      | ✓   | ✓                                    | ✓                                    |  | 84   |
| Utah                       | ✓   | ✓                                    | ✓                                    |  | 31   |
| Vermont                    | ✓   | ✓                                    | ✓                                    |  | 20   |
| Virginia                   | ✓   | ✓                                    | ✓                                    | ✓  | 54   |
| Washington                 | ✓   | ✓                                    | ✓                                    | ✓  | 31   |
| West Virginia              |   | ✓                                    |                                      |  | 32   |
| Wisconsin                  | ✓   | ✓                                    | ✓                                    |  | 59   |
| Wyoming                    | ✓   | ✓                                    | ✓                                    | ✓  | 6  |
| # of states responding yes | 38  | 49                                   | 32                                   | 17   | ∅  |
| Mean/Average               | Yes                                       | Yes                                  | Yes                                  | No   | 71   |

**Legend:**

✓ = Yes  
 ∅ = Not applicable  
 \* = Officials could not access data

Sources: State surveys 2010/2011, LAB 2011, National Center for Safe Routes to School 2011



# Bicycle Promotion in Cities

84% of cities report having Bike to Work Day events.

| City                       | Bicycle education courses |                   | Bike to Work Day events | Open street initiatives <sup>(4)</sup> | City-sponsored bicycle ride | Public bike share program |
|----------------------------|---------------------------|-------------------|-------------------------|--|-----------------------------|---------------------------|
|                            | Youth                     | Adult             |                         |  |                             |                           |
| Albuquerque                | ✓★                        | ✓★                | ✓★                      | ✓★                                     |                             | (1)                       |
| Arlington, TX              | ✓★ <sup>(3)</sup>         | ✓★ <sup>(3)</sup> | ✓★                      |  |                             |                           |
| Atlanta                    | (2)                       | ✓                 | ✓                       | ✓★                                     |                             |                           |
| Austin                     | ✓★                        | ✓                 | ✓                       | (1)                                    | *                           | (1)                       |
| Baltimore                  | (1,2)                     | (1)               | ✓                       | ✓                                      | ✓                           | (1)                       |
| Boston                     | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| Charlotte                  | ✓                         | ✓                 | ✓                       |  | ✓                           |                           |
| Chicago                    | ✓                         | ✓★                | ✓                       | (5)                                    | ✓★                          | ✓                         |
| Colorado Springs           | *                         | ✓                 | ✓                       |  | ✓★                          |                           |
| Columbus                   | ✓                         | ✓                 | ✓                       |  | ✓                           |                           |
| Dallas                     | ✓★                        | ✓                 |                         |  | ✓                           | (1)                       |
| Denver                     | ✓                         | ✓★                | ✓                       | (1)                                    | ✓                           | ✓                         |
| El Paso                    |                           |                   |                         | ✓★                                     | ✓★                          | (1)                       |
| Fort Worth                 | ✓★                        |                   | ✓★                      |  |                             | (1)                       |
| Fresno                     | ✓                         | ✓★                | ✓                       |  | ✓★                          |                           |
| Honolulu                   | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| Houston                    | ✓                         | ✓                 | ✓                       |  | ✓                           | (1)                       |
| Jacksonville               | ✓★                        | ✓★                | ✓★                      |  |                             |                           |
| Kansas City, MO            | ✓                         | ✓                 | ✓                       | ✓                                      | ✓★                          | (1)                       |
| Las Vegas                  | ✓★                        |                   |                         |  |                             |                           |
| Long Beach                 | ✓                         | ✓                 | ✓★                      | ✓                                      | ✓                           | (1)                       |
| Los Angeles                | ✓★                        | ✓                 | ✓                       | ✓★                                     |                             | (1)                       |
| Louisville                 | ✓                         | ✓                 | ✓                       | ✓★                                     | ✓                           | (1)                       |
| Memphis                    | ✓★                        | ✓                 | ✓★                      |  | ✓                           |                           |
| Mesa                       | ✓                         |                   | ✓                       |  | ✓                           | (1)                       |
| Miami                      |                           | ✓                 | *                       | ✓                                      | ✓★                          | (1)                       |
| Milwaukee                  | ✓                         | ✓                 | ✓★                      |  | *                           |                           |
| Minneapolis                | ✓                         | ✓                 | ✓                       |  | ✓                           | ✓                         |
| Nashville                  |                           |                   | ✓                       |  | ✓                           | ✓                         |
| New Orleans                | ✓★                        | ✓★                |                         |  |                             |                           |
| New York                   | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| Oakland                    | ✓                         | ✓                 | ✓                       | ✓★                                     | ✓★                          |                           |
| Oklahoma City              |                           | ✓                 | ✓                       |  |                             | (1)                       |
| Omaha                      | ✓                         | ✓                 | ✓                       |  | ✓                           | (1)                       |
| Philadelphia               | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| Phoenix                    |                           | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| Portland, OR               | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| Raleigh                    |                           |                   | ✓                       |  | ✓★                          | (1)                       |
| Sacramento                 | ✓★                        | ✓★                | ✓★                      |  | ✓★                          | (1)                       |
| San Antonio                | ✓★                        | ✓★                | ✓★                      | (1)                                    | ✓★                          | (1)                       |
| San Diego                  | ✓                         | ✓                 | ✓                       |  | *                           | (1)                       |
| San Francisco              | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | (1)                       |
| San Jose                   | ✓                         | ✓                 | ✓                       | ✓★                                     | ✓                           | (1)                       |
| Seattle                    | ✓                         | ✓                 | ✓                       | ✓                                      |                             | (1)                       |
| Tucson                     | ✓                         | ✓                 | ✓                       | ✓★                                     |                             |                           |
| Tulsa                      | ✓★                        | ✓★                | ✓                       | *                                      | *                           | *                         |
| Virginia Beach             |                           | ✓★                | ✓                       |  |                             |                           |
| Washington, DC             | ✓                         | ✓                 | ✓                       | ✓                                      | ✓                           | ✓                         |
| # of cities responding yes | 38                        | 41                | 43                      | 21                                     | 32                          | 5                         |
| Mean/Average               | Yes                       | Yes               | Yes                     | No                                     | Yes                         | No                        |

**Legend:**

✓ = Yes

∅ = Not applicable

\* = Officials could not access data

 ★ = New since 2010  
Benchmarking Report

Source: City surveys 2010/2011 Notes: Cleveland, Detroit, and Indianapolis did not provide data requested for this chart. (1) In development. (2) Previous education program lost funding and agency is working on reinstating. (3) New in 2011. (4) Open streets are events where streets are temporarily closed to cars and are also known as "ciclovias," "Sunday parkways," and by other names. (5) Initiative no longer in operation or is currently inactive.

"Share the Road") campaign, whether states include driver's manual and driver's test information on bicyclists, and the number of schools participating in National Walk and Bike to School Day, and whether a state has a state-sponsored ride to promote bicycling or physical activity (and how many participants). City education benchmarks include the presence of youth and adult bicycle education courses and participation levels in these courses.

### Share the Road Campaigns

"Share the Road" is perhaps the most common slogan used in bicycle education. Share the Road campaigns are widespread and can take many forms. Many states have Share the Road signs on roadways. Others have Share the Road bumper stickers. Some states have sophisticated campaigns with public service announcements including ads on buses, billboards, radio, and television. The basic message is always the same, encouraging bicyclists and motorists to obey traffic laws and show respect to other road users. Thirty-eight states report having a Share the Road or similar public safety campaign.

### Driver Education

Driver education is a unique opportunity to instill knowledge about traffic laws and safety that individuals will use to form habits for years to come. The League of American Bicyclists' Bicycle Friendly State surveys collect information from states on whether information on bicycling is included in the state driver's manual and whether questions on sharing the roadway with bicyclists are included on the state driver's exam. Arkansas is the only state that does not include information on

bicycling in its state driver's manual. Thirty-two states include driver's test questions on bicyclists.

### Bicycle Education

Although nearly everyone must have some form of driver's education before receiving a license, there is no education requirement to ride a bicycle. Yet having knowledge and skills to properly handle a bicycle in traffic can improve safety for bicyclists and make them better motorists. Bicycle education teaches youth and adults the rules of the road, how to properly handle a bicycle in traffic, and how to respectfully share the road with other users.

The Alliance survey on youth and adult bicycle education courses reveals that 41 cities (80% of cities surveyed, up from 35 cities 2 years ago) have adult bicycle education courses, and 38 cities

(Continued page 120)



# Adult Bicycle Education Courses

| City             | Participation - # of adults |      |      |       |       | # adults per 1 participant |              |              |              |              |
|------------------|-----------------------------|------|------|-------|-------|----------------------------|--------------|--------------|--------------|--------------|
|                  | 2006                        | 2007 | 2008 | 2009  | 2010  | 2006                       | 2007         | 2008         | 2009         | 2010         |
| Atlanta          | *                           | 110  | 274  | 116   | 101   | *                          | 3,106        | 1,247        | 3,694        | 4,243        |
| Austin           | 50                          | 50   | 80   | ø     | 108   | 11,545                     | 11,545       | 7,215        | ø            | 5,696        |
| Baltimore        | *                           | *    | 30   | (1)   | (1)   | *                          | *            | 16,149       | ø            | ø            |
| Boston           | *                           | *    | 200  | *     | *     | *                          | *            | 2,483        | *            | *            |
| Colorado Springs | *                           | 12   | 20   | *     | *     | *                          | 24,343       | 14,606       | *            | *            |
| Chicago          | *                           | *    | *    | *     | 200   | *                          | *            | *            | *            | 10,910       |
| Columbus         | 30                          | 30   | 30   | 150   | 200   | 18,569                     | 18,569       | 18,569       | 3,962        | 2,972        |
| Dallas           | -                           | 66   | 124  | 300   | 300   | *                          | 13,716       | 7,300        | 3,188        | 3,188        |
| Denver           | *                           | *    | *    | 39    | 64    | *                          | *            | *            | 12,057       | 7,347        |
| Fresno           | *                           | *    | *    | 18    | 30    | *                          | *            | *            | 18,475       | 11,085       |
| Houston          | 300                         | 400  | 600  | *     | *     | 5,049                      | 3,787        | 2,524        | *            | *            |
| Indianapolis     | *                           | *    | 30   | *     | *     | *                          | -            | 19,297       | *            | *            |
| Kansas City, MO  | *                           | 120  | *    | 0     | 118   | *                          | 2,754        | -            | ø            | 3,126        |
| Long Beach       | *                           | 16   | 70   | *     | *     | *                          | 20,910       | 4,779        | *            | *            |
| Los Angeles      | *                           | *    | *    | 351   | 135   | *                          | *            | *            | 8,260        | 21,477       |
| Louisville       | 60                          | 120  | 60   | 50    | 50    | 7,111                      | 3,556        | 7,111        | 8,659        | 8,659        |
| Memphis          | *                           | *    | *    | 300   | 400   | *                          | *            | *            | 1,644        | 1,233        |
| Miami            | 16                          | -    | 17   | *     | *     | 17,441                     | *            | 16,415       | *            | *            |
| Milwaukee        | 10                          | 20   | 25   | 100   | 200   | 41,919                     | 20,959       | 16,768       | 4,436        | 2,218        |
| Minneapolis      | *                           | *    | 335  | 1,707 | 1,678 | *                          | *            | 849          | 178          | 181          |
| Nashville        | 30                          | 30   | 30   | (1)   | (1)   | 15,229                     | 15,229       | 15,229       | ø            | ø            |
| New Orleans      | *                           | *    | *    | 0     | 20    | *                          | *            | *            | ø            | 13,928       |
| New York         | 101                         | 429  | 945  | 1,307 | 1,785 | 63,083                     | 14,852       | 6,742        | 4,974        | 3,642        |
| Oakland          | *                           | 35   | 114  | 114   | 137   | *                          | 7,997        | 2,455        | 2,807        | 2336         |
| Omaha            | 10                          | *    | *    | 20    | 25    | 28,076                     | -            | -            | 16,808       | 13,447       |
| San Francisco    | 250                         | 300  | 389  | 1,000 | 1,000 | 2,632                      | 2,193        | 1,691        | 698          | 698          |
| San Jose         | 200                         | 200  | 200  | 250   | 200   | 3,505                      | 3,505        | 3,505        | 2,878        | 3,598        |
| Seattle          | *                           | *    | *    | 1,000 | 1,000 | *                          | *            | *            | 524          | 524          |
| Tucson           | 400                         | 400  | 500  | 562   | *     | 1,000                      | 1,000        | 800          | 738          | *            |
| Virginia Beach   | *                           | *    | *    | 0     | 20    | *                          | *            | *            | ø            | 16,378       |
| Washington, DC   | *                           | *    | *    | 434   | 893   | *                          | *            | *            | 1,120        | 544          |
| Mean/Average     | 121                         | 146  | 204  | 372   | 394   | 8,773<br>(2)               | 6,230<br>(2) | 4,016<br>(2) | 2,345<br>(2) | 2,391<br>(2) |
| Median           | 55                          | 88   | 97   | 150   | 169   | 13,387                     | 9,771        | 6,927        | 3,441        | 3,620        |
| High             | 400                         | 429  | 945  | 1,707 | 1,785 | 63,083                     | 24,343       | 19,297       | 18,475       | 21,477       |
| Low              | 10                          | 12   | 17   | 0     | 20    | 1,000                      | 1,000        | 800          | 178          | 181          |

Source: City surveys 2008/2009 and 2010/2011 Notes: The following cities reported having adult bicycle education courses in at least one year, but did not provide data on participation: Albuquerque, Arlington, TX, Charlotte, Fort Worth, Honolulu, Jacksonville, Oklahoma City, Philadelphia, Phoenix, Portland, OR, Sacramento, San Antonio, San Diego, and Tulsa. All other cities not included in this table reported no adult bicycle education courses. (1) This city reports no longer having adult bicycle education courses. (2) Weighted average.

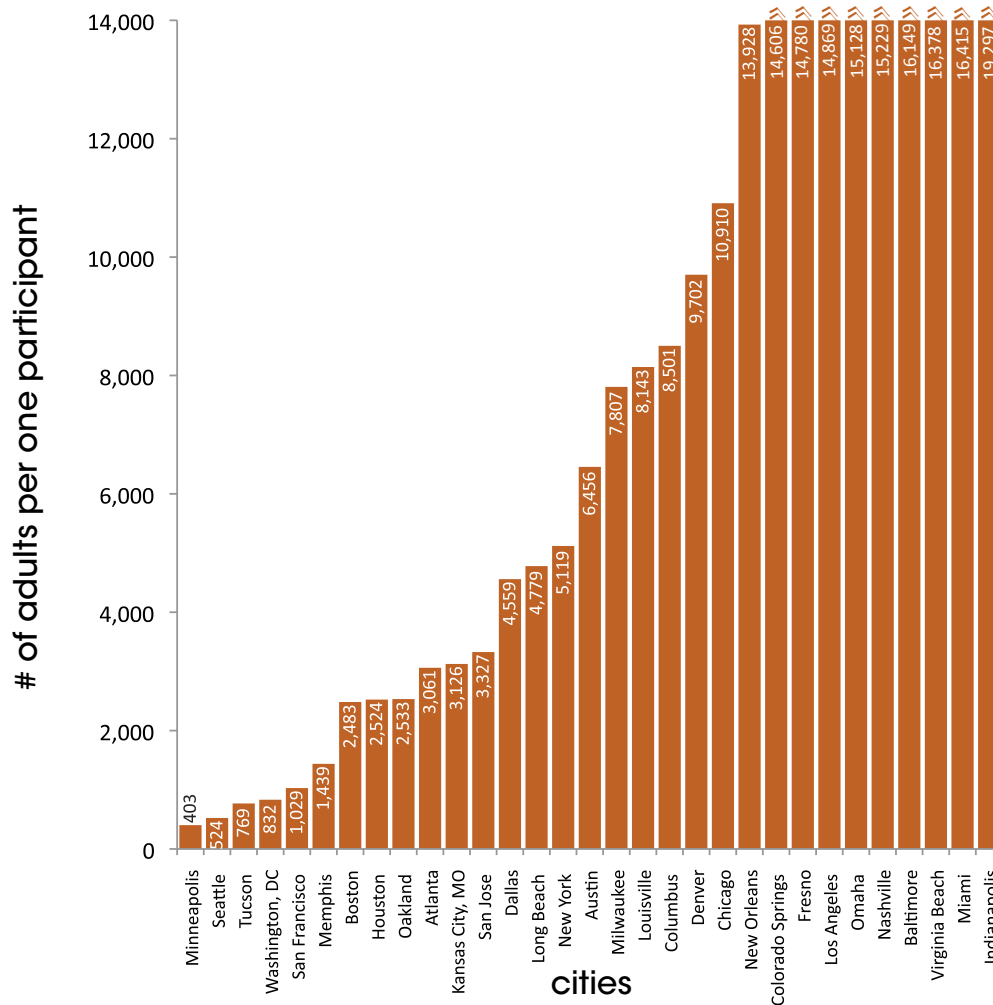
## Legend:

- \* = Officials could not access data
- ø = Not applicable
- = High value
- = Low value

**Adult bicycle education participation has grown 267% in the last 4 years.**

Forty-one of the cities surveyed for this report say their city has adult bicycle education courses. Since 2006, participation in these courses has been on the rise with the average number of participants increasing 267% in just four years. In 2010 these courses attracted an average of one person per 2,391 adults.

## Adult Bicycle Education: Adults Per One Participant



**Source:** City surveys 2008/2009 and 2010/2011, ACS 2009 **Notes:** 3-year average data between 2008 and 2010 used with the following exceptions: 1-year data used for: Baltimore, Boston, Chicago, Colorado Springs, Houston, Indianapolis, Kansas City, MO, Long Beach, Miami, Nashville, New Orleans, Virginia Beach; 2-year average used for: Austin, Denver, Fresno, Los Angeles, Memphis, Omaha, Seattle, Tucson, Washington, DC. The following cities reported having adult bicycle education courses in at least one year, but did not provide data on participation: Albuquerque, Arlington, Charlotte, Fort Worth, Honolulu, Jacksonville, Oklahoma City, Philadelphia, Phoenix, Portland, Sacramento, San Antonio, San Diego, Tulsa. All other cities not included in this table reported no adult bicycle education courses.

One out of every 403 Minneapolis adults was a bicycle education participant, on average, between 2008-2010. Seattle, Tucson, and Washington, DC, also rank among the cities with the highest levels of participation in adult bicycle education courses.

**Minneapolis leads cities for adult bicycle education participation.**



# Youth<sup>(3)</sup> Bicycle Education Courses

| City           | Participation - # of youth |        |        |        |        | # of youth per one participant |        |        |        |        |
|----------------|----------------------------|--------|--------|--------|--------|--------------------------------|--------|--------|--------|--------|
|                | 2006                       | 2007   | 2008   | 2009   | 2010   | 2006                           | 2007   | 2008   | 2009   | 2010   |
| Albuquerque    | *                          | *      | *      | 10,000 | 10,000 | *                              | *      | *      | 13     | 13     |
| Atlanta        | *                          | 300    | 34     | (1)    | (1)    | *                              | 303    | 2,671  | ø      | ø      |
| Austin         | *                          | *      | *      | 1,500  | 1,000  | *                              | *      | *      | 117    | 175    |
| Boston         | *                          | *      | 300    | 800    | 2,600  | *                              | *      | 388    | 139    | 43     |
| Chicago        | *                          | *      | *      | *      | 1,200  | *                              | *      | *      | *      | 557    |
| Columbus       | 3,800                      | 4,200  | 4,500  | 4,000  | 4,000  | 46                             | 42     | 39     | 45     | 45     |
| Dallas         | *                          | *      | *      | 15     | 30     | *                              | *      | *      | 22,879 | 11,439 |
| Honolulu       | 5,000                      | 5,000  | 5,000  | 5,000  | 5,000  | 12                             | 12     | 12     | 13     | 13     |
| Houston        | *                          | *      | 2,050  | *      | *      | *                              | *      | 260    | *      | *      |
| Long Beach     | ø                          | ø      | 2,070  | *      | *      | ø                              | ø      | 60     | *      | *      |
| Los Angeles    | *                          | *      | *      | 7,851  | 2,427  | *                              | *      | *      | 119    | 384    |
| Louisville     | 30                         | 60     | 60     | 0      | 25     | 4,491                          | 2,246  | 2,246  | ø      | 5,341  |
| Memphis        | *                          | *      | *      | 75     | 100    | *                              | *      | *      | 2,445  | 1,834  |
| Mesa           | *                          | *      | *      | 200    | 600    | *                              | *      | *      | 611    | 204    |
| Milwaukee      | 500                        | 800    | 1,025  | 4,500  | 5,000  | 326                            | 204    | 159    | 36     | 32     |
| Minneapolis    | 125                        | 150    | 180    | 1,126  | 729    | 534                            | 445    | 371    | 72     | 112    |
| Nashville      | 250                        | 500    | 1,000  | (1)    | (1)    | 546                            | 273    | 136    | ø      | ø      |
| New Orleans    | *                          | *      | *      | 0      | 50     | *                              | *      | *      | ø      | 1,526  |
| New York       | *                          | 658    | 857    | 4,410  | 7,241  | ø                              | 2,892  | 2,221  | 429    | 261    |
| Oakland        | 520                        | 673    | 613    | 983    | 1,469  | 152                            | 117    | 129    | 91     | 61     |
| Omaha          | 1,000                      | 1,000  | 1,000  | (1)    | (1)    | 94                             | 94     | 94     | ø      | ø      |
| Portland, OR   | *                          | *      | *      | 2,558  | 1,315  | *                              | *      | *      | 44     | 85     |
| Sacramento     | *                          | *      | *      | 4,000  | 4,000  | *                              | *      | *      | 30     | 30     |
| San Francisco  | *                          | 2000   | 3000   | *      | *      | *                              | 54     | 36     | *      | *      |
| San Jose       | 25,000                     | 25,000 | 25,000 | 22,008 | 19,967 | 9                              | 9      | 9      | 11     | 12     |
| Seattle        | *                          | *      | *      | 19,500 | 20,600 | *                              | *      | *      | 5      | 4      |
| Tucson         | *                          | *      | *      | 875    | *      | *                              | *      | *      | 148    | *      |
| Washington, DC | *                          | *      | *      | 5,608  | 2,389  | *                              | *      | *      | 20     | 48     |
| Mean/Average   | 4,466                      | 3,337  | 2,917  | 4,524  | 4,273  | 31 (2)                         | 80 (2) | 88 (2) | 58 (2) | 67 (2) |
| Median         | 520                        | 737    | 1,000  | 2,558  | 2,389  | 152                            | 161    | 148    | 72     | 85     |
| High           | 25,000                     | 25,000 | 25,000 | 22,008 | 20,600 | 4,491                          | 2,892  | 2,671  | 22,289 | 11,439 |
| Low            | 30                         | 60     | 34     | 0      | 25     | 9                              | 9      | 9      | 5      | 4      |

**Source:** City surveys 2008/2009 and 2010/2011 **Notes:** The following cities reported having youth bicycle education courses in at least one year, but did not provide data on participation: Arlington, TX, Baltimore, Charlotte, Denver, Fort Worth, Fresno, Indianapolis, Jacksonville, Kansas City, MO, Las Vegas, Philadelphia, San Antonio, San Diego, Tulsa, and Virginia Beach. All other cities not included in this table reported no youth bicycle education courses. (1) This city reports no longer having youth bicycle education courses. (2) Weighted average. (3) "Youth" includes all residents under age 18.

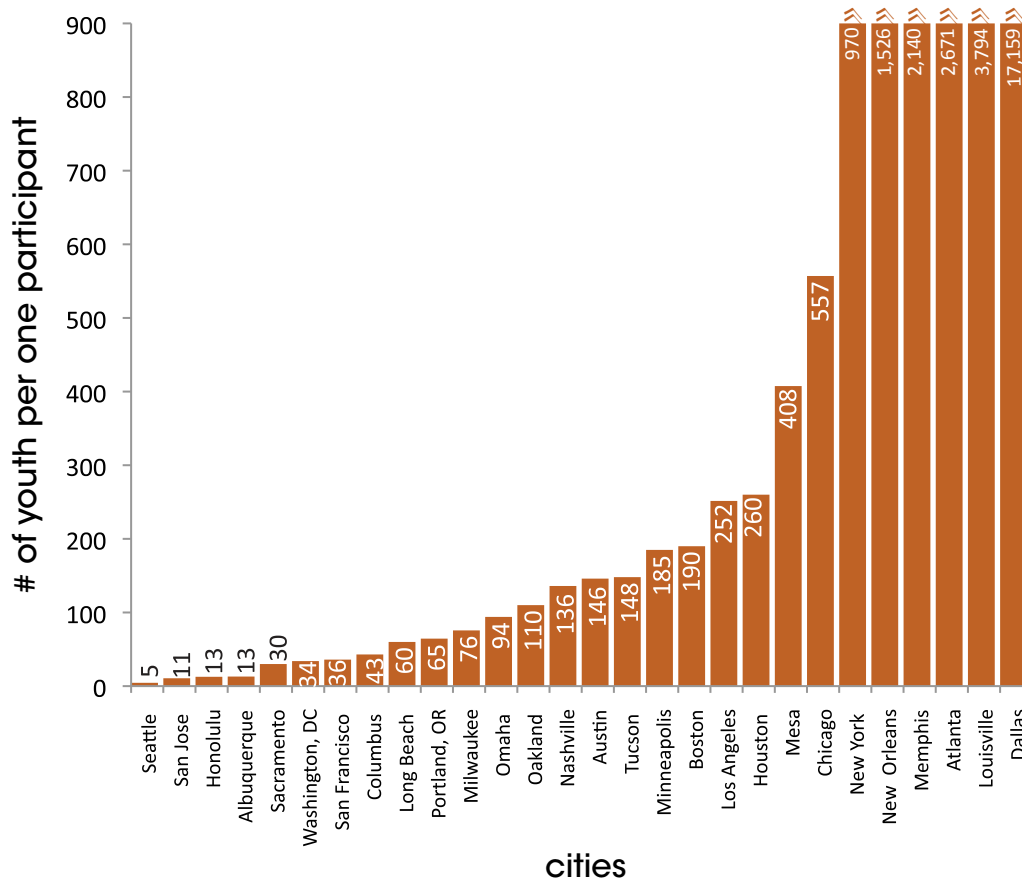
## Legend:

- \* = Officials could not access this data
- ø = Not applicable
- Dark Blue = High value
- Light Blue = Low value

One of every 67  
youth participate  
in bicycle  
education  
courses in major  
U.S. cities.

Thirty-seven of the cities surveyed for this report have youth bicycle education courses. On average, 1 out of 67 youth (under age 18) attend a youth bicycle education course in these cities (in 2010). Seattle has the high value for youth bicycle participation in 2010 with 20,600 participants. One of every four Seattle youth participated in bicycle education in 2010.

## Youth<sup>(3)</sup> Bicycle Education: Youth per One Participant



**Sources:** City surveys 2008/2009 and 2010/2011, ACS 2009 **Notes:** 3-year average data between 2008 and 2010 used with the following exceptions: 1-year data used for: Atlanta, Chicago, Houston, Long Beach, Nashville, Omaha, San Francisco, and Tucson; 2-year average used for: Albuquerque, Austin, Dallas, Los Angeles, Louisville, Memphis, Mesa, Oakland, Portland, OR, Sacramento, Seattle, and Washington, DC. The following cities reported having youth bicycle education courses in at least one year, but did not provide data on participation: Arlington, Baltimore, Charlotte, Denver, Fort Worth, Fresno, Indianapolis, Jacksonville, Kansas City, MO, Las Vegas, Philadelphia, San Antonio, San Diego, Tulsa, and Virginia Beach. All other cities not included in this table reported no youth bicycle education courses. (3) "Youth" includes all residents under age 18.

One out of every five youth in Seattle participate in bicycle education courses. San Jose, Honolulu, Albuquerque, and Sacramento also lead other major U.S. cities in participation levels for youth bicycle education courses.

**Seattle now leads  
cities for youth  
bicycle education  
participation.**



(75% of cities surveyed, up from 30 cities 2 years ago) have youth bicycle education courses. These education courses vary in that some are sponsored by the local government, some by a local nonprofit or advocacy organization, some by the local police department, and others are the result of partnerships between multiple agencies. Surveys also reveal that city adult bicycle education courses averaged one participant per 2,391 adults, and youth courses average one participant per 67 youth residents (in 2010).

## Encouragement Programs and Events

Encouragement programs are those activities which support and promote bicycling and walking. There are many different types of encouragement activities, but this report looked at four specific types of common encouragement events: Bike to Work Day, Walk and Bike to School Day, city-sponsored bicycle rides, and open streets (ciclovía) initiatives. This report also looked at participation levels of these efforts to establish benchmarks and baseline data to measure progress among cities going forward.

### Bike to Work Day

Bike to Work Day is an annual event held on the third Friday in May throughout most of the United States and Canada. Since the League of American Bicyclists organized the first Bike to Work Day in 1956, the day has been a rallying point for bicycle advocates to promote bicycling as a healthy and fun