

Reducing Kansas City's Greenhouse Gas Emissions by Increasing Walking and Bicycling

A proposal for Kansas City, Missouri's Climate Projection Plan.

Kansas City, MO can realize a significant reduction in greenhouse gas emissions if we increase our rate of walking and bicycling up to the national average. Currently **4.3% of all trips** made in the KC metro area occur on foot or bicycle, which is less than half the **national average of 9.5%**. By bringing KC up to the national average we could reduce our **carbon dioxide** emissions by more than **300 million pounds** a year and our fuel expenditures by over \$30 million.

Since the average trip in the region is **less than five miles**, it is quite doable to shift a significant number of our trips to bicycling and/or walking. In order to achieve this goal we would need to take some specific actions to create an **infrastructure and culture** conducive to bicycling and walking.

- Bring **sidewalks** to all parts of the city, and adequately maintain our existing sidewalks.
- Create standardized and pedestrian-friendly designs for **crosswalks, traffic lights, etc.**
- Implement an on-street **network of bike routes** focused on transportation - including both dedicated bike lanes and shared-use lanes.
- Commit to vigorous **enforcement of traffic laws** to keep bicyclists and pedestrians safe.
- Provide bicycle facilities at **destination points**, such as parking, showers, lockers, etc.
- Adopt a **Complete Streets policy** that incorporates all street users into the transportation system.

While infrastructure changes do take time to implement, **some things can be done today**. For example, traffic enforcement, bike routes, bike parking, and crosswalk striping can all start today. The city even has plans and studies for many of these issues, but we need to pull the plans off the shelf and make them happen.

Furthermore, I am not proposing anything radical or unreasonable. I am simply proposing that we become average.

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Pollution Reduction Calculation:

6,899,591 total trips per day in the KC metro area

(MARC Household Travel Survey 2003 -

<http://www.marc.org/transportation/pdf/travelsurveyreport2003pg23-48.pdf>)

2,518,350,715 trips per year

4.3% bike/ped mode split (3.9% ped and 0.4% bike)

9.5% national average (8.3% ped 0.8% bike)

5.2% difference (4.4% ped and 0.4% bike)

$2,518,350,715 * 4.4\% = 209,023,109$ trips shifted to walking

$2,518,350,715 * 0.4\% = 10,073,403$ trips shifted to bikes

Average walking trip length is 1.5 miles

$209,023,109 \text{ trips} * 1.5 = 313,534,664$ miles shifted to walking

Average bike trip length is 3.6 miles

$10,073,403 \text{ trips} * 3.6 \text{ miles} = 36,264,250$ miles shifted to bikes

349,798,914 total miles shifted to bike/ped

Pollution savings (MARC emissions calculator)

331,595,468 pounds of Carbon Dioxide

9,757,539 pounds of Carbon Monoxide

733,191 pounds of Nitrous Oxide

871,055 pounds of Volatile Organic Compounds

Monetary savings of shifting 349,798,914 miles at \$2.00/gallon and mileage of 20 m.p.g. =
\$34,979,891