SOUTH BAY CITIES
CLIMATE ACTION PLANNING FORUM

Sustainable South Bay Neighborhoods:

A manual for quantifying emission reductions for neighborhood-oriented strategies

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This is a new entry into the market – an emissions manual for quantifying greenhouse gas mitigation strategies for neighborhood-oriented strategies. Existing emissions manuals are outdated, based on limited evidence, and don't offer adequate strategies for suburban communities. The new methodology will require that planners and other decision makers fully understand the travel patterns in their community.

KEY NUMBERS

Neighborhoods can achieve

15% fewer greenhouse gas emissions

through implementation of the South Bay neighborhood-oriented strategies.

This will affect

more than 50% of South Bay households

More aggressive implementation will result in greater reductions.

NARRATIVE

Currently, neighborhoods that don't have access to high-quality transit are left out of opportunities to access regional and state funds because greenhouse gas (GHG) reduction methodologies are not available for alternate strategies. This manual provides the emissions reductions for a new suite of neighborhood-oriented strategies through open and transparent methodology.

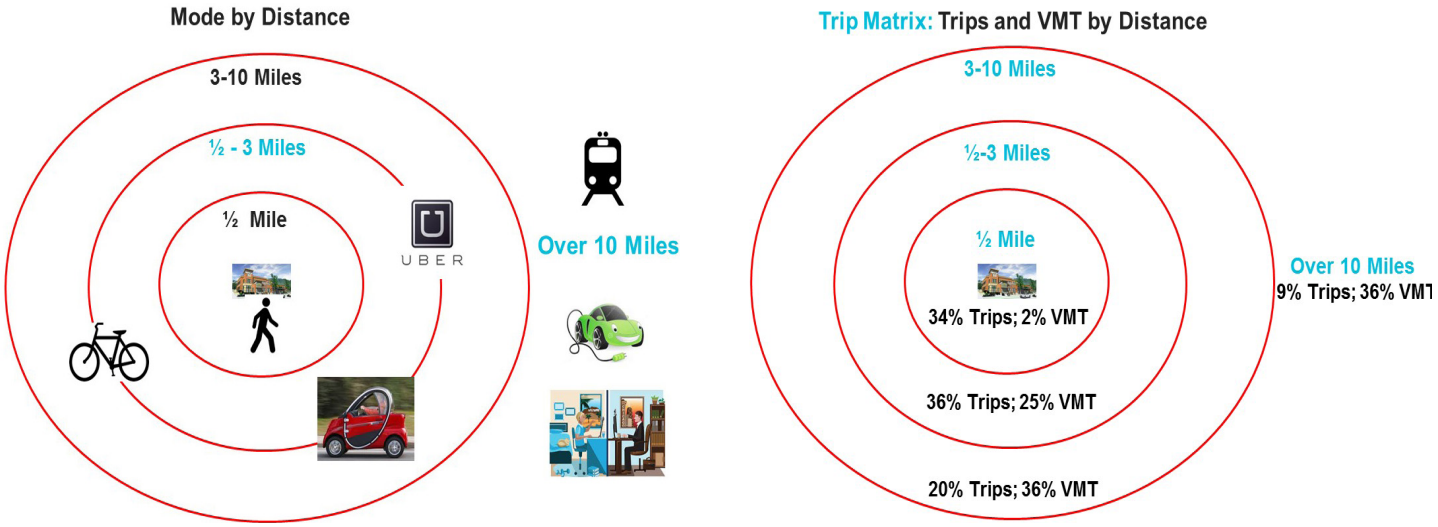
The methodology is particularly robust because it relies on a large, local database collected in the South Bay over the last 10 years. The database contains 3 large-scale studies which have provided more than 40,000 trips, including their origin and destinations, lengths, routes, modes, and speeds. The methodology covers the following strategies by distance: Land Use, Parking, Electric Mobility, and Workplace Strategies.

By utilizing this methodology, planners can model scenarios using different assumptions about land use, walking trips, transit trips, uptake of electric vehicles, parking, and workplace practices.

METHODOLOGY

Modes are limited by distances. In the South Bay communities, our surveys and data show that people usually don't make walking trips beyond a ½ mile. Average biking trips for activities tend to be around three miles in length, and neighborhood electric vehicles (NEVs) are not generally driven further than 10 miles from the home. Rail is convenient for long distance regional trips. **Therefore, the neighborhood-oriented strategy methodology uses distance rings from the home to consider mode-split and mode usage.**

The methodology is unique in that it considers how trips are made from the point of view of the household, using a nearby neighborhood center as the focus of land use. It offers an integrated approach to neighborhood planning. The robust South Bay dataset reveals how trips and vehicle miles traveled (VMT) are made at the various modal boundaries. 70% of South Bay household trips are under 3 miles. This accounts for under 30% of household VMT. The reverse is true for distances over 3 miles. More than 70% of South Bay household VMT occurs over 3 miles, representing under 30% of household trips.



The methodology reveals that addressing short trips is as necessary as addressing long ones. The neighborhood-oriented land use strategies focus on bringing more trips closer to the household through the creation of neighborhood centers and parking regulations. This pulls more trips closer to the home and increases walking, which is the cleanest and healthiest mode available. Workplace practices such as telecommuting also draw in long distance trips closer to the home. Both long and short-distance trips are addressed through electric vehicles, bicycles, shared mobility, and shuttles/transit.

The methodology has shown that through fully implementing the neighborhood-oriented strategies, communities can see average GHG emission reductions of 15%. This reduction would occur for over 50% of households in the South Bay.

LEARN MORE

To view the full study, visit www.southbaycities.org/programs/climate-action-planning

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