SCAG Bicycle Data Clearinghouse

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Chart 3: Mode of Travel by Trip Length in Los Angeles County

Mode Split for All Trips in LA County

Trip Distance for All Trips in LA County
2011 Counts: 11,865 Bicyclists and 64,885 Pedestrians at 33 intersections

Cyclists by Gender (Total=11,865)

- Female Cyclists: 2032 (17%)
- Male Cyclists: 9833 (83%)

Rates of 3 Cyclist Behaviors
- Wrong Way: 650 (5%)
- On Sidewalk: 2973 (30%)
- Helmet Use: 4986 (42%)
17 intersections were counted in both 2009 and 2011. Over these two years:

- At the 4 intersections that received new bike infrastructure, ridership increased by 101%
- At the remaining 13 intersections that had no change in infrastructure, ridership only increased by 19%
- Bicycling increased most on weekdays, suggesting that more people are riding to and from work and school

- Bicycle infrastructure is correlated with higher rates of female ridership
- Bicycle infrastructure is correlated with lower rates of wrong-way and sidewalk riding
- Class I and Class II bikeways had higher ridership than Class III or streets with no bike infrastructure
CONDUCTING BICYCLE AND PEDESTRIAN COUNTS IN SOUTHERN CALIFORNIA
A Manual for Jurisdictions in the Los Angeles Metro Region

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Bicycle and Pedestrian Count Manual

- What are counts and who can do them?
- What types of counts are there?
- Whom do we count?
- What types of non-motorized travel should we count?
- Where should we count?
- How often should we count?
- What technology should we use?
- How do we verify the accuracy of the count?
- How do we use all this data?
- How do we share our count data?
Whom do we want to count?

The first step is to determine whom you want to count. You may want to count only bicyclists, only pedestrians, both together, or both separately. This section is focused on capturing non-motorized travel on streets, trails, and public stairways.

Who counts as a pedestrian?

This seemingly rhetorical question is, in truth, harder to determine once out in the field. It’s very clear that people walking would be counted as pedestrians. But, what about joggers, wheelchair users, babies in strollers, rollerbladers, skateboarders, and so on? If the count methodology allows, it’s ideal to separate true pedestrians from most wheeled or other powered forms of transportation (except for those who need it for mobility reasons). Otherwise, all of the following can be counted as pedestrians.

Count the following as a “Pedestrian”:
- A person walking or jogging
- Wheelchair or assistive power scooter user
- Passenger on wheelchair or assistive power scooter
- Person using an assistive walking device (walker, cane, knee walker)
- Baby in a stroller
- Baby being carried

Count the following as “Other”, if possible. If not, include in the pedestrian count:
- A skateboarder
- A rollerblader
- Non-motorized kick scooter rider
- Segway rider
- A bicyclist walking his/her bicycle on the sidewalk
- An equestrian
- Person on toy transportation (pull cart, mini-car, big wheel, bicycle with training wheels, etc.)

Who counts as a bicyclist?

Counting bicyclists is a bit clearer, although it should not be restricted to two-wheeled pedalcycles. Unicycles, pedicabs, tandem cycles, electric bicycles, bicycle trailers, and recumbent cycles should all be included in a bicycle count. If the count methodology allows, it’s ideal to capture the number of people on a cycle as opposed to the number of bicycles.

Count the following as a bicyclist:
- Unicycle
- Bicycle (including electric)
- Tandem cycles (count each person, if possible)
- Pedicab operator and passengers (count each person, if possible)
- Human passenger on a cycle (count each person, if possible)
- Human passenger in bicycle trailer (count each person, if possible)
- Cyclist on three or four-wheeled cycle
- Recumbent bicyclist
- Hand cyclist
- A cyclist who dismounts in order to cross as a pedestrian at an intersection, then remounts after crossing
**Pneumatic tubes**

**What it counts:** Bicycles

**What it is:** Two rubber tubes are stretched across the right-of-way, and record when a bicyclist passes over them.

**How it works:** When a bicycle or other vehicle passes over the tubes, pulses of air pass through to a detector which then deduces the vehicle's axle spacing, and hence classifies it by vehicle type.

**Advantages:** Familiar technology to most jurisdictions; Widespread use by data collection firms; Portable, easy to set up, and inexpensive; Battery powered; Captures directionality.

**Drawbacks:** Susceptible to theft, vandalism, and wear-and-tear; May be a tripping hazard for pedestrians; Not appropriate in cold weather conditions; Can deteriorate under high bicycle or vehicular traffic, thus reducing their accuracy; On-site data downloading. May not detect side-by-side riding.

**Typical location:** On-road bikeways and exclusive bike paths

**Best installation:** Paved surface, minimal pedestrians, above freezing weather conditions

**Count duration:** One day to several months

**Accuracy:** Error rate is 4% or less for 24-hour counts, a higher error rate for 15-minute intervals

*Photo Source: Paul Kreuger*
Figure 1: Decision Flow Chart for Automatic Counters

Not all automatic counters work in all situations. Use this flowchart as a guideline to find a counter(s) that works in your situation.

START HERE

What are you counting?

What type of path/facility?

Multi-use trail (including bicyclists)

Unpaved trail (pedestrians only)

Sidewalk

Unpaved Trail

Multi-use paved trail

Facilities on or adjacent to roadway

Need to distinguish user types?

YES

Consider dual technology sensors

NO

NO

NO

Count time period?

Continuous (Permanent Counters)

Finite Period (Movable Counters)

What type of path/facility?

Unpaved Trail

Paved: Separated (no other vehicle traffic)

Paved: Mixed Traffic

Bike-only off-street facility?

YES

NO
Count all bicyclists and pedestrians as they enter the intersection, according to their direction of travel, mode of travel, gender, etc. Use one intersection graphic per 15-minute interval.
Welcome to the Bike Inventory site!

What is the Bicycle Data Clearinghouse Project?

This project seeks to compile, organize, make accessible, and create a data standard for bicycle count data collected in Los Angeles County. The project will collect existing data and create an interface for collecting future data, in 1 centralized location. This centralized location is a data clearinghouse (interactive mapping website) built by UCLA, where anyone can access existing data, and where municipalities can add new data that is collected. This project will also create a training manual that clearly explains how to conduct bicycle volume counts. Other elements of the project include conducting counts and surveys at Union Station and document tools for estimate vehicle mile traveled and greenhouse gas emissions reduction, resulting from bicycle volume data.

Who is sponsoring this project?

The Los Angeles County Metropolitan Transportation Authority and the Southern California Association of Governments are sponsoring the study. These organizations received funding for this project from a California Department of Transportation’s Community Planning grant. If you have specific questions about any of these sponsoring groups, please contact Alan Thompson or Lynne Goldsmith.

Why participate?

Many municipalities are interested in collecting bicycle volume data but are not aware of how to go about doing so. In response, this project will provide a training manual to do so. Secondly, the data that do exist are not in any standardized format. This makes it difficult to compare counts from different locations. Because this project is providing a data standard, planners, modelers and researchers can make fair comparisons between locations and years. Travel occurs independently of jurisdictional boundaries. Therefore, it is important to bring data together which represent all jurisdictions. Lastly, more funding agencies, such as Metro, are going to be requiring before and after treatment count data be collected.

What will be done with existing count data that is collected?

Members of the project team will take existing data and convert it into the data standard. After the data is in the standard format, shapefiles will be created and these data will be posted to the mapping interface.
Please send in your count data

Artesia  Azusa  Bell  Bell Gardens  Bradbury
Cerritos  Compton  Cudahy  Diamond Bar  El Monte
Hawaiian Gardens  Industry Irwindale  La Mirada
La Verne  Maywood  Monrovia  Montebello
Monterey Park  Norwalk  Palmdale  Paramount
San Fernando  Santa Fe Springs  Sierra Madre  Signal Hill
South El Monte  Temple City  West Covina
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Come to SCAG’s Toolbox Tuesday on June 25th for the unveiling of the finished manual and clearinghouse website!