

This handout is a working summary of some of the data sources that will be used in the Snapshot Analysis, intended to provide additional explanation as to what information is available from each. This handout also describes in greater detail how the transit service metrics will be analyzed.

I. Summary of Data Sources

Data Source	From	Year(s)	Source for
Regional Transit Database	MTC (supplied by transit operators)	2005–2009	Transit availability and frequency/capacity analysis
U.S. Census	U.S. Census Bureau	2000	Community/neighborhood-level demographic and socioeconomic data (blocks and block groups)
American Community Survey	U.S. Census Bureau	2005–2007	Regional and subregional-level socioeconomic data (counties, larger cities, PUMAs)
California ES-202 Employment database	California Employment Development Department (EDD)	2006	Location of establishments and employment by TAZ/neighborhood
Projections 2007	ABAG	2006	Land use data and household and employment estimates by TAZ/tract
California State-Wide Integrated Traffic Reporting System (SWITRS)	California Highway Patrol	1999–2007	Ped/bike collision data
Emissions inventory estimates from the Community Air Risk Evaluation (CARE) Program	Bay Area Air Quality Management District (BAAQMD)	2005	Toxic Air Contaminant emissions from on-road mobile sources (cars and trucks)

Regional Transit Database (RTD)

The Regional Transit Database comprises the data used in MTC's 511.org Transit Trip Planner web application, provided by transit operators. It provides a comprehensive GIS coverage of Bay Area transit stops, including routes and frequencies for all time periods (weekdays, evenings, weekends). Snapshots of the RTD are available for several time points between July 2005 and April 2009. No comprehensive data is available before 2005.

Census 2000

Data from the 2000 Census is available down to the block level for "short form" Census data (population counts, household counts, population by race/ethnicity counts), and down to the block group level for "long form" Census data (households by income level, vehicle availability, workers at work by income level, etc.). There are 76,000+ blocks and 4,422 block groups in the nine-county Bay Area.

American Community Survey

ACS data is available on an annual basis for larger geographical areas in the region. One-year data is available from the 2005, 2006, and 2007 ACS at various levels of larger geographies within the region (areas with 65,000+ population, including each of the nine counties, the 25 largest cities, the 11 urbanized areas, and the 54 "Public Use Microdata Areas." In addition, a

rolling 3-year estimate (2005–2007 inclusive) is available for areas of 20,000 population or greater. Eventually the five-year accumulation of ACS data for 2005–2009 will be released at the census tract and block group level, perhaps by fall 2010. These data accumulations will replace the “long form” survey data reported with the 2000 and earlier decennial censuses.

California Employment Development Department (EDD) ES-202 Employment Database

This economic database is based on unemployment compensation records provided by all employers to the State of California. It is a comprehensive GIS database on all Bay Area employers, with data on employment counts and industry for the first three quarters of calendar year 2006. Individual data records may not be released due to restrictions on use of this data, so data must be aggregated to larger areas of geography (such as travel analysis zones or communities of concern). The EDD database provides excellent data on employment counts by detailed industry, but does not provide information on the earnings level by jobholders.

Association of Bay Area Governments’ (ABAG) Projections 2007

ABAG’s *Projections 2007* will provide detailed socioeconomic and land use data for the analysis. Data is available at the census tract and travel analysis zone level for recent estimates of households by income level, jobs by industry, land use density, etc.

California State-Wide Integrated Traffic Reporting System (SWITRS)

The California Highway Patrol assembles data annually on motor vehicle (automobile, truck, or motorcycle) collisions with other motor vehicles as well as collisions with bicyclists and pedestrians. These data only include motor vehicle collisions reported to law-enforcement authorities; thus there may be a number of injury collisions involving pedestrians and cyclists that are not reported. Generally, jurisdictions that have greater populations or large non-motorized trip generators (such as universities) report higher numbers of collisions; however, lacking reliable data about pedestrian and bicycle trips, it is difficult to produce a conclusive rate for such collisions.

BAAQMD Emissions Inventory Estimates

The Bay Area Air Quality Management District produces estimates of emissions from a variety of sources, both stationary and mobile, including cars and trucks. Emissions inventories are estimated using computer models developed by the California Air Resources Board, which for on-road mobile sources (i.e. cars and trucks) take into account factors such as vehicle fleet composition, average fuel economy, and congestion. BAAQMD’s most recent inventory of emissions is from 2005 and is estimated over a 1-km-square grid covering the region.

In addition, the Air District has identified through its Community Air Risk Evaluation (CARE) Program six communities at risk of exposure to Toxic Air Contaminants (TACs) from point sources, area sources, and on-road and off-road mobile sources. These communities are Eastern San Francisco, Richmond, Concord, West Oakland, East Oakland/San Leandro, and San Jose. BAAQMD’s CARE Program emphasizes risk from exposure to diesel exhaust, which is a major contributor to airborne health risk in California.

II. Overview of Transit Service Analysis

Transit Availability Analysis (Geographic Coverage)

The purpose of the geographic coverage analysis is to evaluate the current regional transit system in terms of walk distance to the nearest available transit. This is done by calculating walkable buffers around all transit stops and stations, and dividing neighborhoods into areas with either a “short walk distance” (less than 1/3 mile), “moderate walk distance” (1/3 to 2/3 mile), or “long/no walk distance” (greater than 2/3 mile). These 1/3-mile and 2/3-mile distances are being used in MTC’s new set of activity based models currently under development.

Transit Service Density Analysis

The Transit Service Density Analysis is a detailed, GIS-based analysis of the 2005 and 2009 Regional Transit Database that will focus on transit services available by location or neighborhood and can also reflect system changes since 2005. Three sets of analyses are possible:

1. *Transit Stop Density*. A basic map showing the density of transit stops or stations per square mile.
2. *Transit Stop Frequency Density*. This expands the analysis by weighting each transit stop by the number of buses, trains, or ferries stopping for passengers at that location within a set time period (such as weekday midday, Saturday or Sunday midday, weekday late-night hours, etc.)
3. *Transit Stop-Frequency-Capacity Density*. This expands on the previous analysis by further weighting the seating capacity of the bus, train, or ferry. The product is a map showing the “transit seats provided per hour, per square mile” density.