



Bicycle Benchmarking Project

Draft Report

August 2004

**Prepared by the Thunderhead Alliance
with the Chicagoland Bicycle Federation**



Bicycle Benchmarking Project Draft Report

August 2004

The Thunderhead Alliance is the national coalition of state and local bicycle advocacy organizations, currently 104 organizations in 46 states. Our work to increase the effectiveness of our member organizations includes trainings, development of replicable models in bicycle advocacy initiatives, and this benchmarking project to assess the effectiveness of our work.

Our 50 States, 50 Cities Project focuses our work on the goal of having effective state and local bicycle advocacy organizations in all 50 states and the 50 top population cities. This benchmarking project will help us focus our resources in areas where our work is most needed.

Initial funding for this first phase of the benchmarking project has come from the generosity of Planet Bike and the National Bicycle Dealers Association.

Why Benchmarking?

Bicycle advocacy in North America has now developed to the point where a more precise measure of progress is required. States and metropolitan areas need the ability to judge their achievements over time and make useful comparisons with other places.

This project is the first of its kind in the United States. It brings together data on both the bicycling environment and the advocacy organizations trying to improve that environment. Data on bicycle usage, crashes, facilities, policy, planning and funding must be brought together in a consistent way so real progress can be judged.

The numbers and charts are only the beginning. It is our hope that this information can be used to set goals, plan strategies and evaluate results. Then successful models can be emulated and failed models can be discarded.

Thunderhead Alliance organizations are in the perfect position to not only assist with gathering data, but to deliver the results back to their transportation officials and request better performance for bicycling and data collection. Leaders of Thunderhead organizations tapped all available resources to collect this data and are already leveraging the results in their communities.

Review of Draft Report

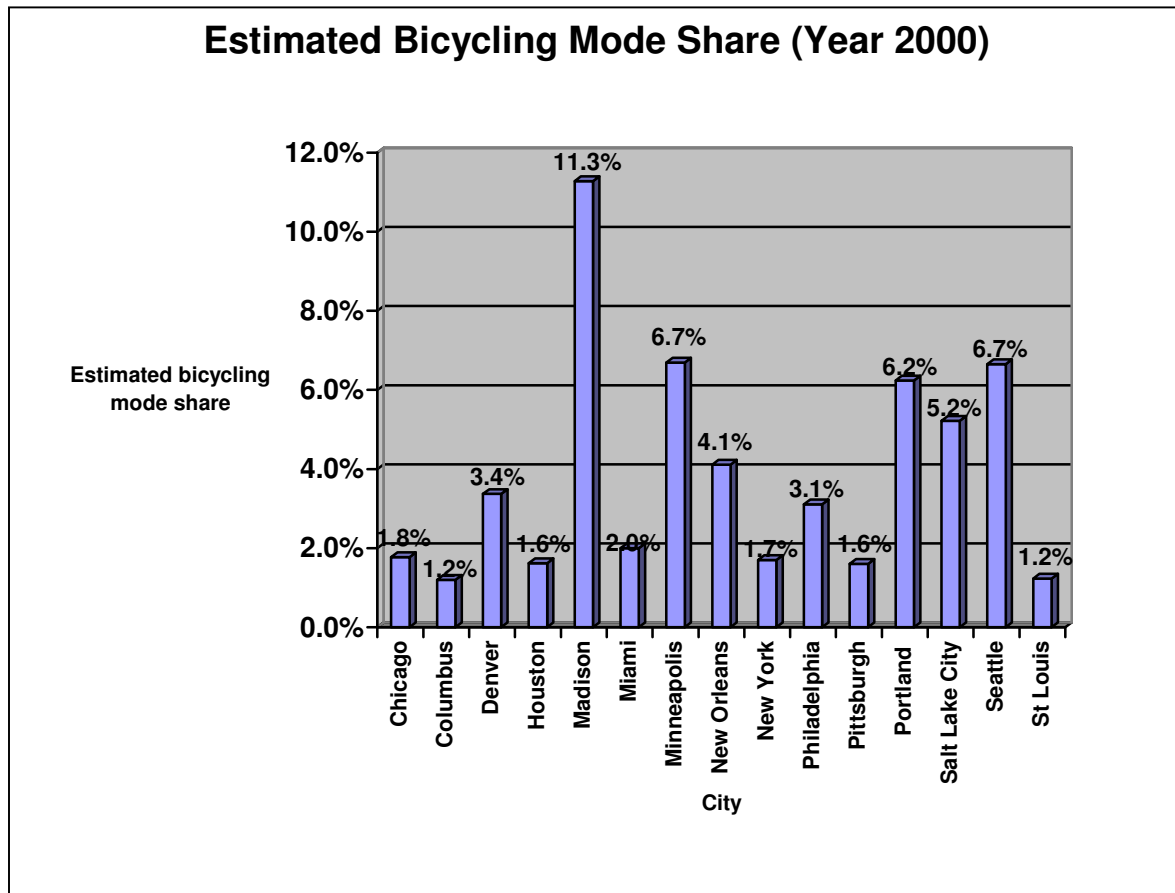
This initial report containing information on 15 cities and 14 states is the first phase towards our goal of a baseline benchmarking report with complete profiles on all 50 states and the 50 largest cities in America. This baseline report will evolve over time as we continue this project. Thunderhead is currently seeking funding and partners for this first full report.

This draft report is a brave first attempt to pull together the best of all available data. We welcome your comments on our synthesis. We want to make the report better and more useful in the future. We are also keenly aware that better data collection is needed in many areas. We look forward to dialogue on priorities and realistic opportunities for better data collection.

We are requesting your assistance with this project. Please carefully review this draft report and contact Matt Maloney, Thunderhead's benchmarking coordinator, with comments and questions: matt@biketraffic.org or 312-427-3325 x 238

If interested in supporting or participating in the next phase of the benchmarking project, contact the Thunderhead's Executive Director Sue Knaup: sue@thunderheadalliance.org or 928-541-9841.

Find out more about the 50/50 Project and all of the Thunderhead Alliance's programs at: www.thunderheadalliance.org



Counting bikes- a few words about this data

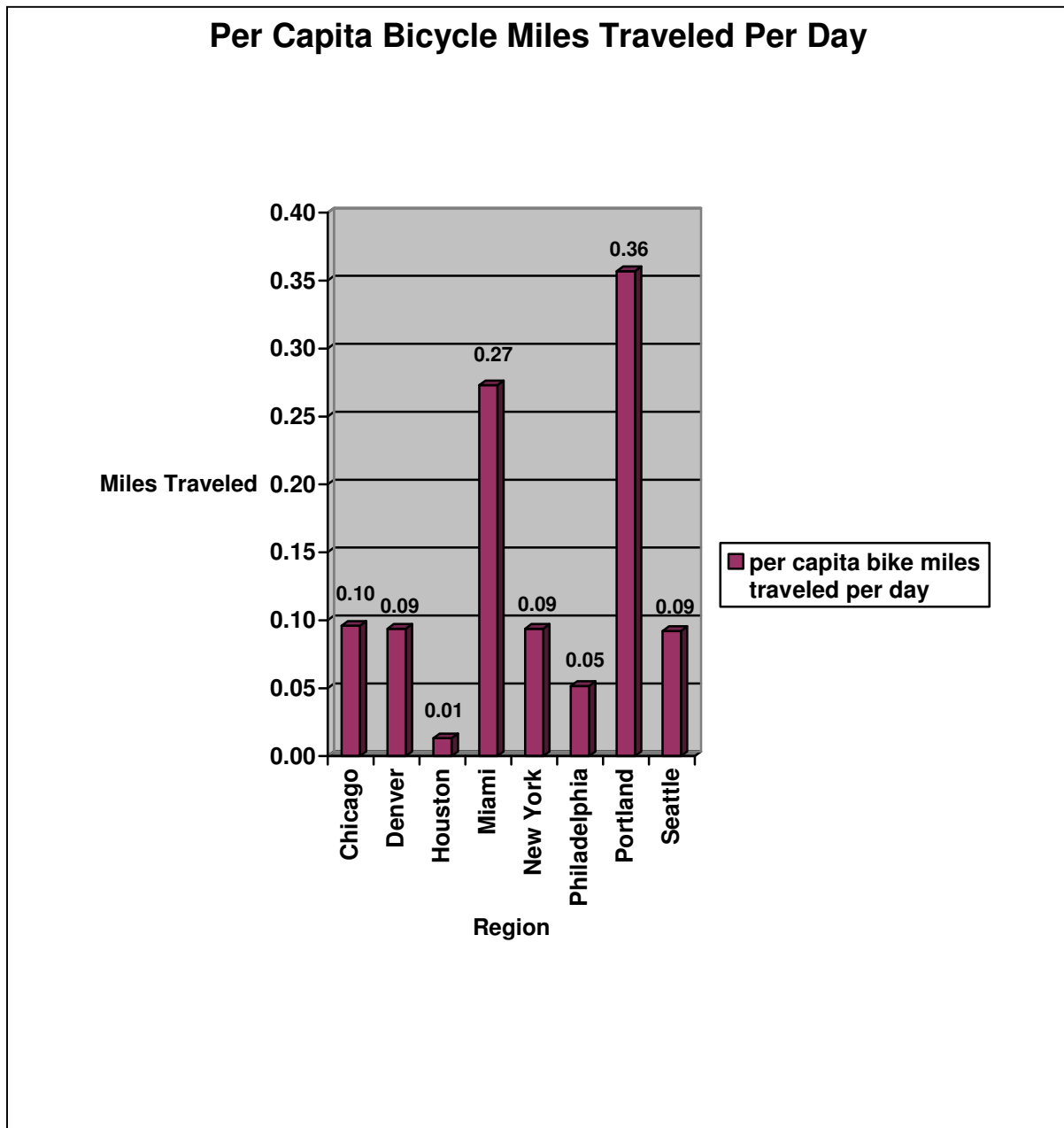
The best (albeit only) starting point we have for determining bicycling mode share across different cities is **journey to work census data** from the year 2000, which determines a percentage of riders 16 and over who ride their bikes to work. Though some municipalities have had some success in terms of counting bikes using their own methodologies, the only way we can paint any relatively consistent picture of comparison across a wide array of cities is to use numbers from the same source.

But what percentage do work trips by bike make up of all trips? For the purpose of this data, we utilized nationwide numbers from the Bureau of Transportation Statistics (BTS) and the 2001 National Household Travel Survey (NHTS) to help us generate an estimate of actual “mode share”.

Census data is taken in the last week of March. So seasonal variation presents one obvious hurdle. Nationally, NHTS data indicates that average monthly bicycle travel is 110% of March bicycle travel. It also indicates national bicycle travel for work makes up about 5% of all bicycle travel. To keep things simple and to keep our estimates conservative, we used a multiplier of 20 to estimate all bike trips from census work trips.

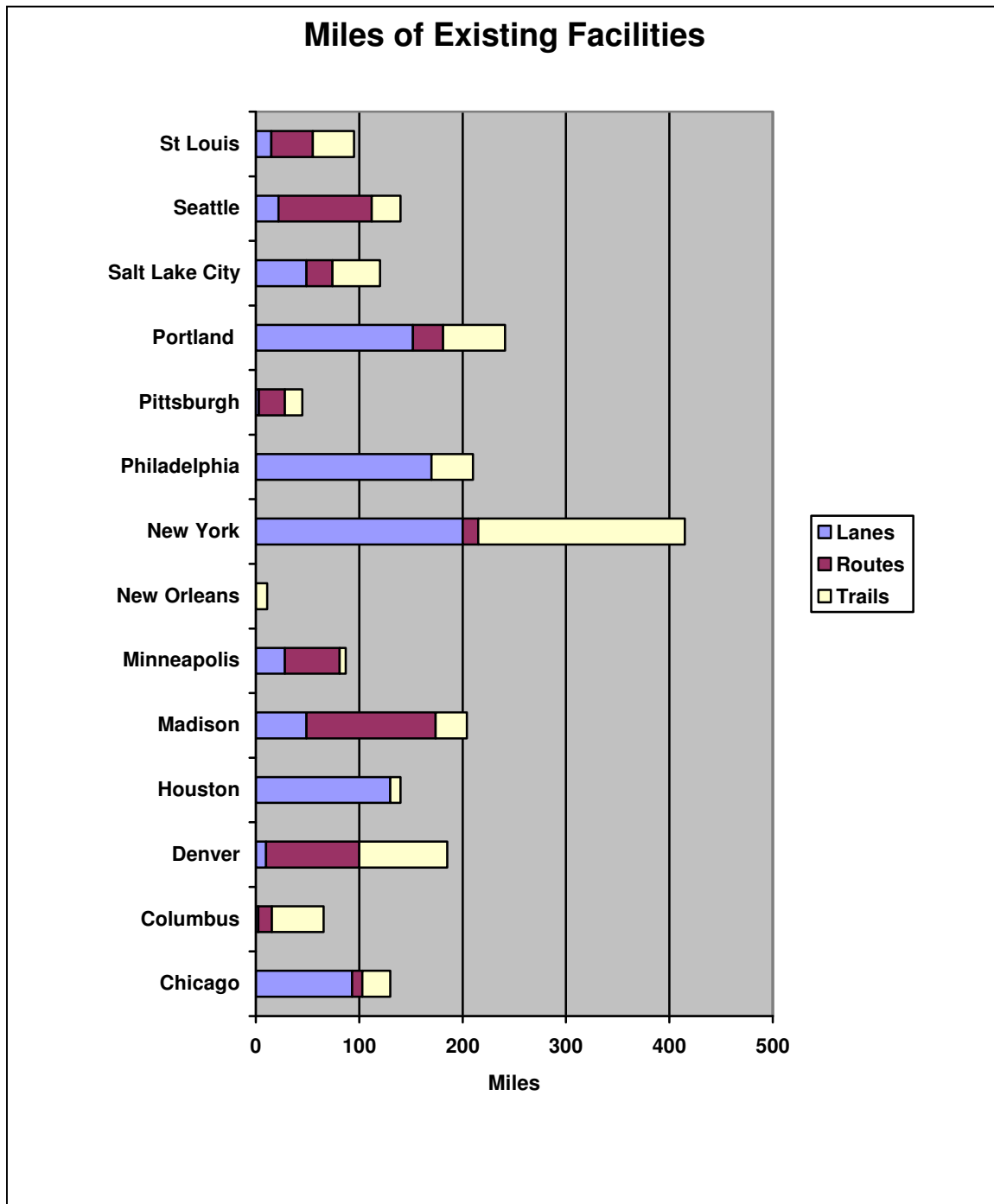
According to NHTS data, about 17% of all trips by any kind of mode are for work. So for the purpose of coming up with a multiplier, we ended up multiplying the total journey to work number by 5.9 (100/17) and the total bike to work number and multiplying by 20 (100/5). Then we divided the bike to work number by the total.

*Note: Data here is an estimate only and is not suitable for use in any other domain outside the scope of this project.

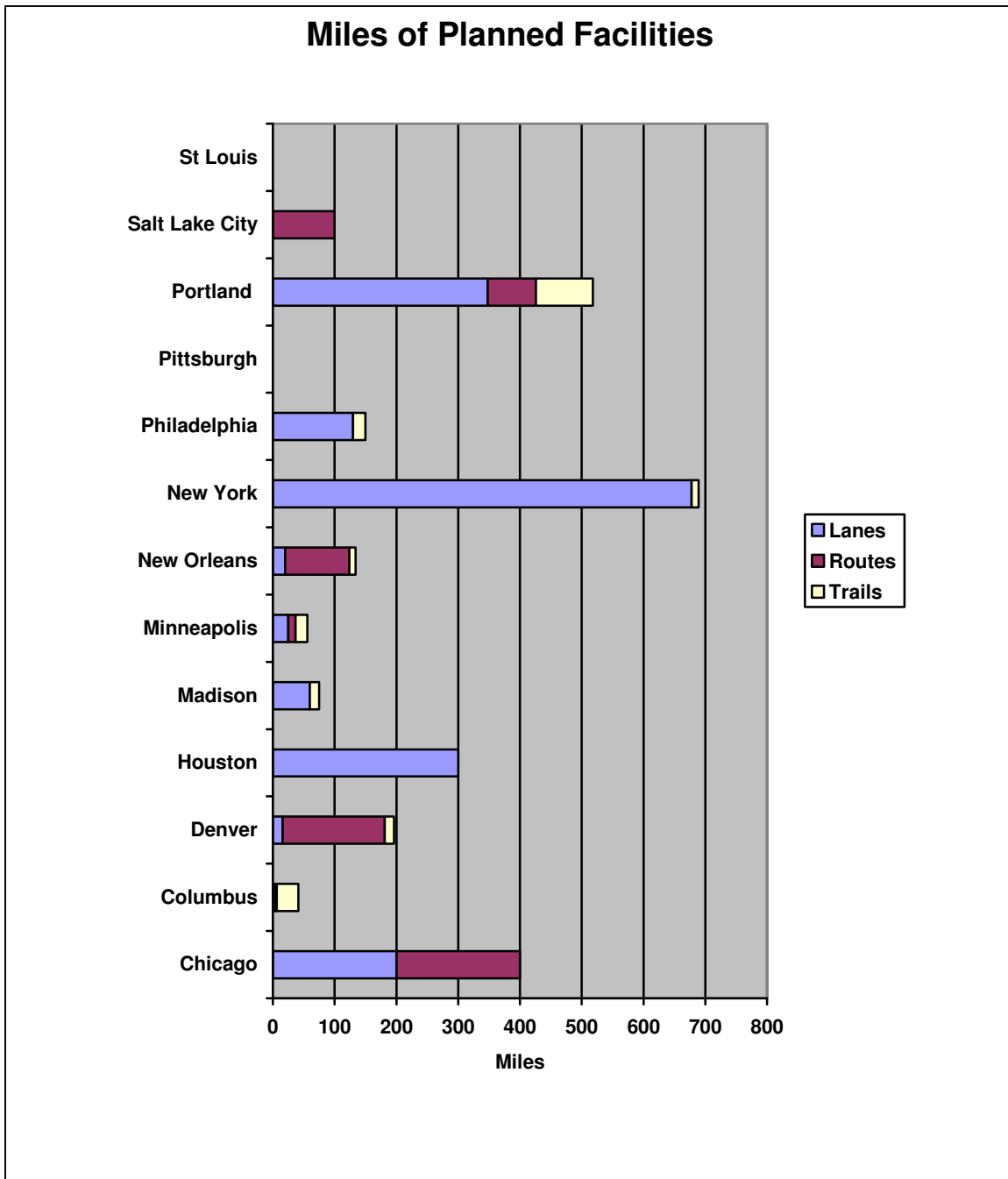


All data used for this graph comes directly from the 2001 National Household Travel Survey (NHTS). We wanted to define a measure of how many miles a day a person travels on his or her bike on a per capita basis. In other words, we used NHTS data for average trip length by bike, and average daily number of person bike trips, as well as the population of the region (metro area as defined by CMSA). The formula for this calculation:

(Avg bike trip length * Avg number of daily bike trips) / Total population of region

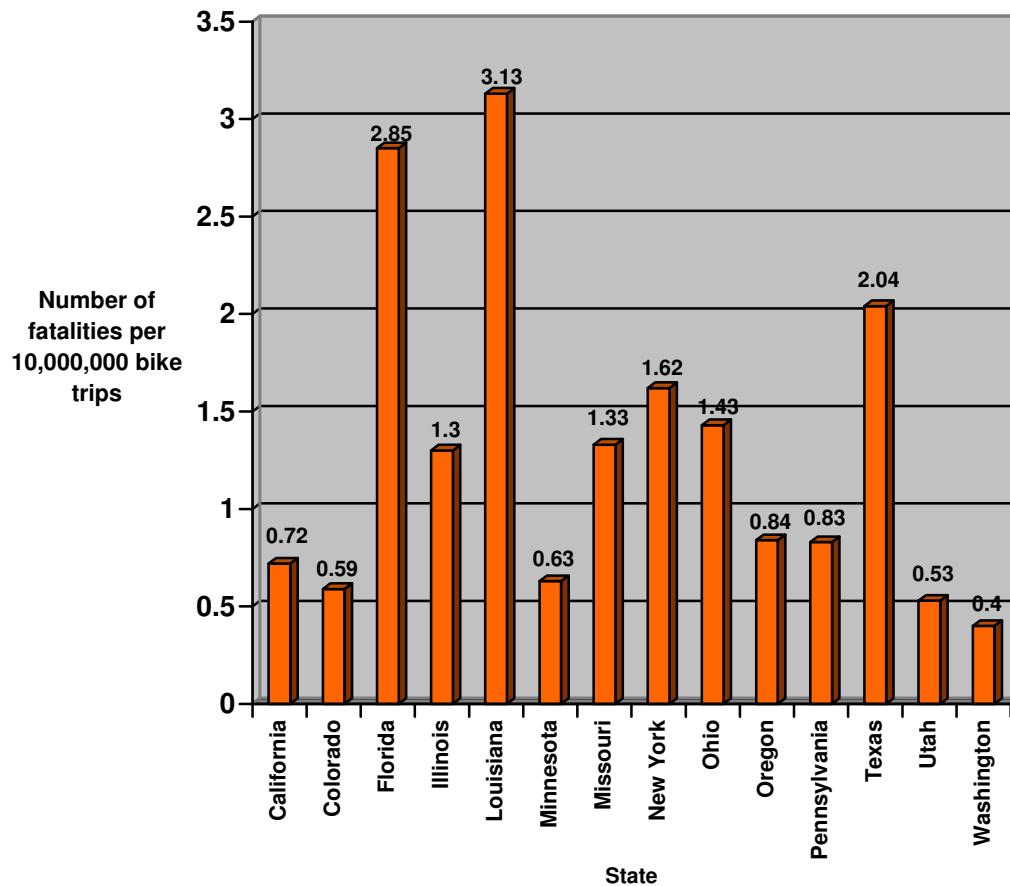


How many miles of facilities exist in each city as of 2004? Thunderhead organizations in each city reported on this data, sometimes with the help of a local DOT. “Routes” means “signed routes”, and “Trails” refers to miles of “off-street trails” (including sidepaths) within the urban area. “Lanes” refers to striped on-street bike lanes.



How many additional miles of facilities are planned in writing for these cities as of 2004? Thunderhead organizations in each city reported on this data, sometimes with the help of a local DOT. There exists a wide array of differences in terms of these facilities across the board. "Routes" have to do with "signed routes", and "Trails" are miles of "off-street trails" within the urban area.

Statewide Bicycling Fatalities per 10,000,000 trips



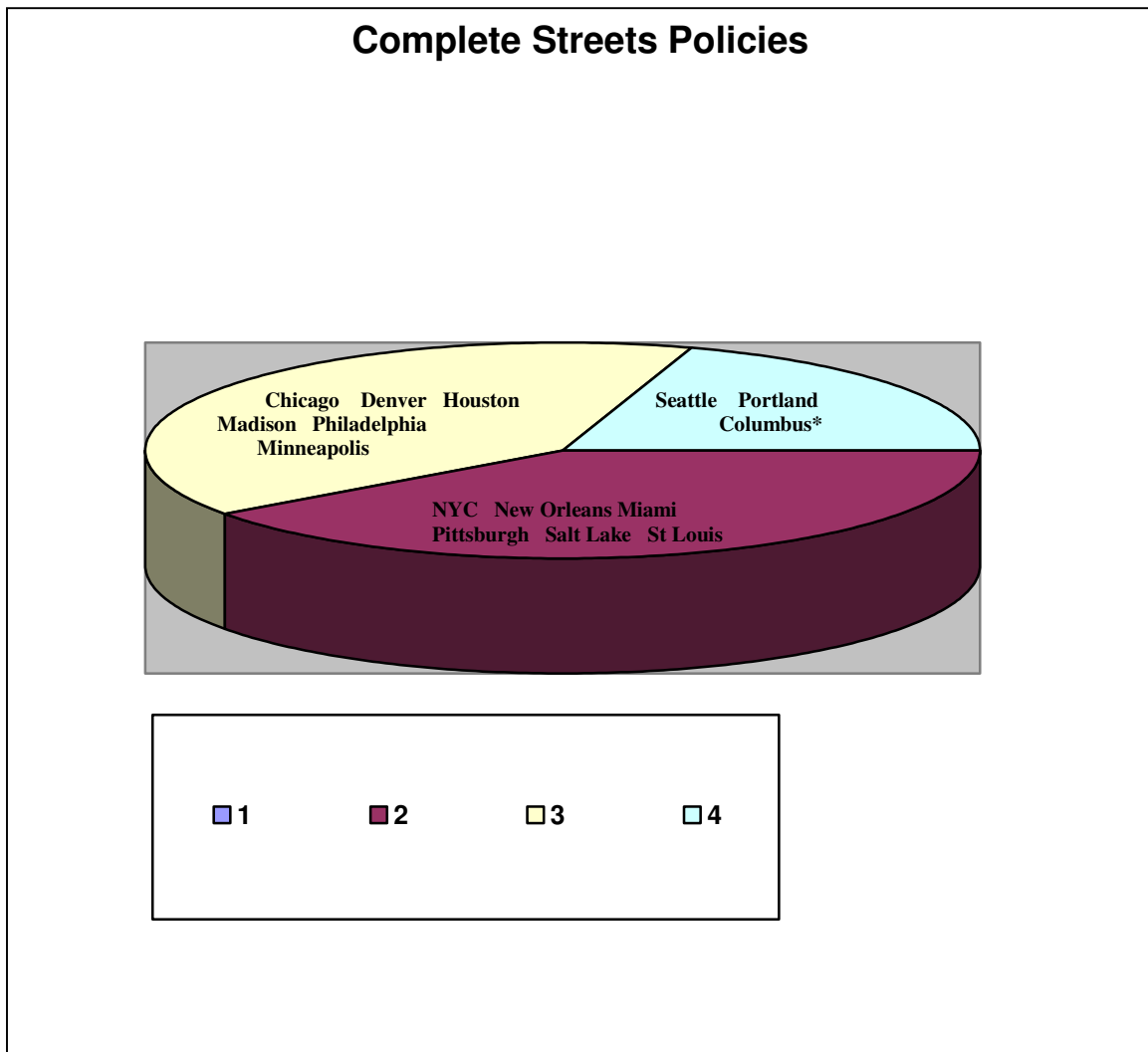
How does the rate of cyclist fatalities differ across different states? For this data set, we gathered state-by-state 2001 NHTSA bicyclist fatality data. Next we calculated bicycle mode share by state using census journey to work data and our mode share calculations. From here we looked at 2001 National Household Travel Survey (NHTS) total number of annual person trips data. We took number of bicycle trips per year, by state, and compared that with the number of annual fatalities. This graph shows how many fatalities to cyclists occur in these states for every ten million bicycle trips.

City-wide annual reported bicycle crashes and fatalities

	Annual bicyclist fatalities (single year average over 3 years '00/'01/'02) from NHTSA	Annual reported crashes per year involving bicycles, and latest year of report	Annual fatality rate per cyclist mode share (mode share % * pop)/fatalities	Annual crash rate per cyclist mode share (mode share % * pop)/reported crashes
Chicago	6	1185 (average '95-'99)	1 per 8537 (9)	1 per 43 (10)
Columbus	1	237 ('02)	1 per 8517 (10)	1 per 36 (13)
Denver	3	128 (average '97-'02)	1 per 6227 (11)	1 per 146 (3)
Houston	6	396 (average '00-'02)	1 per 5285 (12)	1 per 80 (5)
Madison	1	93 ('02)	1 per 23,466 (3)	1 per 252 (1)
Miami	2	668 (county-wide '01)	1 per 3550 (13)	1 per 54 (8)
Minneapolis	1	232 ('02)	1 per 25,608 (2)	1 per 110 (4)
New Orleans	2	250 (county-wide avg '99-'02)	1 per 9942 (6)	1 per 80 (5)
New York	17	3700 (info from advocate, no year given)	1 per 8821 (8)	1 per 41 (11)
Philadelphia	4	830 (info from advocate, no year given)	1 per 11,792 (5)	1 per 57 (7)
Pittsburgh	N/a	N/a	N/a	N/a
Portland	2	140 (avg '97-'02)	1 per 16,529 (4)	1 per 236 (2)
Salt Lake City	1	310 (county-wide number '02)	1 per 9480 (7)	1 per 51 (9)
Seattle	1	N/a	1 per 37,449 (1)	N/a
St Louis	1	110 ('02)	1 per 4282 (14)	1 per 39 (12)

Fatality data over selected cities 2000-2002 comes from NHTSA/National Center for Statistics & Analysis. These numbers involve bicyclists killed in motor vehicle crashes only. Data on reported bicycle crashes comes from our advocates assisting in this project. This graph provides these annual numbers as well as the year they were derived. In the final two columns we attempt to take fatality and crash data and place it in better context. We take the city's estimated bicycling mode share and multiply it by the population. Then we divide the number of fatalities and reported crashes by this number. In parenthesis, we rank the cities based on their overall rate of fatalities and injuries.

*Note: Reported bike crashes for Miami, New Orleans, and Salt Lake City are county-wide numbers. As a result, we used population of county and estimated county-wide bicycle mode share to derive annual fatality rate and annual crash rate. Some of these numbers provided by our advocates have not been independently verified with local police.



We asked leaders of Thunderhead Alliance member organizations to rate their cities' bicycle policies- i.e. to what degree has the city committed to providing bicycling accommodations and facilities as part of road projects? We asked the respondents to answer from '1' to '4', with '4' being the highest level of accommodation known as a Complete Streets policy.

Here are the classifications for each rating:

1. **Bike accommodations almost never permitted.**
2. **Bike accommodations sometimes provided when requested.**
3. **Projects routinely reviewed for need, accommodations sometimes provided when requested.**
4. **Bike accommodations always provided unless determined to be unreasonable. Justification for not providing accommodation is required. Also known as a Complete Streets policy.**

Ratings 1-3 are qualitative in nature. They are based upon the Thunderhead leader's experience in dealing with the level of accommodation in their cities. Rating 4 requires such a policy to be in place.

* note: The Columbus region just unveiled a complete streets policy in late July 2004.

Staffing Levels and Existing Planning

	Full-time equivalent city bike staff	Full-time equivalent county-level dedicated bike staff (in region, includes MPO employees)	Existing City Bike Plan?	Existing Suburban Bike Plans?
Chicago	10	3	Yes	2 county plans, some municipal, regional plan expected
Columbus	2	2	No	1 regional plan, some municipal
Denver	1	3	Yes	Some municipal
Houston	3	2	Yes	None known
Madison	1.5	0	Yes	County plan
Miami	N/a	2	Yes	Some municipal
Minneapolis	1.25	N/a	Yes	3 county plans
New Orleans	0	0.5	No	Regional plan expected
New York	10	1.5	Yes	Some
Philadelphia	0	1	Yes	2 county plans, some municipal
Pittsburgh	0	1.	Yes	None known
Portland	11	5	Yes	Regional plan, and all jurisdictions have bike plan element
Salt Lake City	1	.5	No	Some
Seattle	Awaiting response	Awaiting response	Yes	Some
St Louis	0.5	1	No	Regional plan expected

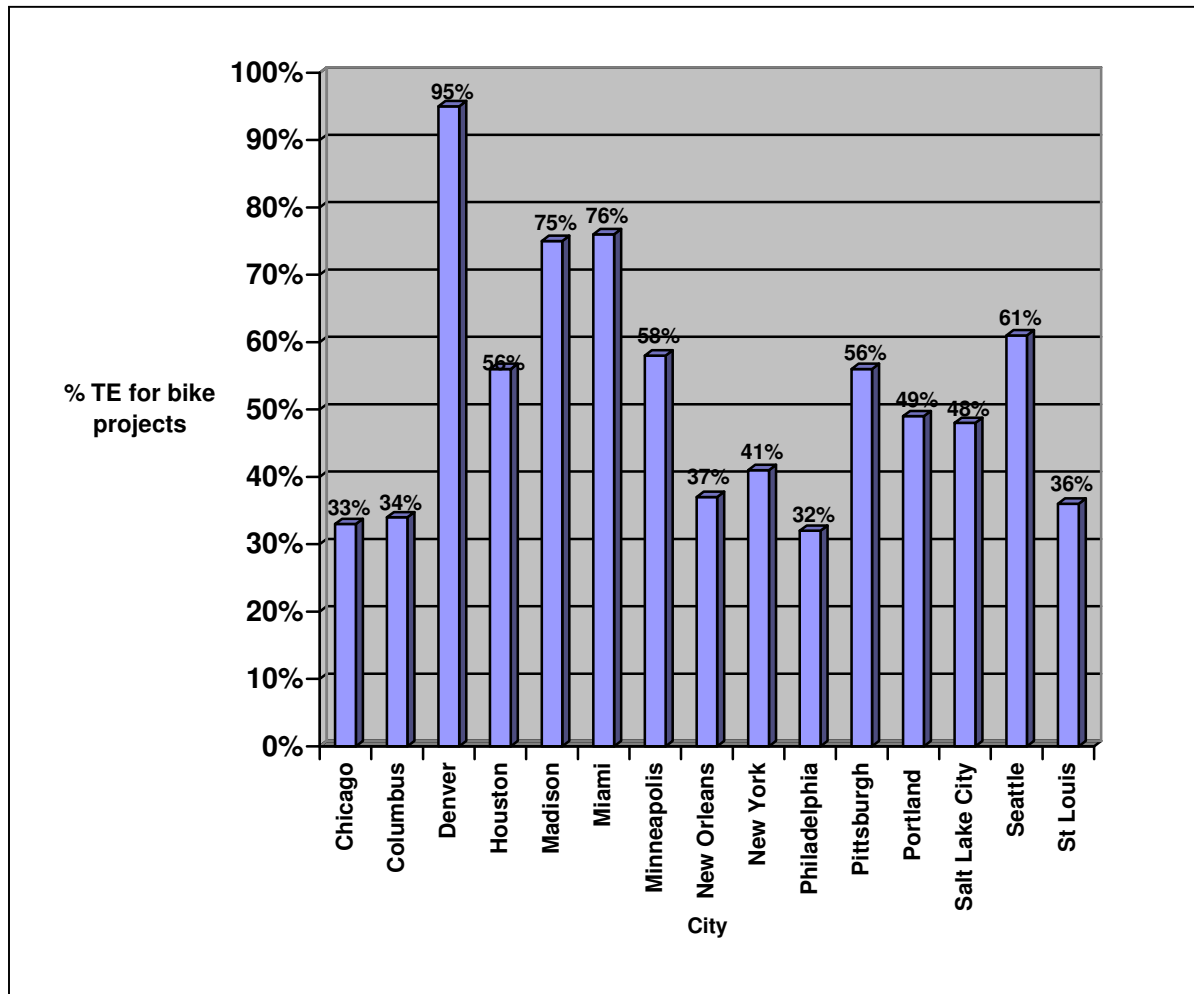
Leaders of Thunderhead Alliance organizations provided all data for this section.

Police on Bikes and Bikes on Transit

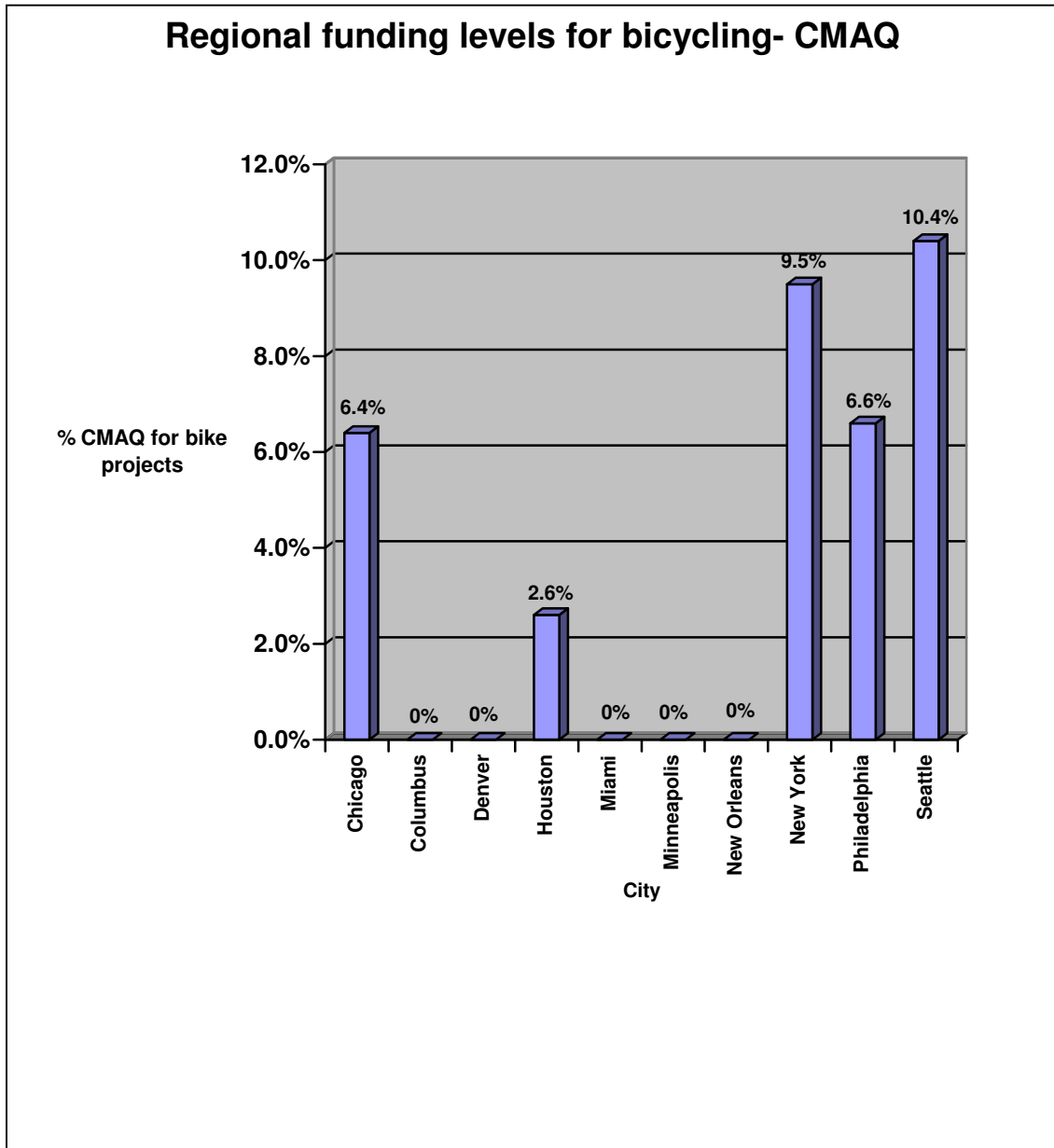
	Police on bikes in city?	Are bikes permitted on transit?
Chicago	Yes	Yes
Columbus	No	Expected Sept '04
Denver	Yes	Yes
Houston	N/a	N/a
Madison	Yes	Yes
Miami	Yes	Yes
Minneapolis	Yes	Yes
New Orleans	Yes	Expected late '04 or early '05
New York	Yes	Yes
Philadelphia	Yes	Yes
Pittsburgh	Yes	Yes
Portland	Yes	Yes
Salt Lake City	Yes	Yes
Seattle	Yes	Yes
St Louis	Yes	Yes

Leaders of Thunderhead alliance member organizations provided all data for this section.

Funding Levels for Bicycling- Transportation Enhancements Funds

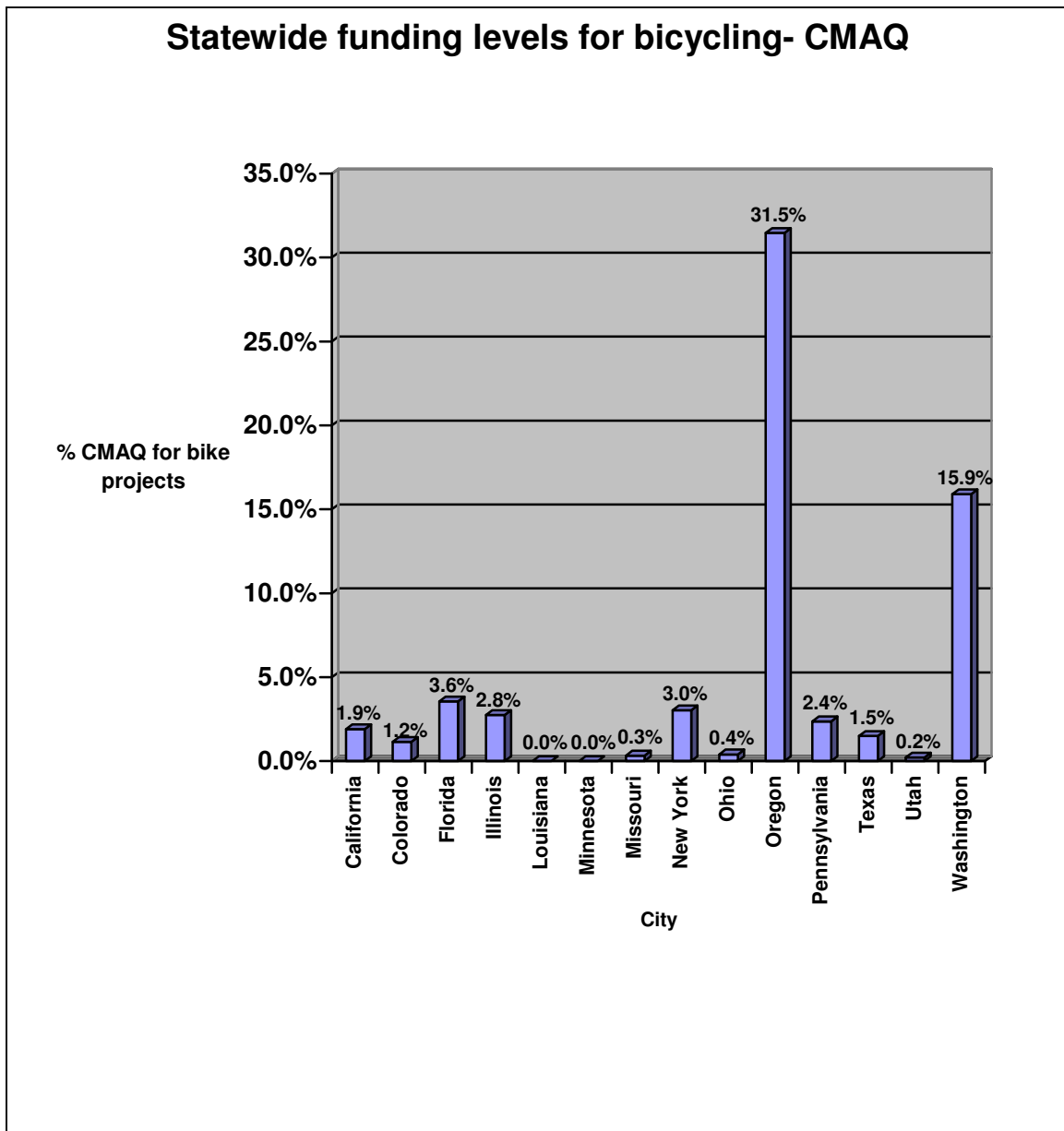


Data for Transportation Enhancements is submitted by states to the Transportation Enhancements Clearinghouse (NTEC). The data represented on this graph is taken for the years 1998 to present and reflects percentage of bike projects funded out of Enhancements to all projects on a regional basis (city and surrounding suburbs and counties). Our regional boundaries are equivalent to the boundaries set up by local metropolitan planning organizations (MPOs). Different states and regions have different funding cycles, so the amount of years or projects represented in this graph might differ from place to place. This data reflects approved projects, not necessarily obligated ones. The graph represents bike or bike/ped projects including rails to trails projects, but does not include stand-alone pedestrian projects (i.e. sidewalks). Since it's not always possible to define the exact scope of certain project descriptions, this data collection included many multi-modal projects as "bike projects". It is fair to say that all the projects represented here include a significant bicycle element.



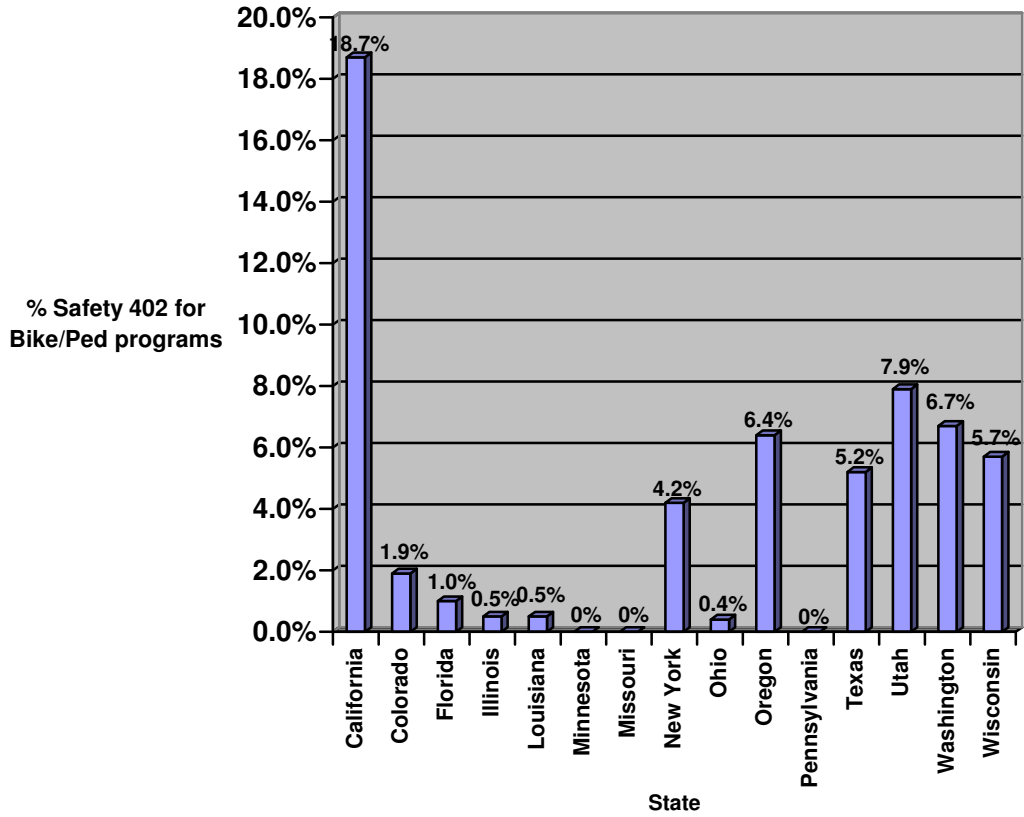
CMAQ data was reported by leaders of Thunderhead Alliance member organizations, in conjunction with regional MPOs (metropolitan planning organizations). We asked advocates to report on this data over a three-year period and assess the amount of approved bike projects as compared to all types of projects.

*Note: Columbus Ohio's MPO has indicated they are beginning to consider the use of CMAQ funds for bike projects as early as 2004.



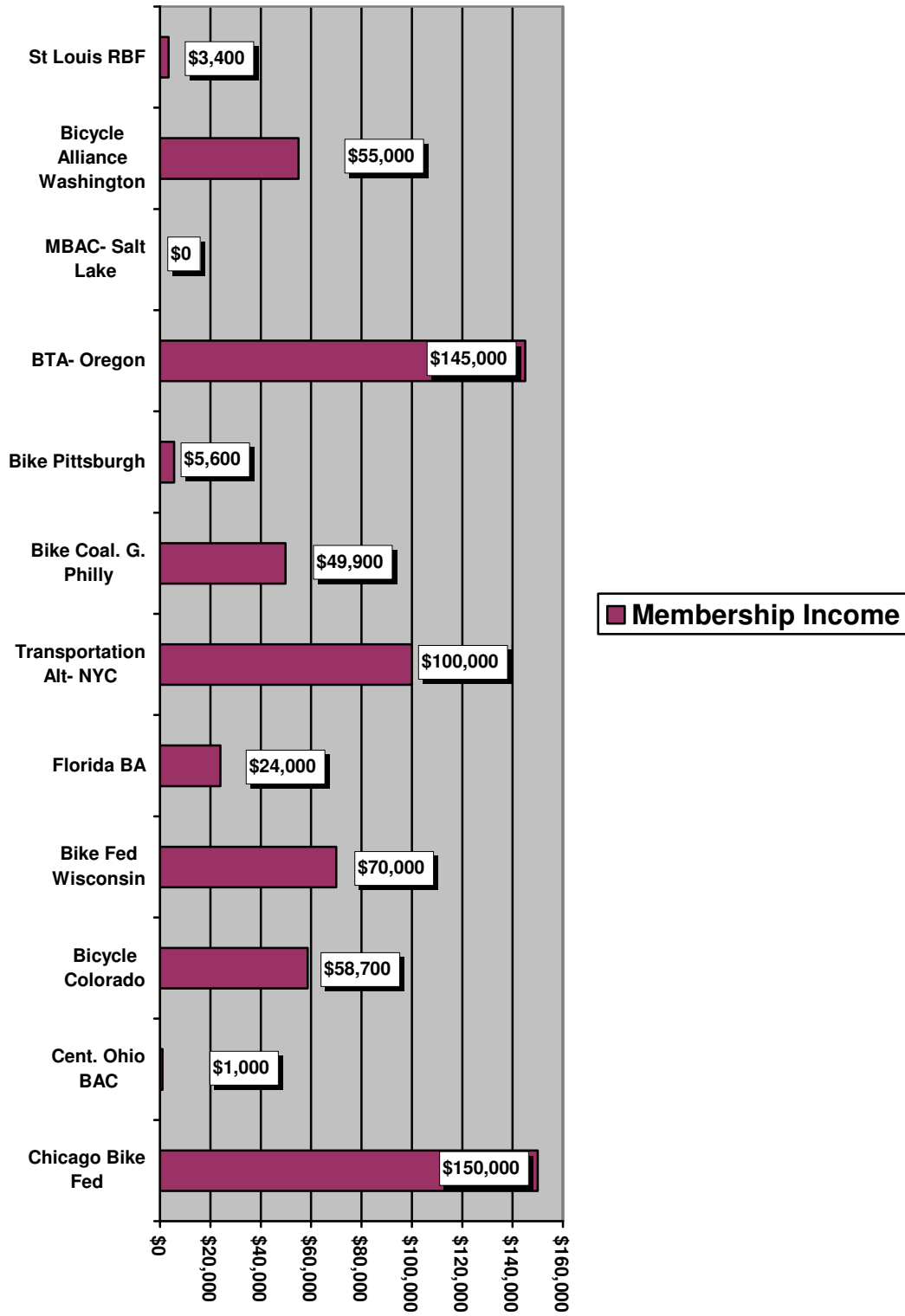
This data was gathered for the years 1998, 1999, and 2000 from the Federal Highway Administration's state-by-state *CMAQ Annual Reports*. The graph represents the percentage of CMAQ funds allocated to bicycle projects as compared to all projects.

Statewide Safety 402 funding for bike/ped programs

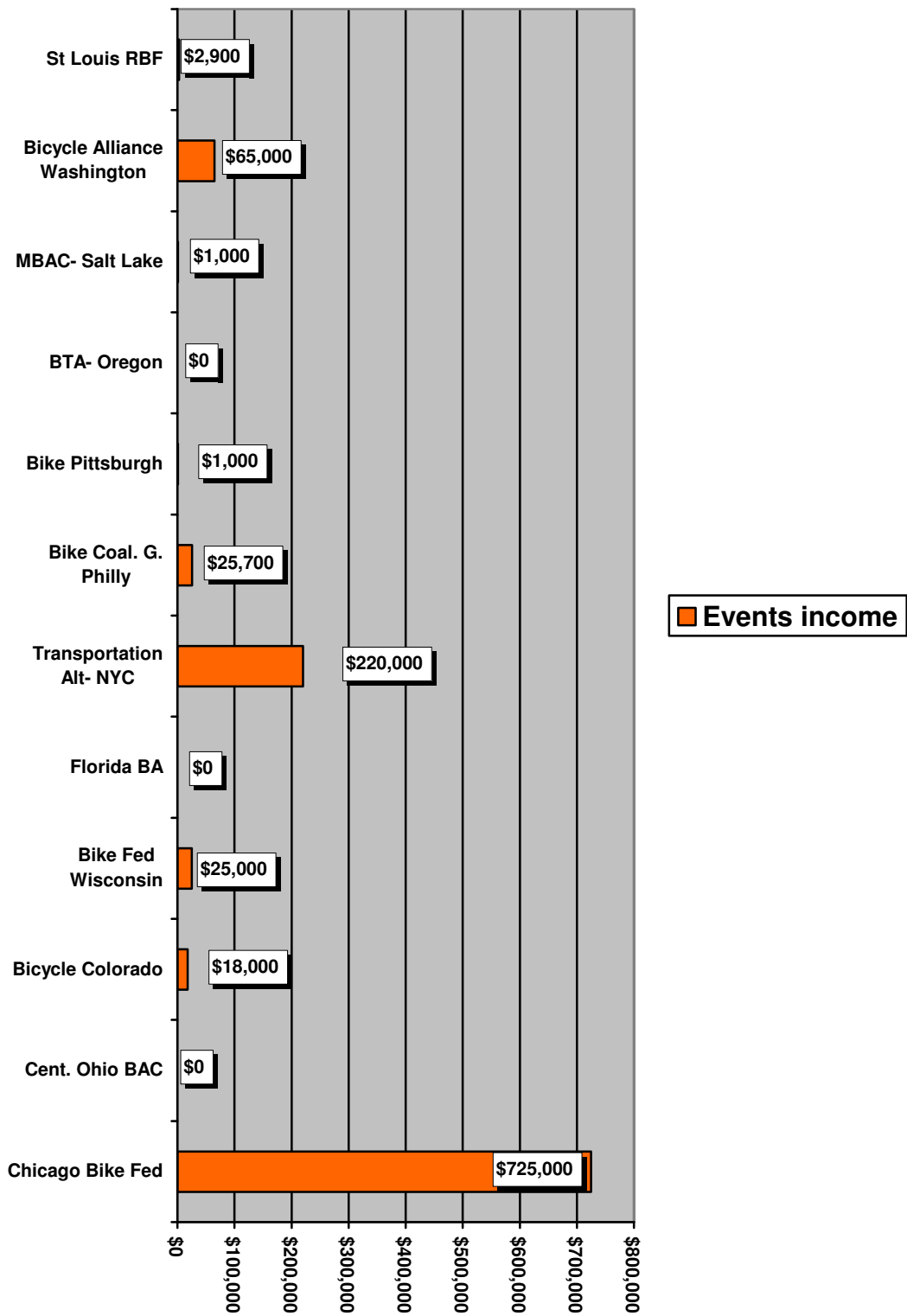


We received data for Section (Safety) 402 funds from NHTSA. This data compares total expenditures to bike/ped expenditures across these states for fiscal years 2000-2002.

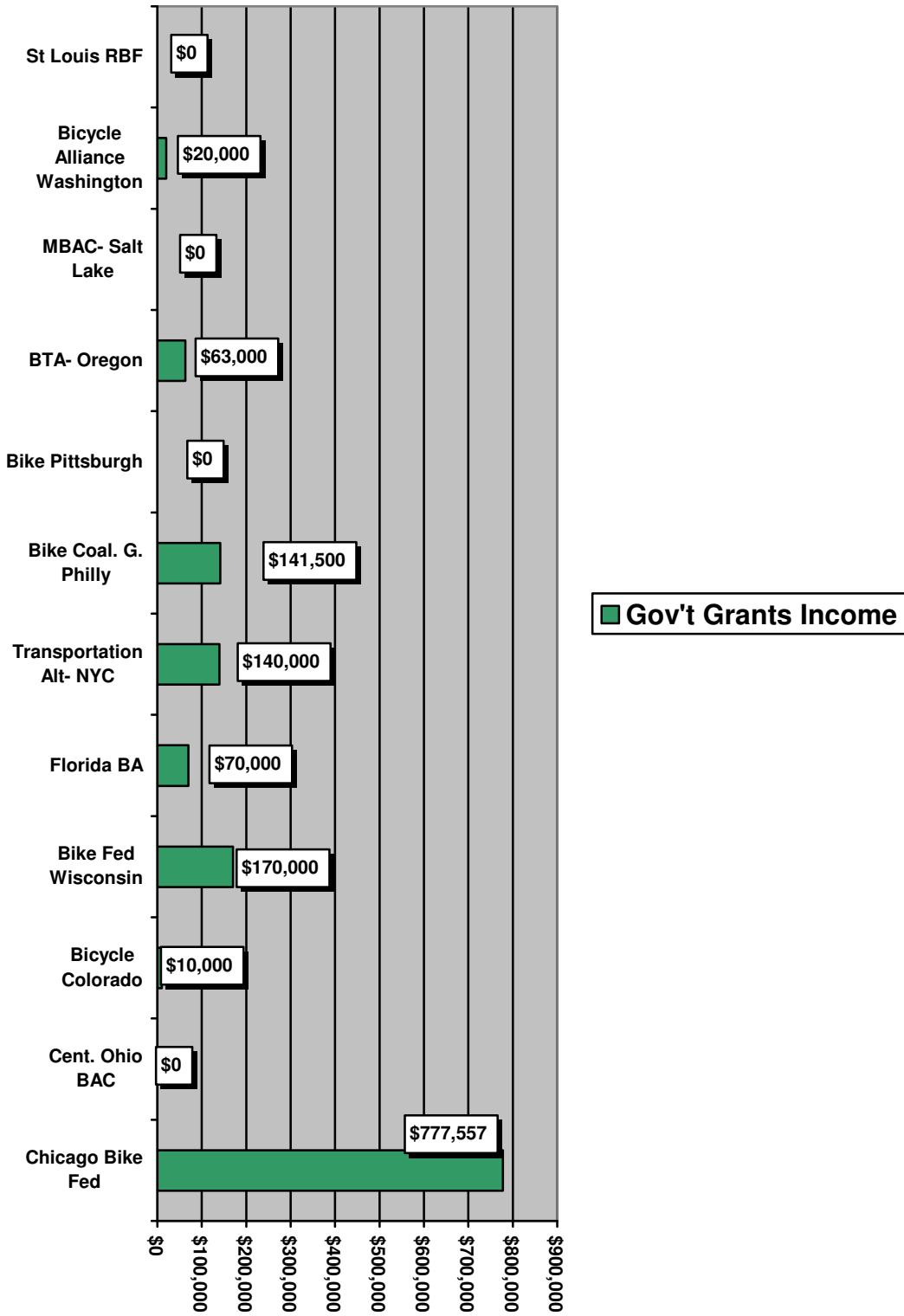
Organizational Benchmarks- Income from Membership



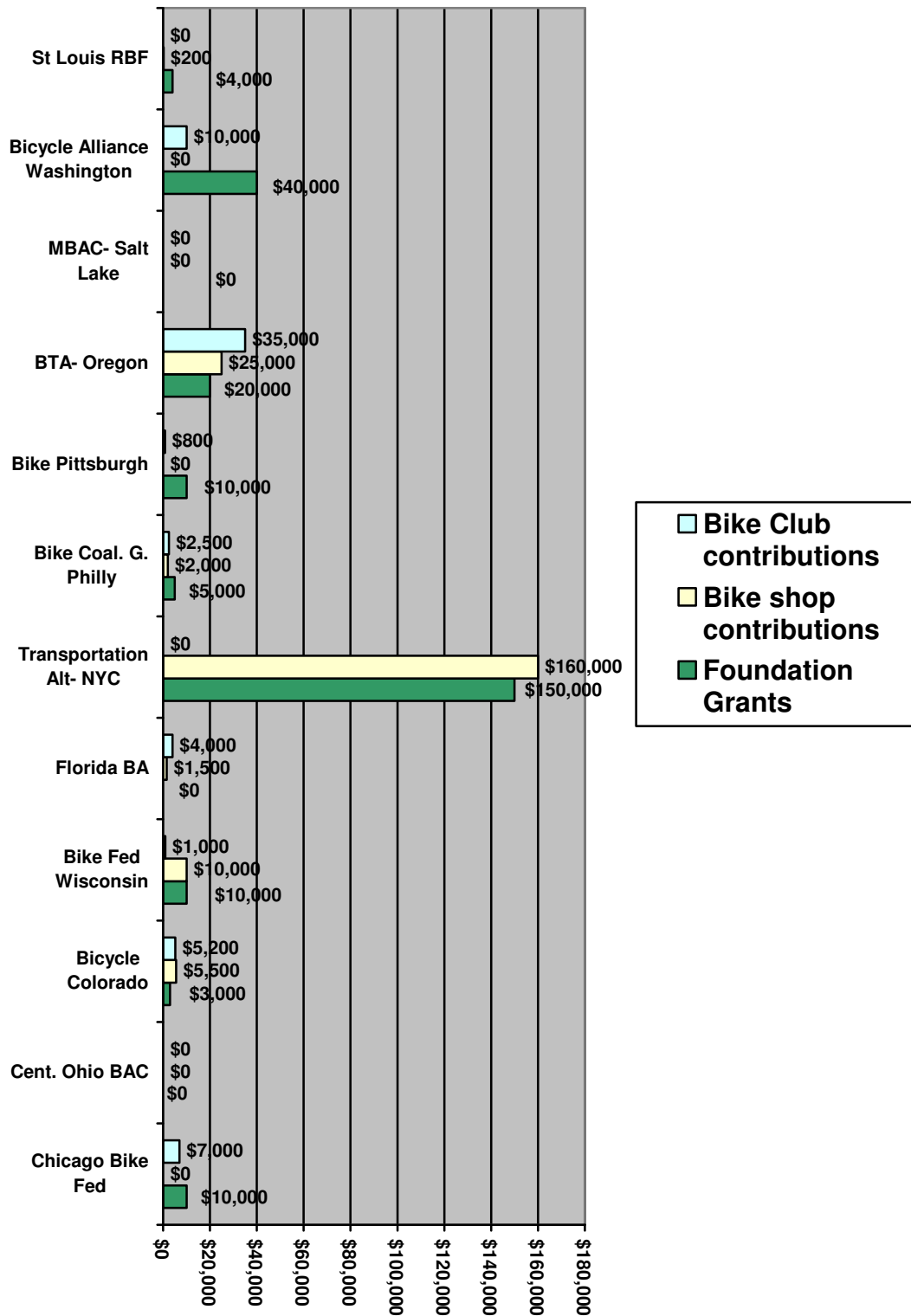
Organizational Benchmarks- Income from Events



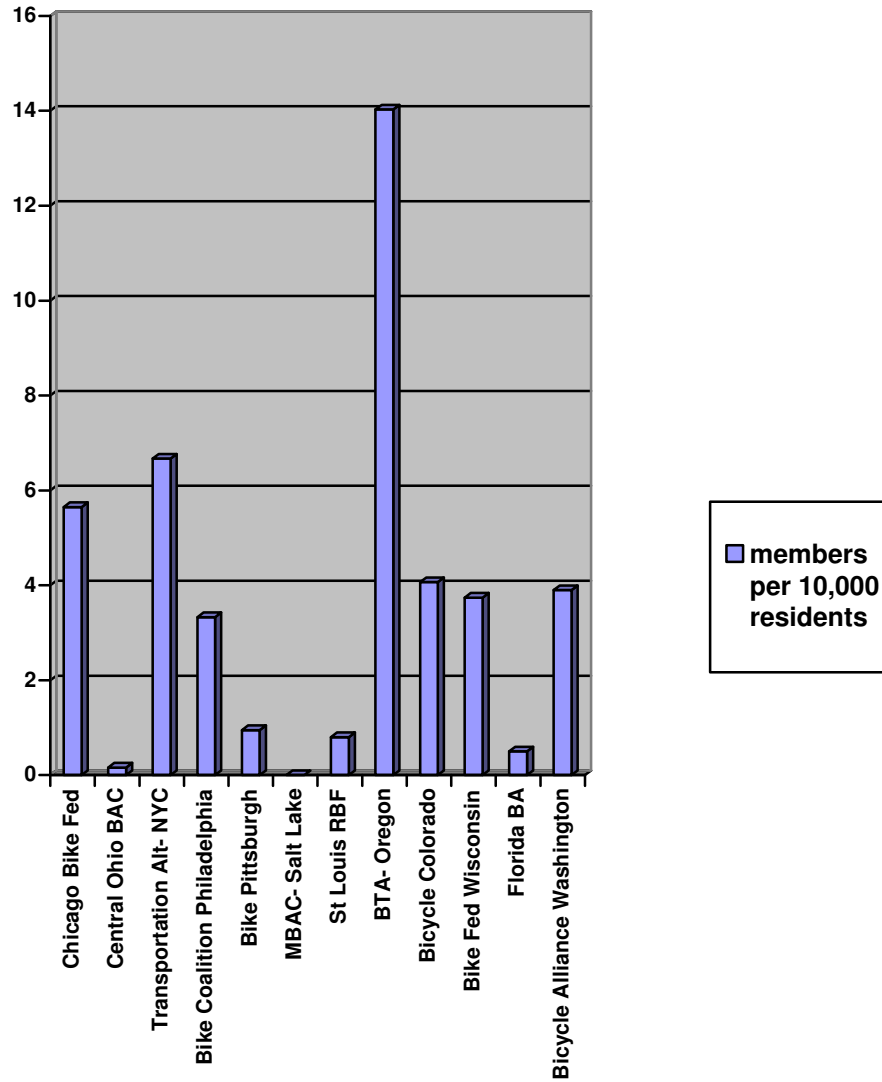
Organizational Benchmarks- Income from Government Grants



Organizational Benchmarks- Other Income Sources



Organizational Benchmarks- Number of Members per Population of Region or State



This is an examination of certain advocacy groups' membership numbers as compared with the populations in their regions. For state organizations we looked at state populations and for local organizations we looked at regional (metro) populations. The rightmost 5 organizations (BTA, Bicycle Colorado, Bike Fed Wisconsin, Florida Bicycle Alliance, and Bicycle Alliance of Washington) are all statewide organizations as opposed to the others, which are regional.

Data Sources

- Year 2000 Census Data is available online and was used for many elements of this report: <http://factfinder.census.gov>
- The National Household Travel Survey (NHTS) is the nation's inventory of daily and long-distance travel. 2001 National Household Travel Survey Data was also utilized for certain correlations, where appropriate: <http://nhts.ornl.gov>
- The NHTS is the integration of two national travel surveys: the Federal Highway Administration-sponsored Nationwide Personal Transportation Survey (NPTS) and the Bureau of Transportation Statistics-sponsored American Travel Survey.
- The Bureau of Transportation Statistics (BTS) compiles, analyzes, and publishes a comprehensive set of transportation statistics. The BTS conducts a monthly household survey of 1,000 households each month, and collects data on core questions about general travel experiences, satisfaction with the system, and some demographic data: <http://www.bts.gov/>
- The National Highway Traffic Safety Administration (NHTSA) compiles and publishes data related to bicycle fatalities and some bicycle injuries: <http://www.nhtsa.dot.gov/>
- The Fatality Analysis Reporting System (FARS) was conceived, designed, and developed by NHTSA in 1975. FARS contains data derived from a census of fatal traffic crashes within the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a traffic way customarily open to the public and result in the death of a person (occupant of a vehicle or a non-motorist) within 30 days of the crash.
- The National Transportation Enhancements Clearinghouse (NTEC) is an information service sponsored by the Federal Highway Administration (FHWA) and Rails-to-Trails Conservancy. NTEC works to provide timely and accurate information necessary to make well-informed decisions about Transportation Enhancements (TE). This Web site explains all the particulars of the TE program, including information on applying for TE funds, how funds are distributed and how TE is managed by each state: <http://www.enhancements.org/>
- The Federal Highway Administration publishes state-by-state annual reports of CMAQ spending: <http://wwwcf.fhwa.dot.gov/environment/cmaggps/>
- The remainder of our data was gathered with the help of leaders of Thunderhead Alliance member organizations, with the kind assistance of members of city and state DOTs as well as MPOs.