Trends in New Jersey Land Use:
Addressing Obesity Through Planning

New Jersey Future
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Development that protects open space and farmland, revitalizes communities, keeps housing affordable, and provides transportation choices
Land-Use in New Jersey: Overview

• Most developed state in the nation
• Highest population density in the nation
• Second highest rate of transit ridership
• Large portion of land is either protected open space or falls under the jurisdiction of one of three regional areas (The Pinelands, Highlands and Meadowlands)
Spreading out from the Urban Core

• Post-war suburbs (yellow and green) were built in the 1940s and 50s
• 2000 – 2010 saw the fastest growth in South Jersey
• Immigrants are repopulating some of our cities

*Moving Out, NJ Future, 2006
“De-densification”

Percentage of NJ’s Population Living at Various Densities, 1930 to 2008

- Newly-developed acres grew 1.3 times as fast as population between 1995 and 2002 (down from 2.3 times as fast between 1986 and 1995)

*Tim Evans, New Jersey Future

• NJ more developed than anything else (30%)
• Developed footprint grown 25% since 1986
• Suburbanization accelerated 2002 – 2007

*Changing Landscapes in the Garden State,
Rowan & Rutgers, 2010
Urban Areas Have Lost People...

Figure 7
2000 Census Population as a Percent of Peak Population, by Municipality

The 297 New Jersey municipalities having fewer people in 2000 than at some time in the past together had a total 2000 population that was three quarters of a million people fewer than the sum of these municipalities’ peak populations. Much of the population growth in New Jersey’s outlying counties is clearly coming as a direct result of the depopulation of the state’s older, built-out areas.

2000 population as % of peak population
- Less than 60%
- 60 - 69%
- 70 - 79%
- 80 - 89%
- 90 - 94%
- 95 - 99%
- 100% (2000 is peak)

Some recent trends are encouraging

- New Jersey’s 8 “urban centers” accounted for only 3.9% percent of residential building permits issued statewide in the 1990s.

- Their share tripled to 11.8% in the 2000s.

*Built Out But Still Growing, New Jersey Future, 2010*
Transit Rich New Jersey

• **224** rail stations
• Approximately **70 percent** of New Jersey residents live within **5 miles** of a train station
• **1.9 million** jobs (50%) are located in towns served by rail transit

**Potential Health Impact of Switching From Car to Public Transportation When Commuting to Work, December 2010,**

* Alfredo Morabia, MD, PhD, Franklin E. Mirer, PhD, Tashia M. Amstislavski, MA, Holger M. Eisl, PhD, Jordan Werbe-Fuentes, BA, John Gorczynski, AAS, Chris Goranson, MGIS, Mary S. Wolff, PhD and Steven B. Markowitz, MD

• Commuting by public transportation rather than by car increased energy expenditure (+124 kcal/day; $P < .001$) equivalent to the loss of 1 pound of body fat per 6 weeks.

*Getting to Work, New Jersey Future, 2008*
But Jobs are Dispersing

Job losses near transit; job gains along the highway

20 largest job-gaining and job-losing municipalities, 1980-2003:

- 20 largest job losses
- 20 largest job gains

*Getting to Work, New Jersey Future, 2008
Population Density Effects Vehicle Miles Travelled, and thus GHG Emissions

Resident in compact areas drive less, thanks to good transportation alternatives.

Population Density vs. Per-Capita Daily Vehicle Miles Traveled (VMT), 2002

Sources: NJ Department of Transportation (VMT); US Census Bureau (population)
As Land Use Has Spread Out, VMT Has Risen Dramatically

Vehicle Miles Traveled (VMT) Growth in New Jersey

VMT growth has outstripped increases in population and registered drivers since 1970.

Sources: Federal Highway Administration, Highway Statistics 2005; US Census Bureau, 2005 Census
And VMT is Projected to Grow

- VMT growth is projected to outstrip any gains from tighter fuel economy or low carbon fuel standards.
How Can We Lower VMT through Land-Use?

• Density
• Design
• Connectivity of Destinations
• Transportation Options
Design

- Should encourage pedestrian activity
- Mix of uses
- Linked to transit when possible
- **Changes in Physical Activity and Travel Behaviors in Residents of a Mixed-Use Development**
  - Karen G. Mumford, PhD, Cheryl K. Constant, PhD, Jennifer Weissman, MPH, Jean Wolf, PhD, Karen Glanz, PhD
  - Adults who move to a denser, mixed-use neighborhood increase their levels of walking for both recreation and transportation, decrease their automobile travel, and increase their use of public transportation.

Do: Exchange Place

Don’t: Metro Park
Other Design Factors

More of this:

And less of this:

*Transpo Group
Connectivity of Destinations

- More housing near transit stations
- Reconnecting jobs with transit centers
- Mix of uses (retail, housing, entertainment, office)
Transportation Options

- Majority of Americans want to walk, bike and take transit more if it were more available.
- More transit service
- Complete Streets
Complete Streets

Accommodate ALL Users for ALL Trips Safely & Efficiently

• Public transit users
• Bicyclists & Pedestrians
  – All ages
  – All abilities
• Motorists
About a third of Americans don’t drive

- Older people who don’t drive
- All children under 17
- Some people with disabilities
- Many low income people who cannot afford automobiles.
- Those that prefer a car-free lifestyle
Existing Streets are Inadequate

- No sidewalks for pedestrians
- Lanes are too narrow for motorists to share with bikes
- Streets are too wide, too dangerous to cross on foot
- No accommodations for people with disabilities
Incomplete Streets Are Unsafe

Pedestrians and Bicyclists...

- Receive 1% of Federal Funding
- Represent 10% of Trips
- Suffer 13% of Fatalities

Source: FMIS, NHTS, FARS federal databases
Many Types of Complete Streets
Complete Streets Benefits

• Improve Safety
• Provide Connections
• Promote Healthy Lifestyles
• Create More Livable Communities
• Reduce Congestion & Greenhouse Gas Emissions
• Make Fiscal Sense
Supportive Research

• **Walking and Cycling to Health: A Comparative Analysis of City, State, and International Data, October 2010**
  
  – John Pucher PhD, Ralph Buehler PhD, David R. Bassett PhD, Andrew L. Dannenberg MD, MPH
  
  – We examined aggregate cross-sectional health and travel data for 14 countries, all 50 US states, and 47 of the 50 largest US cities through graphical, correlation, and bi-variate regression analysis on the country, state, and city levels. At all 3 geographic levels, we found statistically significant negative relationships between active travel and self-reported obesity. At the state and city levels, we found statistically significant positive relationships between active travel and physical activity and statistically significant negative relationships between active travel and diabetes.

• **The Street Level Built Environment and Physical Activity and Walking, January 2011**
  
  
  – The Irvine Minnesota Inventory (IMI) was designed to measure environmental features that may be associated with physical activity and particularly walking. The results are also useful in showing which built environment variables are more reliably associated with walking for travel—characteristics of the sidewalk infrastructure, street crossings and traffic speeds, and land use are more strongly associated with walking for travel, while factors that measure aesthetics are typically less strongly associated with walking for travel.
New Jersey Future 2011 CS Report Recommendations

• Consider low-cost bike/ped improvements on resurfacing projects
• Reward Local Aid projects that include Complete Streets
• Reform maintenance requirements for sidewalks
• Integrate ADA compliance with Complete Streets
• Develop standards for local policies
• Exempt new sidewalk construction from DEP stormwater regulations
New Jersey State Plan

- Vision of growth in compact walkable cities, regional centers, villages & already developed areas
- Blueprint for infrastructure spending
- NJ State Strategic Plan
- Shaping NJ Recommendation
Additional Research

• American Public Health Association
  – Research on Health and Transportation
    http://www.apha.org/advocacy/priorities/issues/transportation/featured_research.htm

• Public Health Law and Policy
  – Built Environments as Determinants of Health
Climate Change & Land Use
Smart Growth Recommendations from New Jersey Future
Convenor 2006

Recommendations in Brief
1. Shift the transportation and land use strategies to reduce greenhouse gases
2. Implement transit-oriented development strategies
3. Protect open space and farmland
4. Advance transportation, land use, and environmental objectives
5. Address climate change through adaptation strategies
6. Foster local economic development

Transportation Sector is Dominant Source of Carbon Emissions in New Jersey

Vehicle miles traveled (VMT) is the largest component of transportation-related greenhouse gas emissions. In New Jersey, transportation comprises 46% of the total greenhouse gas emissions. To reduce these emissions, the state must focus on improving and expanding public transportation, reducing VMT, and implementing strategies to increase energy efficiency and reduce carbon footprint.

Filling in the Gaps:
Assessing the Implementation of NJDOT's Complete Streets Policy
September 2011

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