7. Environmental Hazards, Pollution, and Community Health

7.1 HAZARDOUS MATERIALS AND POLLUTION EXPOSURE

As shown in Figure 7-1 and Figure 7-2, Mira Mesa has significant numbers of hazardous waste sites and clean up sites compared to other census tracts in California. Many census tracts score above 80 percentile, which means the average number of these sites are higher than 80 percent of the census tracts in the state.

Past or present industrial, light industrial or commercial sites commonly have hazardous materials released to the subsurface soil and/or groundwater.

Figure 7-3 highlight Mira Mesa traffic density, a measure of total traffic volumes divided by the total road length for the year 2013, by Census Tract. The map also illustrates known or potential contamined and toxic release sites as identified by EnviroStor.

California has the biggest network of freeways in the country and its cities are known for heavy traffic.

While California has strict vehicle-emissions standards:

- Exhaust from cars and trucks is the main source of air pollution in San Diego;
- Exhaust fumes contain toxic chemicals that can damage DNA, cause cancer, make breathing difficult and cause low birth weight and premature births; and
- Children who live or go to schools near busy roads have higher rates of asthma and other lung diseases than children in areas farther from roads.

Census tracts along the I-15 have heavy traffic volume, exceeding 80 percentile of census tracts in the state.

Figure 7-1: Clean Up Sites

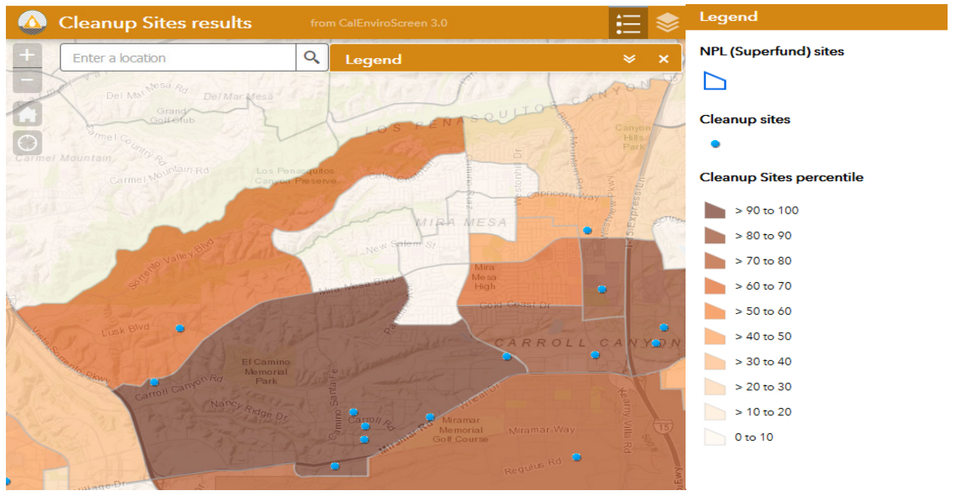


Figure 7-2: Hazardous Waste Sites

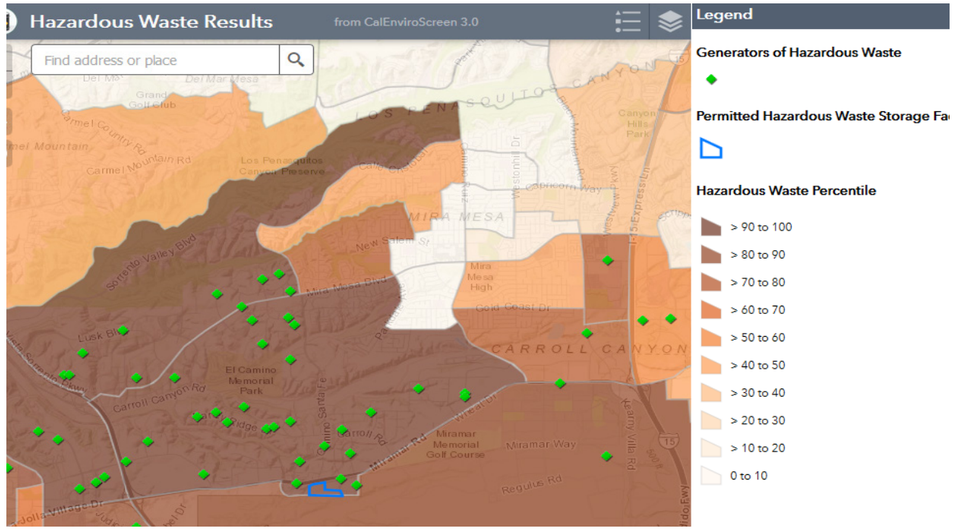
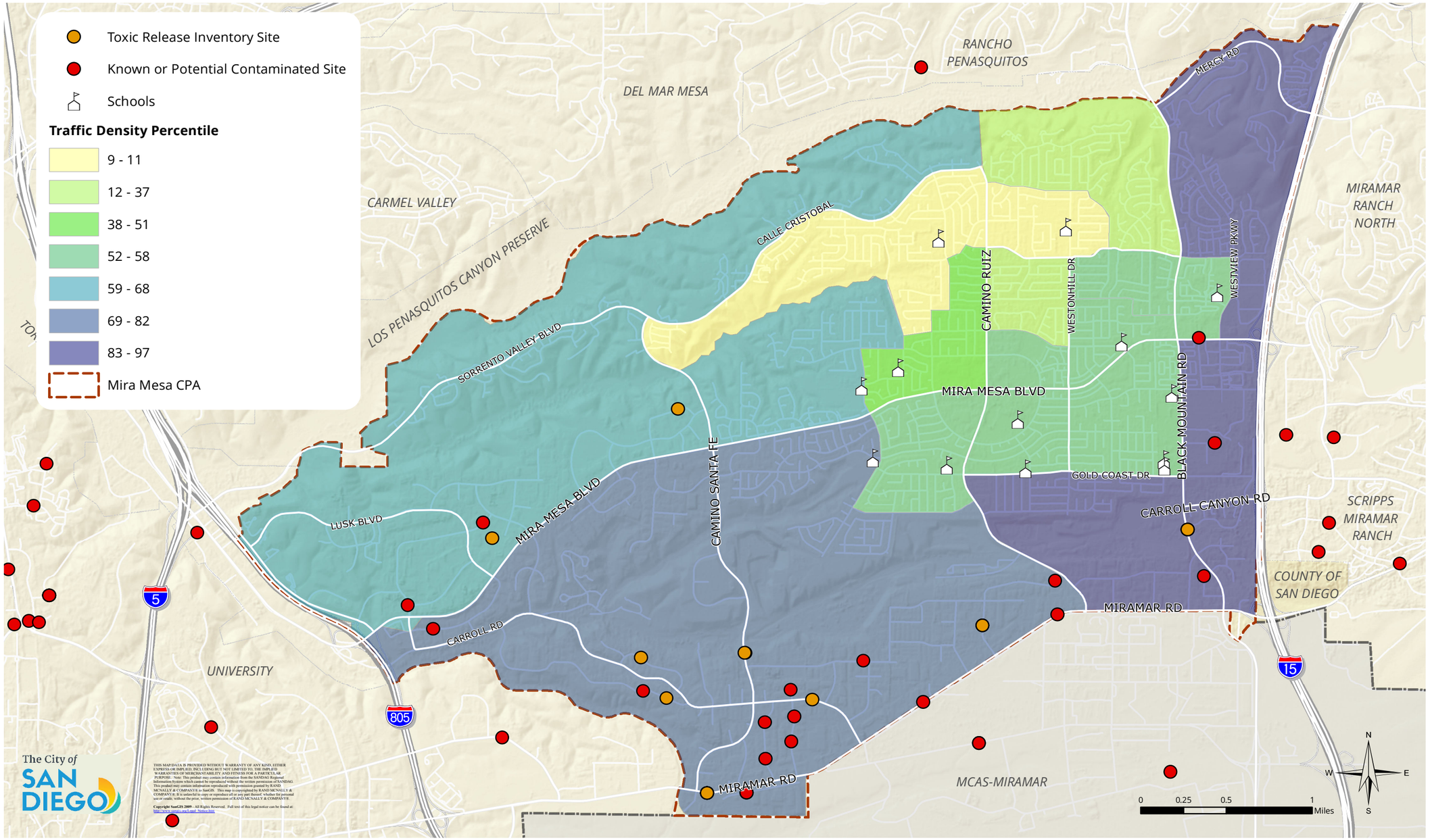


Figure 7-3: Traffic Density and Known or Potential Contaminated Sites



7.2 COMMUNITY HEALTH

Access to Healthy Lifestyle

Many factors contribute to a community's ability to live healthily. One key factor is whether community members can safely and conveniently access parks and recreational facilities. Close-to-home opportunities to exercise and experience nature contribute to individuals' health and feelings of well-being. Indeed, people who live within walking distance (1/4 mile) of a park are 25 percent more likely to meet their minimum weekly exercise recommendation.[3]

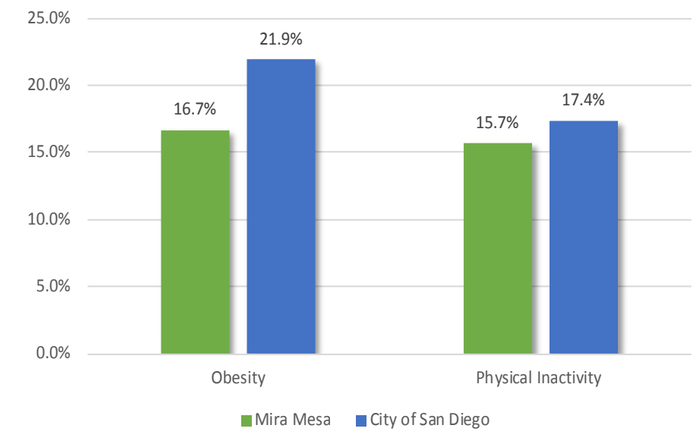
In turn, regular physical activity has many physical health benefits, including a reduced risk of coronary heart disease, hypertension, strokes, some cancers, and premature mortality.[5] Regular physical activity also has many attendant emotional health benefits; it reduces depression, anxiety, stress, as well as improves mood and the ability to perform tasks.[6]

As shown in Figure 7-4, the vast majority of residential area in Mira Mesa is within walking distance of an existing park. There are other indoor gymnasiums and recreational facilities in Mira Mesa, which provide additional opportunities for residents to exercise and recreate.

Although walking to community amenities is possible, the auto-centric design of much of Mira Mesa, make walking unpleasant and unsafe. As previously discussed in Section 3.2 and illustrated in Figures 3-3 and 3-4, Mira Mesa is largely comprised of large blocks and wide, multi-lane roads that cater to cars rather than bicyclists and pedestrians and large extents of streets without shade trees. This type of development is not inviting to bicyclists and pedestrians and disincentivizes these modes of travel for day-to-day activities.[6]

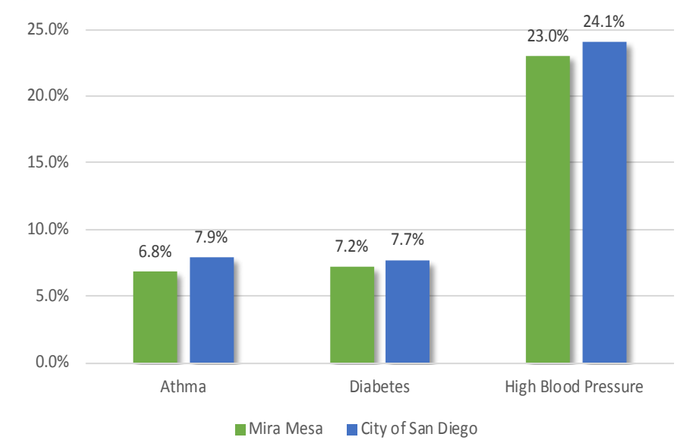
Chart 7-1 and 7-2 illustrates unhealthy behavior and selected health outcome of adults aged 18 years and older in Mira Mesa and the City of San Diego. Overall, residents of Mira Mesa have a better community health behavior and outcomes compared to citywide average.

Chart 7-1: Unhealthy Behavior



Note: Model-based estimates among adults aged >=18 years - 2015
Source: CDC 500 Cities Project: Local Data for Better Health

Chart 7-2: Health Outcomes



Note: Model-based estimates among adults aged >=18 years - 2015
Source: CDC 500 Cities Project: Local Data for Better Health

[3] L. Frank et al., "Linking Objectively Measured Physical Activity with Objectively Measured Urban Form: Findings from SMARTRAQ", Vol. 28, Issue 2, **American Journal of Preventative Medicine**, at 117-125 (February 2005).

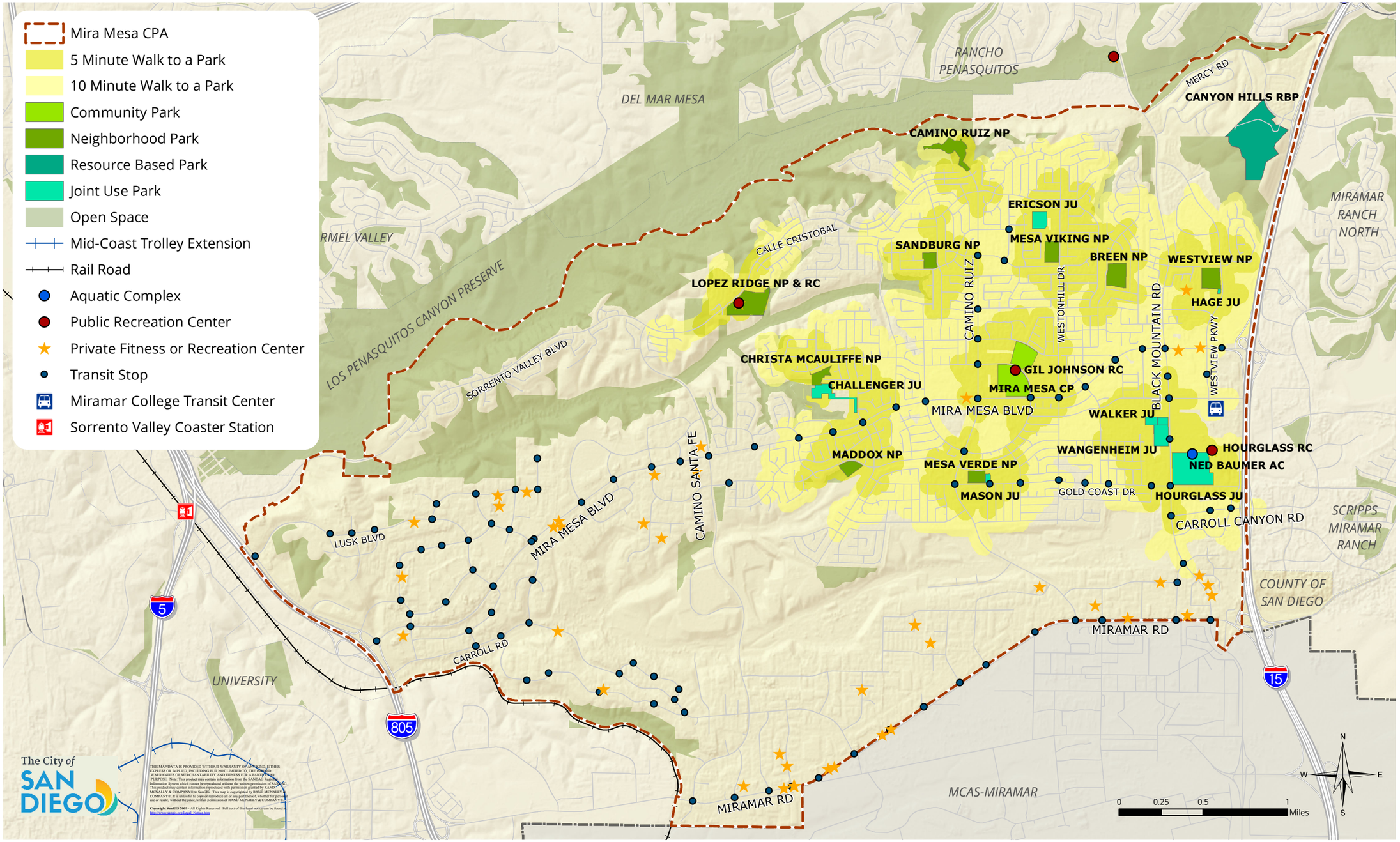
[4] L. Besser and A. Dannenberg, "Walking to Public Transit: Steps to Help Meet Physical Activity Recommendations". Vol. 32, Issue 4, **American Journal of Preventive Medicine**, at 273-280 (November 2005).

[5] U.S. Department of Health and Human Services, Physical Activity and Health: A Report of the Surgeon General (Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996), 4–8, http://www.cdc.gov/nccdphp/sgr/pdf/sgrfull.pdf.

[6] Ibid., 8.

[7] P. Swift, et al., **Residential Street Typology and Injury Accident Frequency**, originally presented at the Congress for the New Urbanism, Denver CO, (June 1997; updated 2006).

Figure 7-4: Access to Parks, Fitness and Recreation Centers

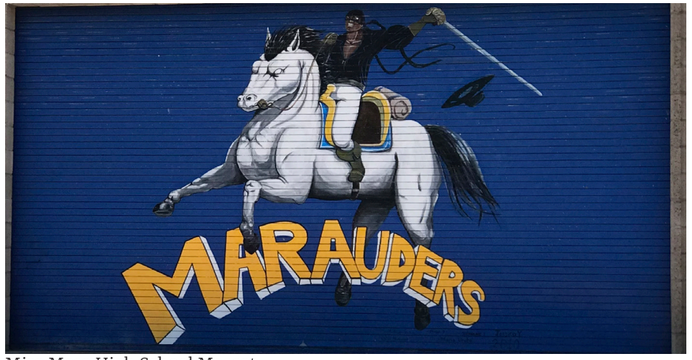


Access to Transit, Schools & Amenities

Convenient access to public transit also helps community members bring healthy living into their daily routines. Almost one-third of Americans who commute to work via public transit meet their daily requirements for physical activity (30 or more minutes a day) by walking as a part of their daily life, including to and from the transit stop. [4]

Walkable access to healthy foods is important to community's health. The presence of a supermarket in a neighborhood is linked to higher fruit and vegetable consumption, as well as a reduced incidence of obesity.[8] A healthy community also provides convenient access to schools. Proximity to schools makes it easier for children to walk or bike to school, which, in turn, is associated with higher overall physical activity throughout the day.

Figure 7-5 depicts access to transit stops, schools and amenities that support a healthy community in Mira Mesa, although, it should be noted, it is not possible to show all services and facilities that provide a benefit to the community and its members. Many employment areas are accessible via public transit. As Figure 7-5 indicates, there are eight grocery stores, sixteen schools, and forty-six fitness and recreation centers that can be easily accessed through public transit. Many of Mira Mesa's residences are within a half-mile walk of a grocery store, schools, and fitness facilities, but there is a limited access to grocery store and school in the western side of the planning area.



Mira Mesa High School Mascot

Ethnic grocery store

Pedestrian walking back from a cafe

[8] Inagami, S., et al., "You Are Where You Shop: Grocery Store Locations, Weight, and Neighborhoods", Vol. 31, Issue 1, American Journal of Preventative Medicine, at 10-17 (2006). See also K. Morland et al., "Supermarkets, Other Food Stores, and Obesity: The Atherosclerosis Risk in Communities Study", Vol. 30, Issue 4, American Journal of Preventative Medicine, at 333-339 (2006).

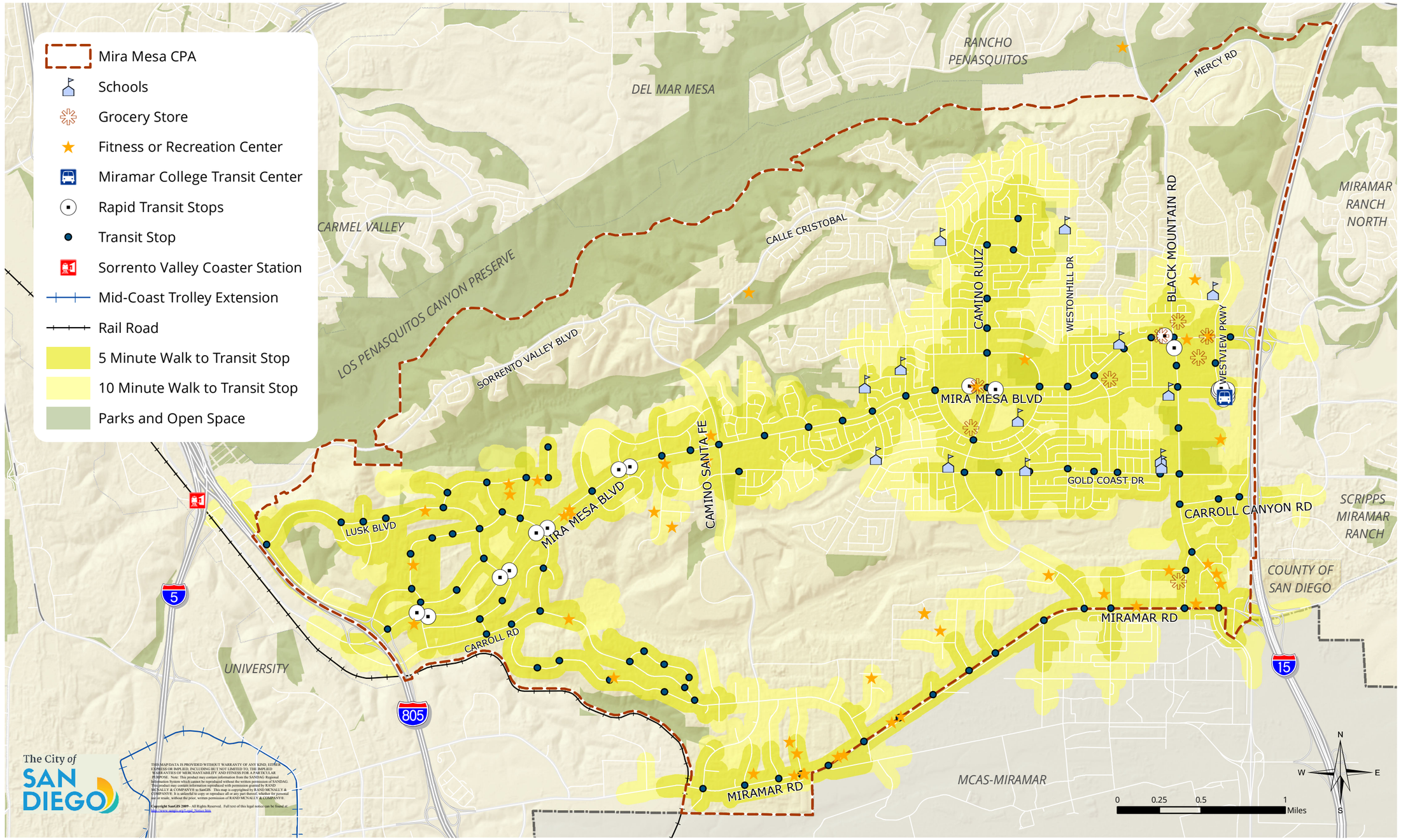



Figure 7-5: Access to Transit, Schools & Amenities