

Trail Counts: Best Practices

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Presentation Overview

- National Bicycle and Pedestrian Documentation Project (NBPD)
- San José's Trail Counts



What is the NBPD?

- A pro bono effort by Alta Planning + Design with support from ITE and the Rails to Trails Conservancy since 2004
- Annual national bicycle and pedestrian count and survey effort
- Fulfill need for in-depth analysis of why people walk and bike
- Objectives
 - Consistent data collection
 - Open data access
 - Shared research

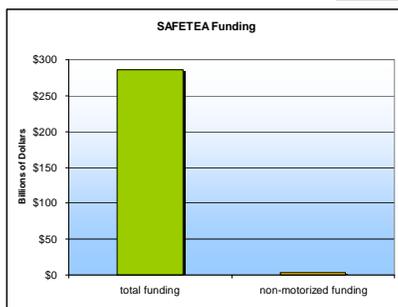


The Need for NBPD

- Lack of consistent data
- Lack of support for non-motorized funding
- Forecasting and policy for other modes is based on marginal data yet receive substantive funding



Funding Comparison



NBPD Accomplishments

- Over 60 organizations and agencies
- Over 600 count locations
- Extrapolation figures
- Related projects: Caltrans Seamless Travel Model
- NBPD website and supportive documents



www.bikepeddocumentation.org

National Bicycle and Pedestrian Documentation Project

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About

One of the greatest challenges facing the bicycle and pedestrian field is the lack of documentation on usage and demand. Without accurate and consistent demand and usage figures, it is difficult to measure the positive benefits of investments in these modes, especially when compared to the other transportation modes such as the private automobile. An answer to this need for data is the National Bicycle & Pedestrian Documentation Project, implemented by and with funding from the Institute of Transportation Engineers (ITE) Pedestrian and Bicycle Council. This consortium will provide consistent model of data collection and ongoing data for use by planners, governments, and bicycle and pedestrian professionals.

2009 Count Dates

The next count/durway days are during the week of May 11, 2010.

- Tuesday, May 11 through Thursday, May 13
- Saturday, May 15 through Sunday, May 16

Methodology

The basic assumptions of the methodology are that, in order to estimate existing and future bicycle and pedestrian demand and activity, agencies nationwide need to start conducting counts and surveys in a consistent manner similar to those being used by ITE and other groups for motor vehicle counts.

News

- Is there value in counting bikes and pedestrians? According to the City of San Jose there is! The San Jose Parks website reports the volume of counts on their program: 800.766.8484.org/CountingBikesandPedestrians.html.
- NBPDC would like to thank the many agencies who sent us data and are listed below the great week done! For example:
 - Alameda, CA counted over 7,000 bicycles and pedestrians in a one hour period at all ages and directions.
 - Using our ultrasonic methods, recent reports of the Capital Square in Columbus, OH would translate into 500,000

Logos for alta and SAN JOSE are visible at the bottom.

How NBPDC Can Help You

- Example count forms
- Count instructions
- Example training PowerPoints
- Overview of automatic count technologies

Data Input: Tally the data

How do you count this?

Logos for alta and SAN JOSE are visible at the bottom.

Manual vs Automatic Counts

- Count Effort Budget
 - Manual count person hours vs. cost of count machines
- Duration of Count Effort
 - Quarterly, bi-annual, yearly
 - Year long
- Type of data
 - Volume
 - Behavior, i.e., helmet use, wrong-way riding
 - Gender

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Automatic Count Technologies

Passive Infrared	Detects change in thermal contrast
Active Infrared	Detects obstruction in beam
Ultrasonic	Emits ultrasonic wave and listens for echo
Doppler Radar	Emits radio wave and listens for change in frequency
Video Imaging	Analyzes pixel changes or Data is played by and analyzed by a person
Piezometric	Senses pressure on tube or underground sensor
In-Pavement Magnetic Loop	Sense change in magnetic field as metal passes over

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Automatic Counter Examples

■ Infrared

■ Infrared and Loop Detection

Drawings courtesy of Eco-Counter: www.eco-counter.com

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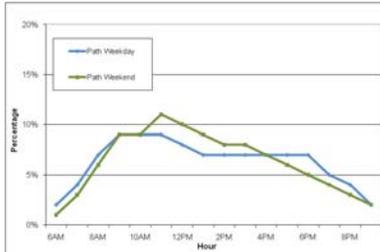
Lessons from Seamless Travel

- Grouping poses automatic count problems
- However, year-long count data provides a wealth of information

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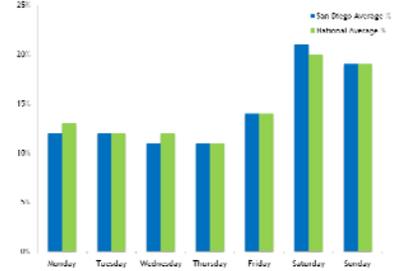
Key Findings: Peaking Periods

Peaking periods for bicyclists and pedestrians are much different than for vehicles



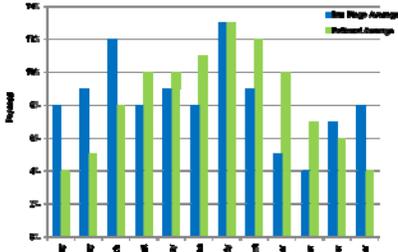
Key Findings: Day of Week Volumes

Day of week volumes are relatively consistent nationwide



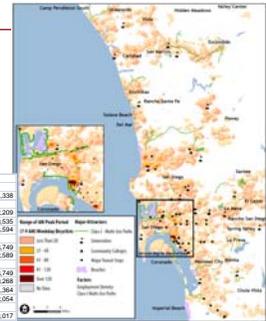
Key Findings: Month of Year Volumes

Monthly volumes appear to be highly related to localized conditions



How the Seamless Model Can Help You

- Forecast demand
- Existing trails
- Proposed trails
- Help justify funding



Future Bike Path Projections

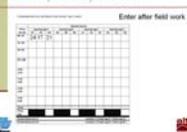
Estimate of Annual User Use	55,533
By Mode of Travel:	
Walk/Jog	292,200
Bicycle	220,535
Rollerblades/Other	38,594
By Sex:	
Male	308,749
Female	242,889
Means of Travel to Trail:	
Drive	308,749
Bicycle	110,268
Walk/Jog	81,384
Other	22,654
Tip Purpose: \$	
Health	419,017
Recreation	251,182
Commuting	22,654
Economic Benefits	\$ 3,859,363
Health Benefits	\$70,571,213
Transportation Benefits (Saved VTY)	30,384



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Count Considerations

- Who are you counting?
 - Bicycles? Pedestrians? Both?
 - Do you need to differentiate between bicycles and pedestrians?
- Technology cost
 - What is your budget?
- Staff time cost
 - What is your budget?



Thank you!

www.bikepeddocumentation.org

