

Public Health and the Atlanta Regional Commission Livable Centers Initiative

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Community Design and Health

Related to land use

- Obesity, physical activity, CVD
- Water quantity and quality

Related to automobile dependency

- Air pollution and asthma
- Climate change contribution
- Car crashes
- Pedestrian injuries

Related to social processes

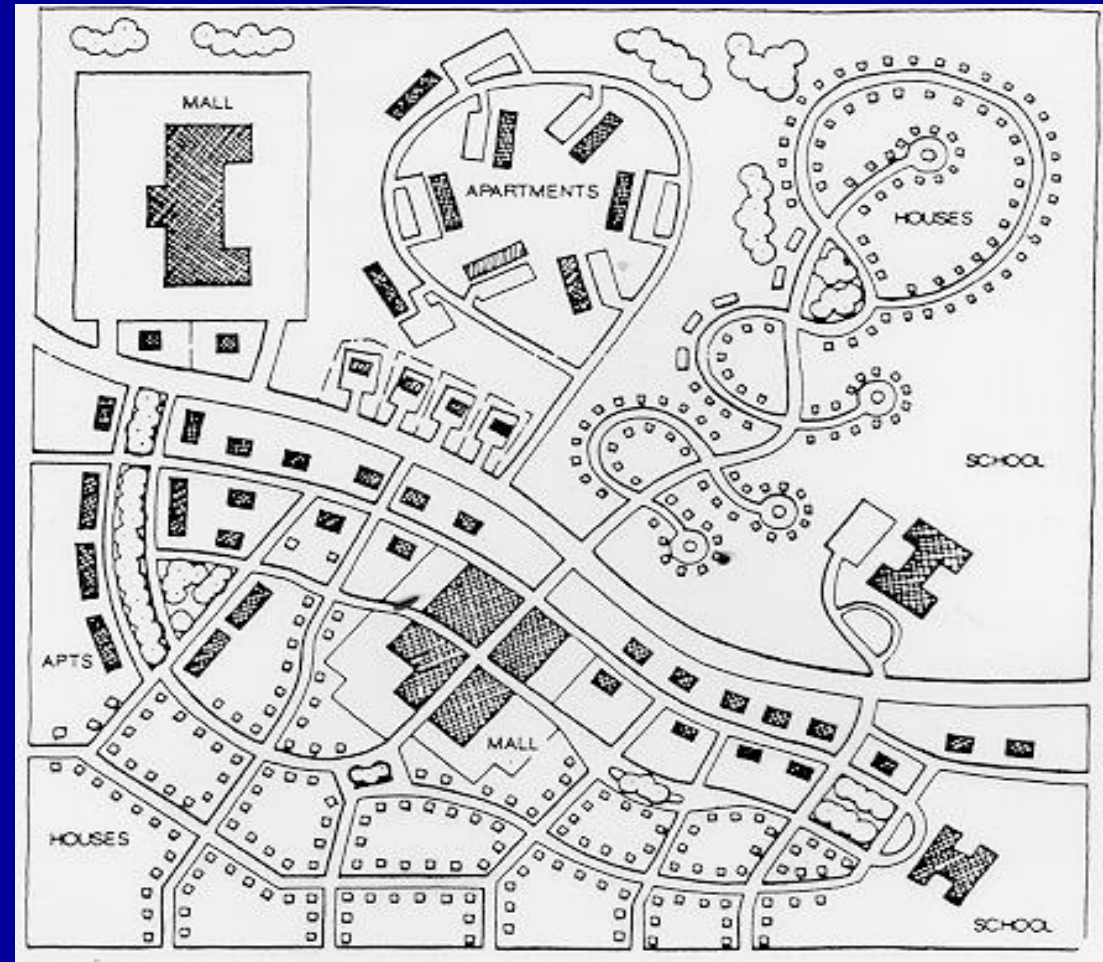
- Mental health impact
- Social capital
- Environmental justice

Walkable Community Designs: Connectivity and Physical Activity

Suburban
Development



Traditional
Neighborhood



Drawing by Duany Plater Zyberk,
in ITE Journal 1989;59:17-18

Physical Activity

A sedentary lifestyle increases the risk of

- overall mortality (2 to 3-fold)
- cardiovascular disease (3 to 5-fold)
- some types of cancer, including colon and breast cancer

The effect of low physical fitness is comparable to that of hypertension, high cholesterol, diabetes, and even smoking.

Sources: Wei et al., *JAMA* 1999;
Blair et al., *JAMA* 1996

Why Do We Care About Walkability?

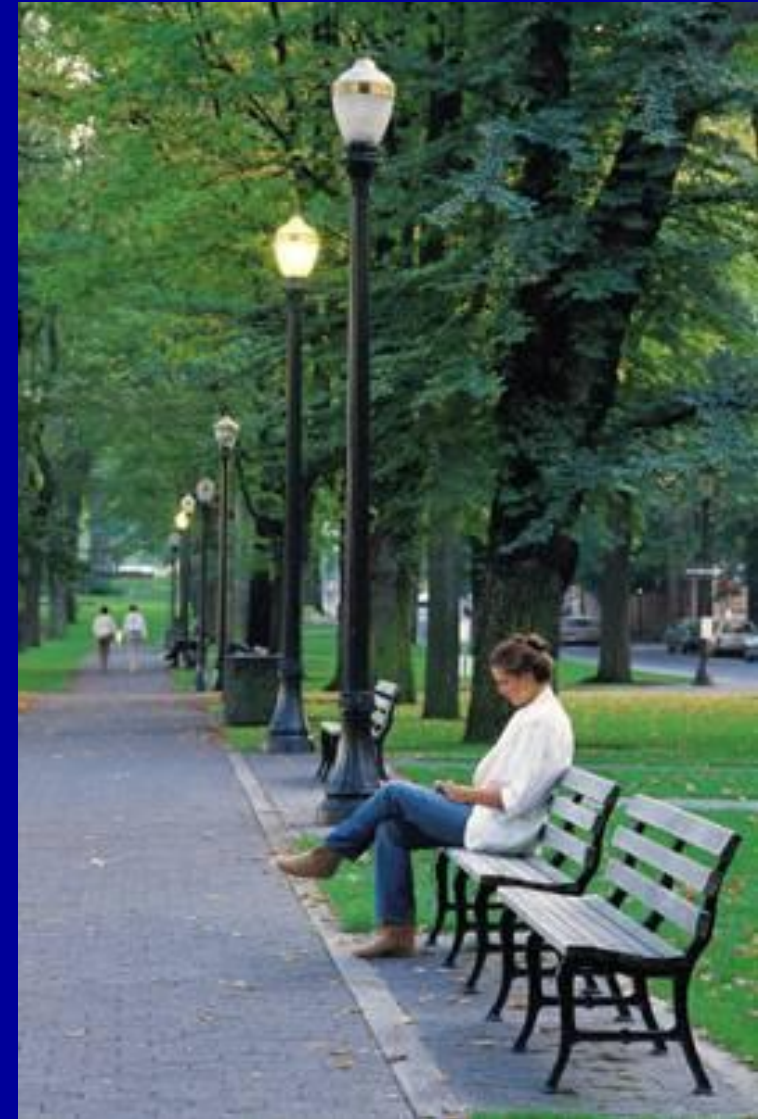
Creation or enhancement of access to places for physical activity can increase the percentage of people engaging in physical activity



Design Makes a Difference



Access to Parks



* CANINE CONSTITUTIONAL

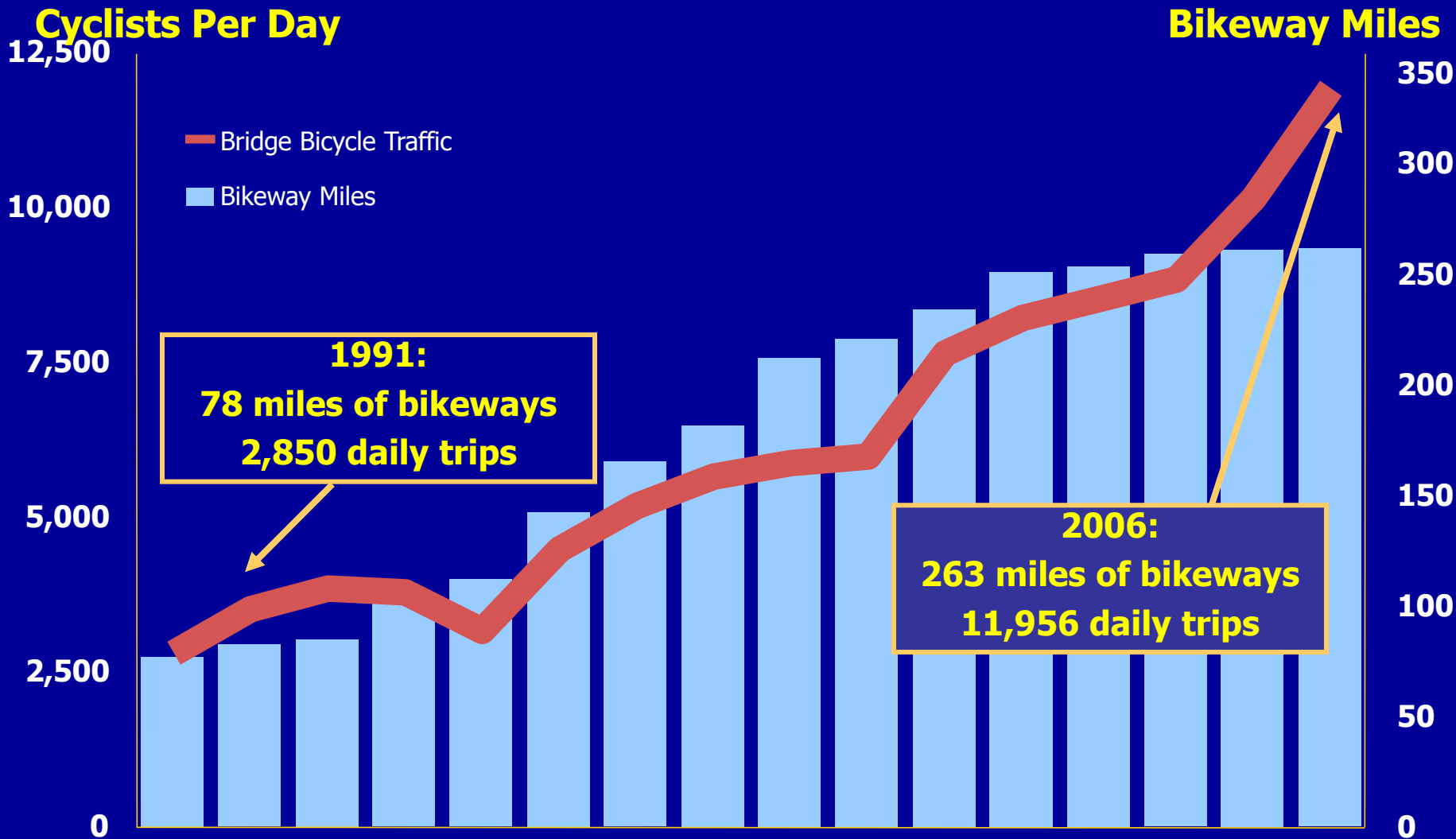


Tom Rowell / Olycom

A brisk walk in the park keeps Mares B in shape between dog shows. His owner, Columbus resident Cathy Stumbo, got up early

to give her 3-year-old Doberman his regular workout. They typically log 18 miles in Berliner Park.

Increasing Bicycle Use, Portland, OR



Year: 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006

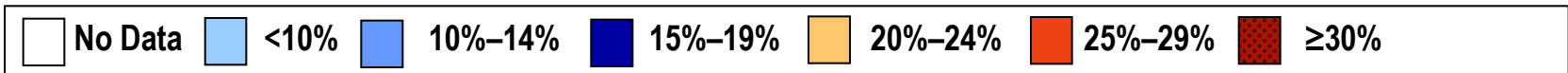
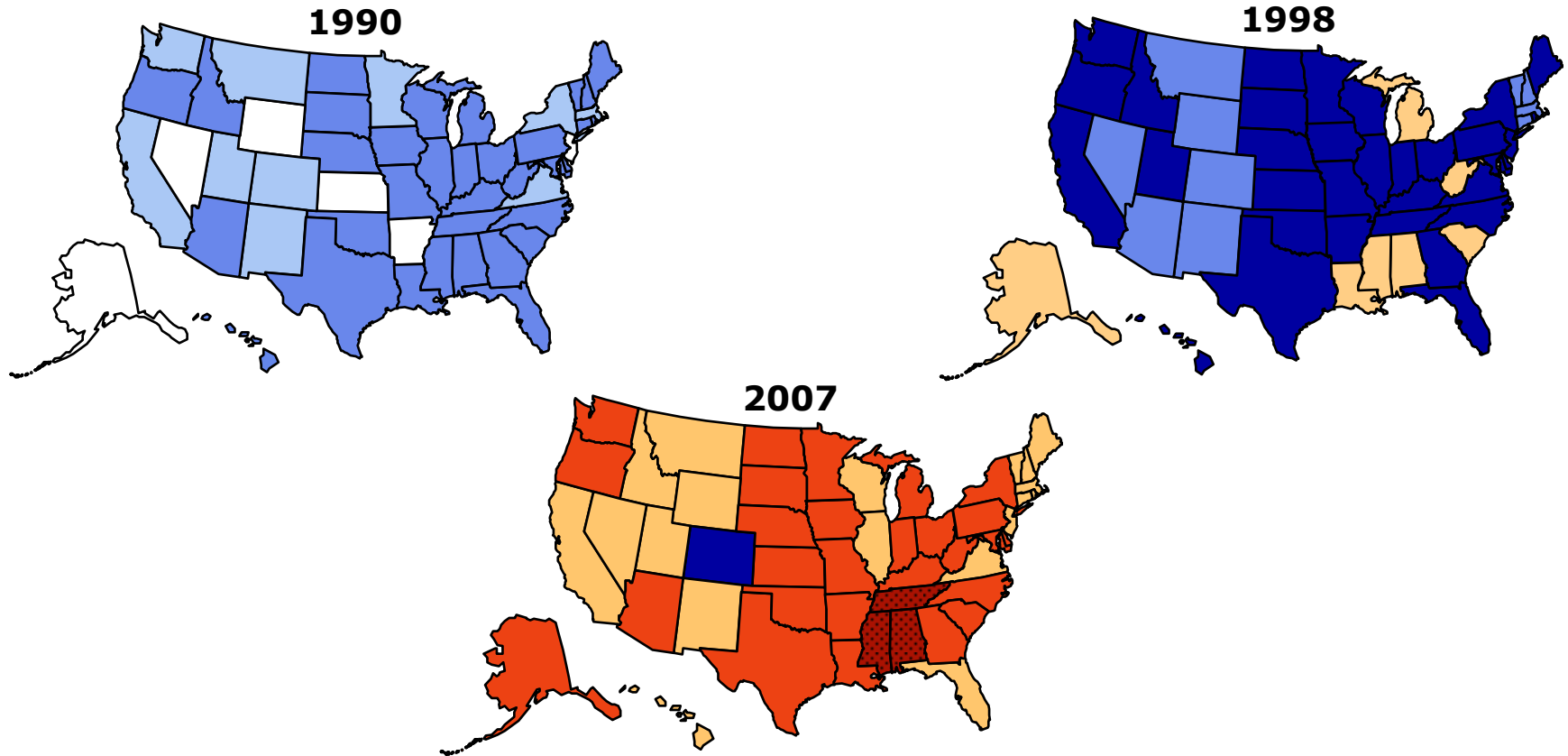
Bridge Bicycle Traffic 2,850 3,555 3,885 3,830 3,207 4,520 5,225 5,690 5,910 6,015 7,686 8,250 8,562 8,875 10,192 11,956

Bikeway Miles 78 83 86 103 113 144 166 183 213 222 235 252 254 260 262 263

Obesity Trends* Among U.S. Adults

BRFSS, 1990, 1998, 2007

(*BMI ≥ 30 , or about 30 lbs. overweight for 5'4" person)



Children Walking to School

- Parental reported barriers to walking/biking to school: 55% distance, 40% traffic danger



Asthma and Air Pollution

- Natural experiment during 1996 Summer Olympic games in Atlanta
- Peak morning traffic decreased 23% and peak ozone levels decreased 28%
- Asthma-related emergency room visits by children decreased 42%
- Children's emergency visits for non-asthma causes did not change during same period



Mental Health Issues that may Relate to Community Design

- Depression
 - Relieved by physical activity and social interaction
- Stress
 - Aggravated by long commutes
- Attention Deficit-Hyperactivity Disorder
 - Greenspace may improve function in ADHD
- Violent Behavior – Impulse Control
 - Example: road rage

Social Capital

- Defined as social networking, civic engagement, trust and reciprocity
- Decreased by long commutes
- LCI facilitates social capital



Co-Benefits: Promoting Health and Addressing Climate Change



- Transportation alternatives
- Density
- Mixed land use
- Parks and green spaces
- Energy efficient buildings

Health Impact Assessment

- A tool to increase partnerships and communication between public health professionals and planners and other decision-makers



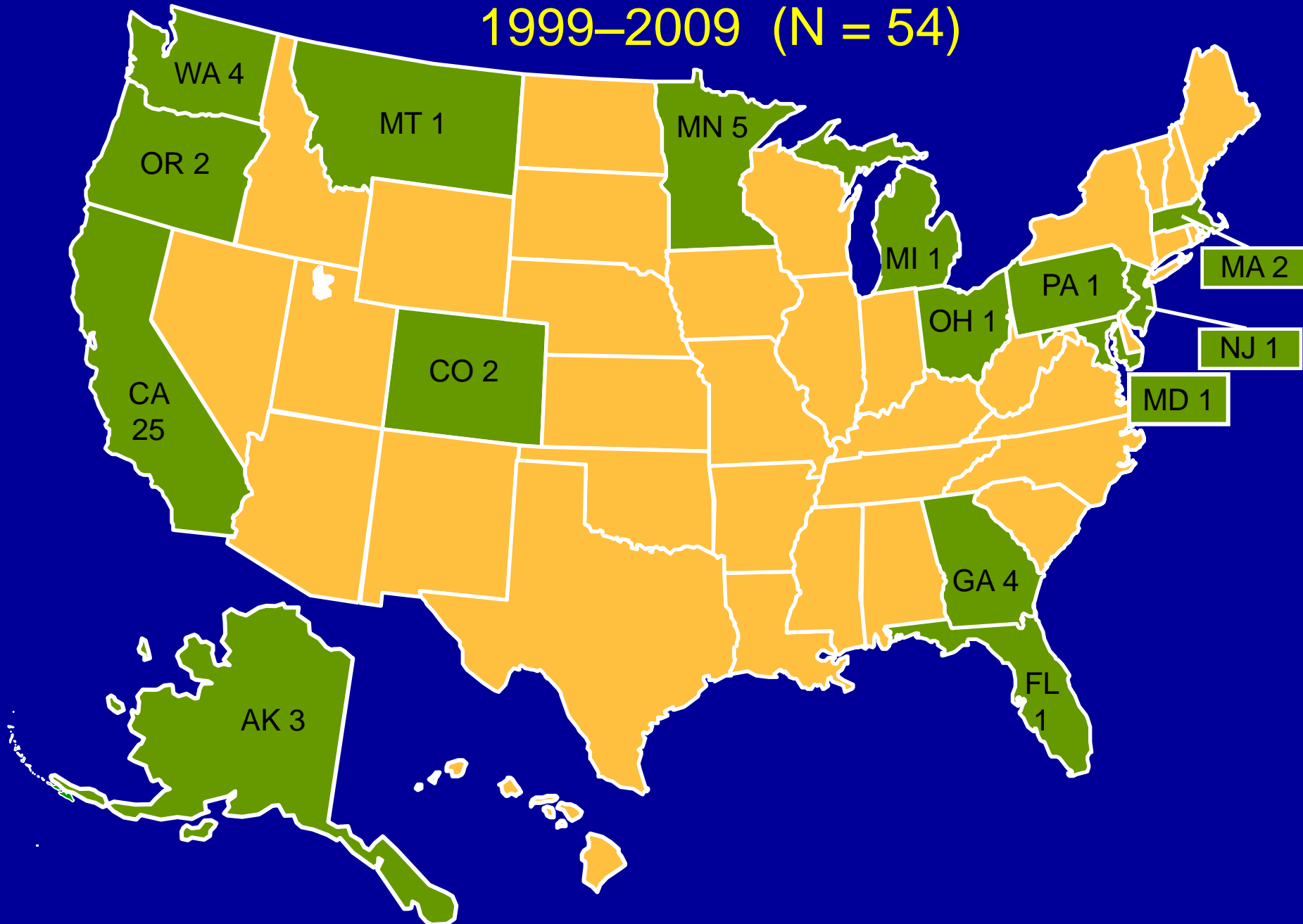
A Vision of Health Impact Assessment

- Planners and others will ask about health consequences of projects and policies as part of their decision-making process
- Health officials will have a tool to facilitate their involvement in planning and land use decisions
- HIAs will lead to a better informed decisions

Steps in Conducting an HIA

- **Screening**
 - Identify projects/policies for which HIA useful
- **Scoping**
 - Identify which health impacts to include
- **Risk assessment**
 - Identify how many and which people may be affected
 - Assess how they may be affected
- **Recommendations**
 - Identify changes to promote health or mitigate harm
- **Reporting** of results to decision-makers
- **Evaluation** of impact of HIA on decision process

Completed HIAs in the United States 1999–2009 (N = 54)





- **Community design choices can be used to promote human health**
- **Make the healthy choice the easy choice**
- **LCIs can be used to promote health**

www.cdc.gov/healthyplaces
www.epa.gov/smartgrowth