Trail Counts: Best Practices

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Presentation Overview

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

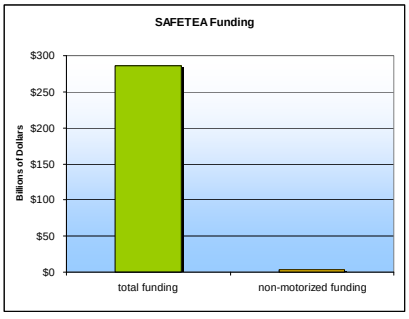
What is the NBPD?

- 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



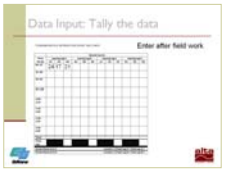
NBPD Accomplishments

- 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

How NBPD Can Help You

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



Manual vs Automatic Counts

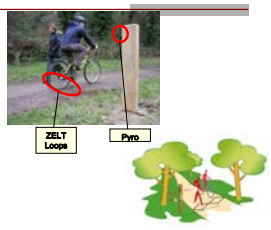
- Count Effort Budget
  - Manual count person hours vs. cost of count machines
- Duration of Count Effort
  - Quarterly, bi-annual, yearly
  - Year long
- Type of data
  - Volume
  - Behavior, i.e., helmet use, wrong-way riding
  - Gender

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

Automatic Counter Examples

- Infrared



- Infrared and Loop Detection

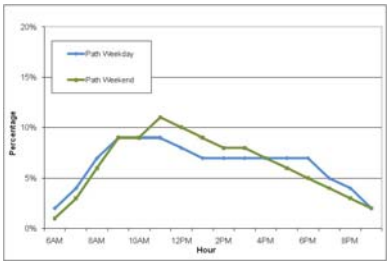
Drawings courtesy of Eco-Counter: www.eco-counter.com

Lessons from Seamless Travel

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

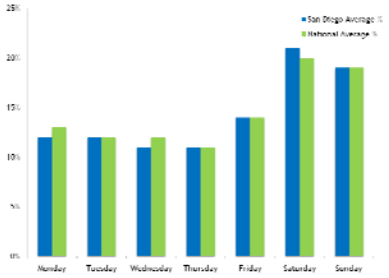
Key Findings: Peaking Periods

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



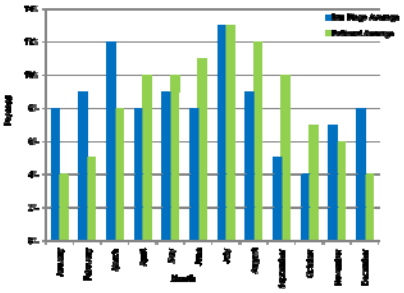
Key Findings: Day of Week Volumes

Day of week volumes are relatively consistent nationwide



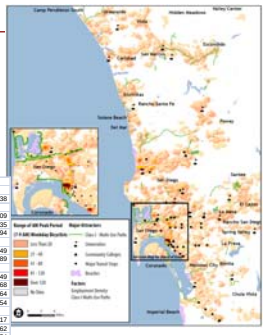
Key Findings: Month of Year Volumes

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 Use /4		551,338
By Mode of Travel:		
	Walk/Jog	292,209
	Bicycle	220,535
	Rollerblade/Other	38,594
By Sex:		
	Male	308,749
	Female	242,589
Means of Travel to Trail:		
	Drive	308,749
	Bicycle	110,268
	Walk/Jog	61,364
	Other	22,054
Trip Purpose: /5		
	Health	419,017
	Recreation	231,562
	Commuting	22,054
Economic Benefits		$ 3,859,363
Health Benefits		$70,571,213
Transportation Benefits (Saved VT/yr)		30,324

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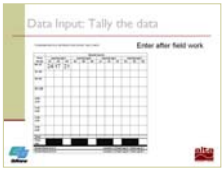
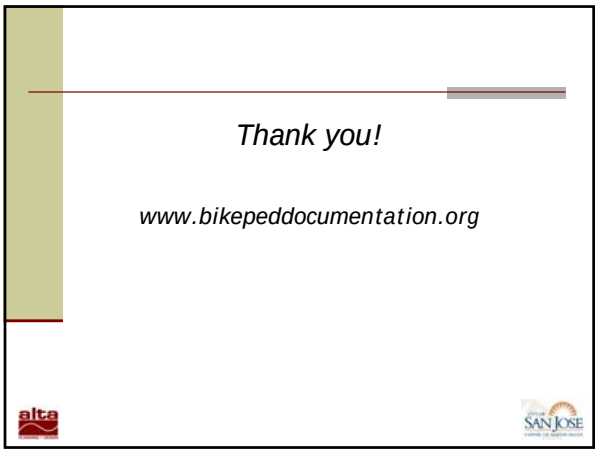


Count Considerations

- 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