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ABSTRACT

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ABSTRACT: The Community Transformation Grant Contract between SANDAG and our partners at the County Health and Human Services Agency directs SANDAG to conduct an existing conditions analysis for the Public Health and Wellness Policy Framework that was developed in our previous Communities Putting Prevention to Work contract. That framework contains nine topic areas including mobility, urban form, environment, economics, social equity, housing, public safety, access to healthy food/nutrition and public facilities and amenities. This report examines these nine topic areas for regional existing conditions. Having a comprehensive understanding of existing conditions can help identify where gaps may exist in regards to health disparities, and can inform decision-makers about where policies and future investments might be directed to address these disparities. The report will lay a foundation for future work and may become a technical appendix to San Diego Forward: The Regional Plan update.
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PURPOSE AND USE OF THIS REPORT

This report was prepared in an attempt to summarize certain existing health and safety conditions in San Diego County pursuant to a Community Transformation Grant (CTG) from the Centers for Disease Control, which was awarded to the San Diego Association of Governments (SANDAG) and the County of San Diego. As part of the CTG, SANDAG agreed to develop a Public Health and Wellness Policy Framework (PHWPF) as input into ongoing regional land use and transportation planning efforts. This report is intended to serve as an existing conditions analysis for the PHWPF. Neither SANDAG nor any of its employees makes any warranty, expressed or implied, regarding the accuracy, completeness, or usefulness of this report for any other purpose.

While care has been taken to ensure the information provided herein is accurate and current, the science and knowledge upon which it is based is dynamic. Therefore, there is no guarantee given that the information provided in this paper is correct, complete, and/or up-to-date with conditions in the region, or the current state of scientific opinion or analysis. It is the responsibility of readers to independently evaluate the content and usefulness of information obtained herein. Furthermore, in many cases, data that might provide additional insight to discussions of key topics may not exist, or obtaining the data may have been beyond the scope of this report.

Additionally, statements in this report do not necessarily constitute or imply endorsements, commitments to particular courses of action, or recommendations by the SANDAG Board of Directors; they are intended for use solely as input into development of the PHWPF.
EXECUTIVE SUMMARY

Healthy and vital communities are critical to the future of the San Diego region. Research has established a clear connection between built environment characteristics and chronic diseases, such as heart disease, diabetes, cancer, and asthma, which account for at least $4 billion in direct healthcare expenditures in the San Diego region. The 3-4-50 principle, developed and adopted by the County of San Diego Health and Human Services Agency, identifies the three behaviors (poor diet, no exercise, and tobacco use) related to the four chronic diseases (Heart Disease, Lung Disease, Type 2 Diabetes, and Cancer) that lead to over 50 percent of deaths in San Diego County.

In order to promote effective policy to foster the health of residents, the San Diego Association of Governments (SANDAG) commissioned this report, which seeks to provide a snapshot of current conditions affecting community health across the San Diego region. While the report is intended to touch on a wide range of factors influencing health outcomes, it focuses on land use patterns and transportation options in particular, given that these are two policy areas in which SANDAG is especially well positioned to provide guidance and support to local communities.

ABOUT THIS REPORT

This report describes the demographic profile and health statistics for the region and identifies current built environment conditions that affect public health (The term “built environment” refers to human-constructed elements of the environment.). It also documents baseline conditions and health trends in the region that affect the overall health of communities. Finally, the report identifies key issues and opportunities to improve the health of residents.

The development of this report was led by SANDAG with the consultant assistance of MIG, Inc. In addition, the SANDAG Public Health Stakeholders Group was created to serve as an advisory group to SANDAG staff, and to solicit recommendations on implementing community health projects. The PHSG facilitated collaboration among health and planning professionals and provided input on the development of this report.

This existing conditions analysis focuses on health conditions and indicators most relevant to the San Diego region. The report is organized into nine categories of built environment aspects that influence the public’s health, listed below.

- Land use and urban form
- Mobility
- Housing
- Environment
- Economic development
- Social equity and environmental justice

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1 2007 data, CHIS, CCR, SANDAG, MEPS, CCS
• Public facilities and amenities
• Public safety
• Healthy food and nutrition

These findings will inform the development and implementation of the Public Health and Wellness Policy Framework (PHWPF) and supports the development of goals, policies, and implementing actions to help improve community health throughout the San Diego region. As SANDAG refines the PHWPF, multi-objective indicators of community health may be selected to monitor progress towards overcoming some of the challenges identified in this report.

KEY FINDINGS

Key findings for each of the nine focus areas are summarized below.

1. Land Use and Urban Form

In a healthy community, the built environment promotes physical activity because daily goods and services are within walking or biking distance, and the walking and biking environment is safe and attractive.

Key Findings for the San Diego Region

• Complete Neighborhoods. Areas with access to multiple destinations (also known as “complete neighborhoods”) are more prevalent in the southern part of the urban core, which encompasses many areas in the city of San Diego. Many Communities of Concern also are areas with walking access to many amenities, but Communities of Concern in the northern part of the region lack this cohesive access.

• Walkability. Walkability is highest in Downtown San Diego and other downtown areas, as well as in older pre-World War II residential neighborhoods. Many residents in the region live within walking distance of daycare facilities, and some residents live within walking distance of elementary schools. However, few residents in the region have walking access to libraries, hospitals, or medical clinics. In 2013, a regional assessment of walkability identified the cities of La Mesa, National City, and Imperial Beach as top cities for the quality of current walking conditions and for policies and projects in place to improve walkability in the future. The Cities of Santee and El Cajon received the lowest walkability scores.

• Transit-Oriented Development. SANDAG is currently preparing a Regional Transit-Oriented Development (TOD) Strategy to assist the region in creating TOD projects and neighborhoods that will reduce greenhouse gas emissions; increase transit ridership, walking and biking; and provide housing and employment opportunities for all residents of the region. The TOD Strategy is expected to be completed in 2015.

2. Mobility

A healthy community promotes walking, biking, and public transit through the design of its built environment through convenient access and various mode choices.
Key Findings for the San Diego Region

- **Pedestrian, Bicycle, and Public Transit Infrastructure.** Areas with the highest levels of transportation infrastructure to support pedestrians, cyclists, and public transit riders are in the region’s core neighborhoods across much of the City of San Diego and south into the City of Chula Vista, west of Interstate 805. A wide range of transit providers serve the region through a variety of service types. Some Communities of Concern have very high and high levels of existing bicycle, pedestrian, and public transit infrastructure, although this infrastructure is not always in good condition. However, only five cities in the San Diego region have pedestrian or combined bicycle/pedestrian plans in place.

- **Sidewalks.** Sidewalk coverage is high over much of the urban core. Most of the region’s urban areas have complete or nearly complete sidewalk networks, although the condition of these networks varies.

- **Physical Activity Inhibitors and Supports.** Physical activity inhibitors, or elements of the built environment that might act as barriers to walking, biking, and other physical activity, are distributed relatively evenly across the San Diego region, with block groups characterized as “high” and “low” found in all parts of the region. Many Communities of Concern overlap with the “low” and “very low” areas of physical activity inhibitors. The areas most supportive of youth physical activity are largely concentrated in the southern part of the region.

- **Bicycle Facilities and Amenities.** Within the region, there are approximately 1,340 miles of existing bikeway facilities, with 806 bike lockers in 64 locations. In early 2014, DecoBike anticipates the launch of San Diego’s first bike-sharing program with 1,800 bicycles at 180 to 220 stations initially planned from Downtown and Hillcrest areas up the coast to La Jolla.

- **Public Transit and Paratransit Access.** Within the San Diego region, access to transit tends to be either very good or very limited; many Communities of Concern have very low access to transit. Residents with disabilities who live within three quarters of a mile of a bus or rail stop/station have access to no-cost Americans with Disabilities Act of 1990 (ADA) paratransit services, but those who do not live within close proximity to transit do not have the option of using paratransit.

- **Transit Facilities.** Metropolitan Transit System currently serves 4,617 bus stops throughout the region, and North County Transit District serves 1,992 bus stops in the North County area. The San Diego Trolley maintains a total of 53 stations and the COASTER service provides service to 8 stations. The 22-mile SPRINTER light rail service along the State Route 78 corridor in North County between the Oceanside and Escondido Transit Centers includes a total of 15 stations.

- **Automobile Infrastructure.** Arterials and high traffic volume roads are concentrated along the region’s major transportation corridors. The Downtown San Diego core is currently served by two carshare programs: Zipcar, which rents cars by the hour or day, and car2go, which rents cars by the minute.

- **Parking.** Policies for shared or reduced parking are growing in the region.

- **Transportation Demand Management.** Transportation demand management (TDM) strategies are becoming more widespread in the San Diego region.

- **Mobile Technology.** SANDAG has been funding Intelligent Transportation Systems (ITS) as an alternative to building large infrastructure projects. The goal of the ITS is to maximize the effectiveness of
the transportation system by utilizing technology to delay or mitigate a freeway expansion by increasing the efficiency of that roadway.

3. Housing

A healthy community provides a diversity of affordable housing choices integrated across neighborhoods.

Key Findings for the San Diego Region

- **Housing Cost.** The cost of housing is rising for both renters and homeowners across the region, and waiting lists for affordable Section 8 subsidized housing units are often long. Currently, the wait time in the City of San Diego is approximately eight to ten years. The median market price for a single-family home in the San Diego region is $483,000. The average share of income spent on housing and transportation in the San Diego region is 67 percent.

- **Overcrowding.** Overcrowded housing continues to be a concern. Based on the 2012 American Community Survey, 6.2 percent of housing units in the San Diego region were overcrowded, meaning that they had more than 1.0 resident per room. About 2.1 percent of housing units were severely overcrowded, with more than 1.5 residents per room.

- **Foreclosures.** Foreclosures and notices of default have fallen substantially since the peak of the foreclosure crisis, and the current rate of foreclosures is consistent with the historical average for the region. In September 2013, there were 662 Notices of Default and 170 Trustee’s Deeds issued in the San Diego region. Both numbers were down substantially from peaks in March 2009, when 4,260 notices of default were issued, and July 2008, when 2,285 Trustee’s Deeds were issued.

- **Housing Diversity.** The majority of housing in the region is comprised of two- or three-bedroom units. In 2008 there were 692,382 single family housing units and 405,023 multiple family housing units in the region. By 2050, it is projected that there will be a 10 percent increase in single-family units, and an 81 percent increase in multi-family units.

- **Housing Tenure.** Just over half of housing units are owner-occupied, and most homeowners have mortgages. In 2012, there were 1,169,225 housing units in the San Diego region, of which a majority 91.9 percent were occupied.

- **Housing Safety.** Lead paint, common in homes built before 1979, remains the top source of lead poisoning. There are approximately 114 cases of childhood lead poisoning in the San Diego region each year.

- **Senior Housing.** In 2012, roughly 15 percent of homeowners and 11 percent of all renters in the San Diego region were over the age of 65. More than half of all seniors (54 percent) in the region spent more than a third of their income on housing. Nearly 33 percent of homeowners and 63 percent of renters ages 65 and up paid 30 percent or more for their housing. County-wide, 9.5 percent of all people living below the poverty rate were seniors.

- **Homelessness.** In 2012, the overall homelessness rate of San Diego was 0.3 percent. Although many cities in the San Diego region offer shelters for the homeless, most services and shelters for residents experiencing homelessness are located in the city of San Diego, which houses nearly two-thirds of San Diego’s 10,000 homeless residents.
• **Jobs/Housing Balance.** Over the past few years, growth in the number of new housing units has slowed significantly. Growth in the number of new jobs began to slow in 2006. The region experienced net job losses in 2008, 2009, and 2010, although in 2010 the loss is not as substantial as in 2009. The loss of 68,400 jobs in 2009 caused the significant drop in the ratio of new jobs to new units as well as the drop in the ratio of total jobs to total housing units.

4. Environment

A healthy community promotes environmental protection and conservation through the design of its built environment.

**Key Findings for the San Diego Region**

• **Climate Change.** The transportation sector accounts for the greatest portion of greenhouse gas emissions in California, and in the San Diego region. In San Diego County in 2010, emissions from cars and light-duty trucks were estimated to comprise 44 percent of total greenhouse gas emissions, and more than 70 percent of all regional emissions were related to individual activities. All 19 jurisdictions in the San Diego region have completed a Greenhouse Gas inventory. Of the 19 jurisdictions, 13 (representing over 87% of the region’s population) have developed or are in the process of developing a Climate Action Plan.

• **Air Quality.** The concentrations of air pollutants currently being measured closely follow the region’s major highway corridors. Relatively few homes are within the air quality impact zones, even in Communities of Concern.

• **Water Supply.** Overall, the San Diego region imports 85 percent of its water supply. Over the past twenty years, the region increased the reliability of the water supply by reducing reliance on the Metropolitan Water District of Southern California, from 95 percent in 1991 to about 45 percent today. The San Diego County Water Authority projects that by 2020, an increasing amount of the region’s water supply will come from seawater desalination.

• **Water Conservation.** According to the San Diego County Water Authority, San Diego per capita water use has fallen from more than 200 gallons per capita daily down to 150 gallons over the past decade. The total potable water use in 2013 was less than it was in 1990, even with a growing population of 30 percent over that period.

• **Soil.** The San Diego region has one site on the Federal Superfund list: the Camp Pendleton Marine Corps Base.

• **Energy.** 20 percent of energy used in the region comes from renewable sources, which includes small and large hydro, wind, biomass, geothermal, and solar power. The majority of energy use in the region comes from natural gas.

• **Noise.** Decibel limits are in place near the San Diego Airport to control noise in surrounding residential areas.

• **Tree Canopy.** Several cities in the region have minimal tree canopy coverage. The City of Del Mar has the greatest coverage at 9.4 percent, while Coronado has the least at 0.3 percent.
• Open Space and Trails. Only about one-fifth of the region’s households have access to a bicycle or pedestrian trail within 1.2 miles. Residents in the western portion of the region, and especially those in communities with high concentrations of low-income households and people of color, have access to fewer acres of park space per capita than residents of other areas.

5. Economic Development

A healthy community provides adequate jobs that pay living wages and opportunities for home ownership or other stable housing.

Key Findings for the San Diego Region

• Commute Time. In 2012, the total average one-way commute time for all modes of transportation in the San Diego region was 25.5 minutes. This is based on data from the 2012 American Community Survey compiled by SANDAG iCommute, on par with the national average. The average commute times for Single Occupancy Vehicles, High Occupancy Vehicles, and Transit were 24.5, 27.9, and 53.3 minutes, respectively.

• Unemployment Rate. The San Diego region unemployment rate is slightly below state and national trends, and has seen a slight decline in rates from July 2013 to December 2013. The regional rate of unemployment in December 2013 was 6.4 percent, compared to the statewide rate of 8.3 percent and the national rate of 6.7 percent.

• Employers. The San Diego region’s economy is currently growing, and is expected to continue growing in the near future. San Diego’s real Gross Domestic Product (GDP) has increased from 2.1 percent in 2011 to 2.7 percent in 2012. San Diego’s regional GDP is $177.4 billion, and it is ranked the 16th highest producing city in the country.

• Workforce Development. A highly skilled and educated workforce can have a profound impact on the socioeconomic well-being of an individual, and to the community the workforce serves. Not only can this union bring about individual benefits such as economic security, but it also can accelerate economic growth of the region. According to the San Diego Workforce Partnership, San Diego’s workforce has seen growth in the healthcare, technology, and sports and active sectors.

6. Social Equity and Environmental Justice

A healthy community fosters positive health outcomes for all residents, regardless of socioeconomic status, race, ethnicity, or ZIP code and provides strong support structures to ensure that vulnerable populations can thrive.

Key Findings for the San Diego Region

• Income. The median household income in the San Diego region in 2012 was $60,330. That year, the wealthiest 20 percent of households in the San Diego region had half (49.8%) of all income. The bottom 20 percent of households received only 3 percent of income in the region.

• Exposure to Environmental Toxins. Some communities within the San Diego region, including neighborhoods such as Barrio Logan in the City of San Diego and the areas along the border, face disproportionate exposure to environmental toxins.
7. Public Facilities and Amenities

A healthy community promotes physical activity, social cohesion, and contact with natural areas through the design of its built environment.

**Key Findings for the San Diego Region**

- **Parks and Playgrounds.** Most households in the urban areas of the region have walking access to community parks and public open space, while most households in the rural areas do not. A significant portion of Communities of Concern block groups have low levels of park access.

8. Public Safety

A healthy community promotes safety, social interaction, cohesion, and sense of place through the design of its built environment.

**Key Findings for the San Diego Region**

- **Crime.** Urban areas appear to attract a disproportionate amount of vandalism, malicious mischief, and violent crime. The violent crime rate in the San Diego region fell six percent during the first six months of 2013 compared to the same period in 2012, although the property crime rate increased four percent during that time period.

- **Vacant Parcels.** Vacant parcels are slightly more distributed across the region.

- **Pedestrian and Cyclist Safety.** Pedestrian and cyclist crashes occur throughout the region, but are somewhat concentrated in more densely populated areas where use is highest. Pedestrians are most at risk along the region’s major roadway corridors and near commercial and employment centers, where traffic speeds exceed 25 miles per hour.

- **Safe Routes to School.** Areas of potential high risk for youth walking and cycling trips to school and other destinations are found most often in the older suburbs. Increasing numbers of schools in the San Diego region are participating in Safe Routes to School programs. Emergency response time for first responders, including police, fire, and Emergency Medical Technicians (EMTs), varies in different areas of the region.

- **Emergency Medical Care.** Emergency response times for first responders, including police, fire, and EMTs, vary in different areas of the region.

- **Disaster Preparedness.** The San Diego County Office of Emergency Services coordinates the overall county response to disasters, including most evacuations.

9. Healthy Food and Nutrition

A healthy community promotes affordable and accessible healthy food options, including grocery stores, food markets, farmer’s markets, food cooperatives and other innovative solutions, through the design of its built environment.
Key Findings for the San Diego Region

- **Healthy Food Access.** Healthy food access is relatively high, particularly in the urban core and the central cities across the region. Areas with a higher density of fast food outlets can be found along the region’s major highway and arterial corridors and near interchanges. The San Diego region overall has more than four times as many fast-food restaurants and convenience stores as supermarkets and other produce vendors, potentially contributing to chronic diseases and obesity. In the City of San Diego, the only city in the region for which local data was available, there were 4.58 as many fast-food restaurants and convenience stores as produce vendors and supermarkets. Several cities within the San Diego region have specific ordinances in place to facilitate the sale of healthy food. Currently within the region, there are 29 Certified Farmers’ Markets.

- **Agriculture and Community Gardens.** Few San Diego region communities have urban agriculture ordinances in place, although the city of San Diego is considered a California model for encouraging urban homesteads. Although the San Diego region is home to more farms than any other county in the nation, land for major crops declined in all but one year from 2006 through 2011, and water prices and development pressures continue to strain farmers and ranchers in the region. Two communities in the region have specific ordinances designed to encourage the development of community gardens.

- **Food Assistance.** While thousands of residents in the region receive food benefits, many still live in food insecure households and are unsure of where their next meals will come from. In 2010, California Food Policy Advocates estimated that over 30 percent of San Diego region adults lived in food insecure households, meaning they did not have regular and reliable access to food.

- **School Lunch Programs.** Over two-thirds of students eligible for free or reduced price lunches were enrolled and participating in the National School Lunch Program as of 2010. San Diego Unified School District is currently the only district in the San Diego region with a formal Farm to School lunch program, but other districts have smaller scale programs to provide students with fresh fruits and vegetables and are interested in expanding existing programs.

- **Senior Food Programs.** San Diego region seniors are served by three food banks in the region, in addition to local community food programs.

NEXT STEPS

This report will serve as the foundation for a healthier San Diego region in the years to come. Key findings will be used to guide regional planning processes, provide data and direction to local jurisdictions as they undertake their own planning efforts, and inform where the SANDAG regional resources are best directed to support the cities and communities of the San Diego region. Based on the data and findings within this report, SANDAG may develop and refine a series of indicators to gauge the status of community health in neighborhoods across the region as the implementation of policies for healthy communities move forward.
INTRODUCTION

ABOUT THIS REPORT
Healthy and vital communities are critical to the future of the San Diego region. This report describes the demographic profile and health statistics for the region and identifies current built environment conditions that affect public health. (The term “built environment” refers to human-constructed elements of the environment.) It also documents baseline conditions and health trends in the region that affect the overall health of communities. Finally, the report identifies key issues and opportunities to improve the health of residents.

The San Diego Association of Governments (SANDAG) led the development of this report with assistance from MIG, Inc. The SANDAG Public Health Stakeholders Group, an advisory group to SANDAG staff created to facilitate collaboration and solicit input and recommendations in implementing community health projects, and Community-Based Organizations provided input into the draft report.

The existing conditions analysis focuses on health conditions and indicators most relevant to the San Diego region. The report is organized into nine categories of built environment aspects that influence the public’s health, listed below:

- Land use and urban form
- Mobility
- Housing
- Environment
- Economic development
- Social equity and environmental justice
- Public facilities and amenities
- Public safety
- Healthy food and nutrition

This analysis informs the SANDAG draft Public Health and Wellness Policy Framework and supports the development of goals, policies and implementing actions to help improve community health throughout the San Diego region.

BACKGROUND
The field of urban planning grew out of concerns for public health and welfare in the fast-growing industrial cities in the early 20th century. These concerns were related to polluting and unsanitary conditions in the cities where tanneries and slaughterhouses abutted homes and schools, and tall skyscrapers blocked light and air from streets. Poor living conditions for city residents often resulted in infectious disease outbreaks and public health emergencies.
To address the growing health concerns, local governments instituted restrictions on the type of uses that could locate close to residential areas. These restrictions went far beyond the 19th century common law theory of nuisance that addressed public health and safety by prohibiting “unreasonable” uses of land to prevent similar outbreaks of infectious diseases. However, shops, restaurants, and schools remained integrated into residential neighborhoods, and residents could walk or ride streetcars to employment centers.

By 1926, the United States Supreme Court’s decision on Village of Euclid versus Ambler Realty Co. established the right of local governments to control land use through zoning laws and introduced the concept of “Euclidean” zoning that segregated land uses to minimize conflicts. While these laws and trends prevented factories from locating close to neighborhoods, and offered a means to escape from the polluted city center, they also provided local governments the power to exclude and segregate communities, and supported the growth of suburbs.

Changes to the transportation system, including the construction of freeways, further weakened the connection between work, home, retail, and other daily services, isolating these uses from one another and making many destinations accessible only by car. Americans were better protected from infectious diseases such as tuberculosis and cholera, but the changing design of the built environment created new barriers to healthy lifestyles, exacerbating chronic disease rates of obesity, asthma, heart disease, and diabetes, all influenced in part by the built environment. As use of cars increased in the years following World War II, air quality worsened and pollution levels rose in many areas, affecting quality of life in some communities and contributing to stress and isolation.

The environmental movement in the 1970s gave rise to the environmental review process that was meant to protect natural lands and resources, in addition to public health. Other urban planning concepts such as New Urbanism and Smart Growth set out to reverse the negative impacts of urban development policies of previous decades with a return to traditional neighborhood design and urban form that valued a mix of uses, pedestrian, bicycle and transit amenities, and compact development.

While each of these initiatives had a slightly different focus, the underlying theme was always the health of a community, defined in terms of the environment, the economy, and equity. The potential to link policy to the design of the built environment continues to be a critical means of improving public health and wellbeing.
AN OVERVIEW OF THE SAN DIEGO REGION

GEOGRAPHY OF THE REGION

The San Diego region is a one-county region covering 4,300 square miles and consisting of eighteen cities and the County of San Diego. The County of San Diego is the second most populous county in California and the fifth largest county in the United States, with a land area roughly the size of the state of Connecticut. San Diego County is bordered by Orange and Riverside Counties to the North, Mexico to the South, Imperial County to the East, and the Pacific Ocean to the West. The San Diego region is home to a mix of urban, suburban, and rural communities in a wide range of environments, from beaches to mountains to desert.

The San Diego County Health and Human Services Agency (HHSA) divides the San Diego region into six subregions for the purposes of tracking population trends and health outcomes, and delivering services. According to HHSA, the regions are defined as follows:

- **The Central Region** encompasses the City of San Diego’s core with approximately 48 neighborhoods and many diverse cultures. The region is home to nearly 487,000 residents within 50 square miles. The Central Region extends from Interstate 8 (I-8) in the north to Lemon Grove and La Mesa in the east and south to National City, with San Diego Bay on its western border.

- **The East Region** is home to approximately 458,000 people, and is the second largest of the six HHSA regions. There are eight Native American reservations within the region. The region has a mixture of urban and rural communities and is home to the incorporated cities of El Cajon, La Mesa, Lemon Grove, Santee, and numerous distinct unincorporated neighborhoods.

- **The North Central Region** comprises the central-western portions of the County. The region has both inland and coastal communities stretching from Del Mar in the north to Point Loma in the south, and east to Scripps Ranch and Mira Mesa. I-8 marks the region’s southern border. Also within the region are three military reservations and two major universities.

- **The North Coastal Region** has a population of nearly 475,000 and consists of six cities and over a dozen communities that stretch geographically from Del Mar in the south to the Orange County border in the north and east to include Vista and Rancho Santa Fe. The United States Marine Corps’ largest installation, Camp Pendleton, is located in the North Coastal Region.

- **The North Inland Region** has nearly 486,000 residents, living in four cities and dozens of smaller communities. The region’s diversity can be attributed to this vast geographic expanse, which includes suburban areas, remote desert communities, historic mountain towns, rural homes and farms, and Indian reservations.

- **The South Region** has four cities and seven communities. It is bordered by the Pacific Ocean to the west, Mexico to the south, the Otay Mountains to the east, and the City of San Diego to the north. The region’s largest city, Chula Vista, is the ninth fastest growing city in California and the second most populated city in San Diego County. Home to approximately 460,000 residents, the ethnic/racial makeup of South Region is 52.3 percent Hispanic, 27.0 percent White, 12.2 percent Asian, 4.6 percent African-American, 0.3 percent Native American, and 3.6 percent others.

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SUMMARY OF POPULATION CHARACTERISTICS

Population

As of January 1, 2012, the San Diego region had 3,177,063 residents living in 1,079,653 households.³

Population Density

Population density increases towards the western and southern parts of the San Diego region. Water steep terrain and habitat preserve areas limit the uniformity of development in the region. Urban centers such as Downtown San Diego are clearly visible as areas of high density, with smaller pockets of higher density emerging in downtown areas of El Cajon and Escondido. However, a large majority of block groups in the region have fewer than 20 people per acre.

Gender

In 2012, half of residents in the San Diego region were male, and half were female. Among residents under age 18, 52 percent were male and 48 percent were female. Among residents age 65 and older, only 44 percent were male, while 56 percent were female.⁴

³ United States Census Bureau. 2012 American Community Survey 1-Year Estimates
⁴ SANDAG. Demographic and Socioeconomic Estimates, San Diego region. 2012
Age

Just under a quarter, or 23.33 percent, of San Diego region residents were under age 18 in 2012. About 12 percent of residents were age 65 or older.5

Race/Ethnicity

In 2012, just under half of residents in the San Diego region, or 47.47 percent, were White. An additional third of residents, or 32.93 percent, were Hispanic/Latino. About 11.32 percent were Asian or Pacific Islander, while 4.43 percent were Black. Just under half a percent of residents were American Indian.6

SUMMARY OF SOCIOECONOMIC CHARACTERISTICS

Income

Median household income in the San Diego region in 2012 was $60,330, above the state median income of $58,328.

Poverty

Approximately 15.0 percent of residents in the San Diego region were living in poverty in 2012.7 The California poverty rate for 2012 was 17.0 percent, while the national poverty rate was 15.5 percent that year. However, while the overall poverty rate fell from a record high of 14.8 percent in 2010, the poverty rate for children rose to 19.8 percent, the highest level in over a decade. Over 142,000 children in the San Diego region lived in families with incomes below the federal poverty level in 2012. Areas with high poverty rates were found across the region, with the highest rates in the East and North Inland Regions. The overall poverty rate was highest in El Cajon, where a quarter (25.4%) of residents and one in three children were living in poverty. Other communities with high rates included San Marcos (21.1%), Escondido (20.3%), Vista (17.6%), San Diego (15.5%), and Carlsbad (13.6%).8

Language

Nearly two in five (37.8%) of San Diego region residents speak a language other than English at home, slightly under the state rate of 44.3 percent. Approximately 15.6 percent of residents speak English less than “very well,” independent of the language spoken at home. Statewide, 19 percent of residents speak English less than “very well.” In the San Diego region, as in the state overall, the dominant language spoken in non-English speaking households is Spanish; almost a quarter of area residents speak Spanish at home. Another 8.1 percent of residents speak Asian or Pacific Islander languages at home.9

Education

Approximately 45 percent of San Diego region residents hold an associate’s, bachelor’s, or advanced degree, well above the statewide rate of 38.8 percent. Only 13.9 percent of residents over age 25 do not have a high

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5 Ibid
6 Ibid
7 United States Census Bureau. 2012 American Community Survey
8 Center for Policy Initiatives. Poverty, Earnings, and Income in San Diego County 2012. September 2013
9 United States Census Bureau. 2012 American Community Survey
school diploma or equivalency. Statewide, 18.5 percent of residents over age 25 do not have a high school diploma or equivalency.¹⁰

COMMUNITIES OF CONCERN

For the 2050 Regional Transportation Plan and the Healthy Communities Atlas, the San Diego Association of Governments defined the following as Communities of Concern:

- **Low Income Community of Concern**: Any community in which 33 percent or more of households are low income, and/or 10 percent or more of the households are severely overcrowded, and/or 25 percent or more of the population is in poverty

- **Minority Community of Concern**: Any community in which 65 percent or more of the population is non-White

- **Low Mobility Community of Concern**: Any community in which 25 percent or more of households have no automobile available, and/or 25 percent or more of the population is disabled, and/or 20 percent or more of the population is aged 65 or older

- **Low Community Engagement Community of Concern**: Any community in which 20 percent or more of households do not speak English as a primary language and do not speak English well, and/or 20 percent or more of the population aged 25 and older have less than a high school education

These communities are primarily concentrated in the urban core of Central San Diego, but are found throughout the southern third of the region.

There is a large degree of geographic overlap between low-income and minority areas, although minority areas account for a larger proportion of the region. Nearly half of all block groups qualify as minority areas. Large minority areas exist in central San Diego and south toward the Mexican border, south of State Route 56, and along the Interstate 8 corridor inland.

¹⁰ Ibid
Table 1: San Diego Region Demographic Profile\textsuperscript{11}

<table>
<thead>
<tr>
<th>Indicator</th>
<th>San Diego region</th>
<th>State of California</th>
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<tbody>
<tr>
<td>Total population (2012 estimate)</td>
<td>3,177,063</td>
<td>38,041,430</td>
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<tr>
<td>Median age of population (years)</td>
<td>34.9 years</td>
<td>35.5 years</td>
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<tr>
<td>Percent who are seniors (65 years of age or older)</td>
<td>12.0%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Percent who are children (under age 18)</td>
<td>22.9%</td>
<td>24.3%</td>
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<tr>
<td>Percent of residents over age 5 who speak a language other than English at home</td>
<td>36.7%</td>
<td>43.2%</td>
</tr>
<tr>
<td>Median household income</td>
<td>$60,330</td>
<td>$58,328</td>
</tr>
<tr>
<td>Per capita income</td>
<td>$29,281</td>
<td>$28,341</td>
</tr>
<tr>
<td>Unemployment rate as of December 2013</td>
<td>6.4%</td>
<td>8.3%</td>
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<tr>
<td>Percent of families below poverty level</td>
<td>9.2%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Percent of residents under age 18 below poverty level</td>
<td>17.1%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Percent of total population experiencing homelessness</td>
<td>0.3%\textsuperscript{12}</td>
<td>0.3%\textsuperscript{13}</td>
</tr>
<tr>
<td>Home ownership rate</td>
<td>53.1%</td>
<td>56.7%</td>
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<tr>
<td>Percent of homeowners spending over 30 percent of gross household income on housing</td>
<td>39.7%</td>
<td>37.9%</td>
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<tr>
<td>Average share of income spent on housing and transportation for moderate-income homeowners\textsuperscript{14}</td>
<td>67%</td>
<td>n/a</td>
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<tr>
<td>Average share of income spent on housing and transportation for moderate-income renters\textsuperscript{15}</td>
<td>60%</td>
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<tr>
<td>Percent of household income spent on childcare\textsuperscript{16}</td>
<td></td>
<td>14.8%</td>
</tr>
</tbody>
</table>

\textsuperscript{11} Except where noted, data are from United States Census Bureau 2012 American Community Survey 1-Year Estimates

\textsuperscript{12} Based on January 2013 count of San Diego County homeless by the Regional Task Force on the Homeless


\textsuperscript{14,15} Center for Housing Policy and Center for Neighborhood Technology. Losing Ground: The Struggle of Moderate-Income Households to Afford the Rising Costs of Housing and Transportation. Moderate income is defined as households earning between $32,919 and $65,839 each year.

SUMMARY OF HEALTH STATUS

Each year in the United States, chronic diseases such as heart disease, stroke, cancer, and diabetes cause seven out of ten deaths and account for about 75 percent of the $2 trillion spent on medical care. San Diego HHSA refers to these diseases as the 3-4-50 diseases—three behaviors (poor diet, physical inactivity, and tobacco use) that contribute to four chronic diseases (cancer, heart disease and stroke, type 2 diabetes, and pulmonary diseases such as asthma) that cause over 50 percent of all deaths in the region. These chronic diseases are important to consider together because they are common causes of disability and death in the San Diego region. They also are highly influenced by the three unhealthy behaviors, and are thus ultimately preventable. In The San Diego region in 2007, the 3-4-50 diseases, considered together, cost $4 billion in direct treatment expenditures.

The behaviors that influence 3-4-50 diseases also are unique because they are heavily influenced by built environment factors, including walkability of neighborhoods and access to healthy foods. As more communities address the connection between health and the built environment, more health-related statistics have become available at the national, state, and county level. This section provides a snapshot of the health status of San Diego region residents based on existing San Diego County data related to obesity, asthma, diabetes, coronary heart disease, chronic obstructive pulmonary disease, health insurance, and access to health care.

Health Insurance and Health Care Access

Approximately 17.6 percent of San Diego region residents did not have health insurance in 2010. North County cities have highest rates of uninsured residents, with over a quarter of Escondido and Vista residents lacking insurance. Approximately 9.5 percent of children under age 18 were uninsured in 2010. Of those children in the County who were insured, over a quarter were covered through Medi-Cal.

These estimates suggest that overall rates of health insurance coverage in the San Diego region are similar to those across the state. However, lower-income households, people of color, and men were more likely to be uninsured. Educational attainment and work status also were found to be predictors of whether or not residents were insured. Most residents who had a college degree had insurance, as did most residents who worked full-time. Those who worked part-time were most likely to be uninsured.

Obesity and Overweight

Overweight and obesity are usually defined by Body Mass Index (BMI). BMI is a standardized ratio of weight to height and is often used as a general indicator of health. Overweight individuals have a BMI of 25 or greater, while obese individuals have a BMI over 30. Key health-related findings include:

- Roughly a third of the San Diego region’s population is overweight, and an additional 26 percent is obese. While the San Diego region’s obesity rate is slightly above the statewide average of 25 percent, it is well below the national average of 35.7 percent.

- Obesity rates in the region are consistent with findings related to overweight and obesity throughout the state.

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16 Center for Disease Control and Prevention (CDC), 2009
17 Center on Policy Initiatives. The Uninsured in San Diego County. November 2011
18 CDC, 2012
Nearly 30 percent of the region’s children in grades five, seven, and nine are overweight or obese. African American and Latino children and youth of color are disproportionately more likely to be overweight compared to their white and Asian peers.19

Physical Activity Levels

- In 2009 only 18 percent of the adult population reported engaging in vigorous physical activity three times per week though over 75 percent reported walking for transportation, fun, or exercise. Later data in 2011 to 2012 showed that more than 25 percent of children and over 30 percent of teens reported fewer than three days of hourly daily physical activity.

Healthy Food Consumption

- Fruit and vegetable consumption is still well below the recommended five servings per day. In 2011 to 2012, over 48 percent of the children and over 70 percent of teens reported eating less than five servings of fruits and vegetables daily. Additionally, over 18 percent of the population reported eating fast food more than three times per week.

Tobacco Use

- Though smoking rates have declined tremendously in the last 20 years, many smokers still experience difficulties quitting smoking. Teens, particularly those in disadvantaged households, all too often begin a lifelong habit. In 2011 to 2012, over 13 percent of adults and 3.9 percent of teens reported smoking. Indoor smoking was reported by over 6 percent of adults and exposure to indoor smoke for 1.5 percent of children and teens.

Cancer, Heart Disease, Stroke, and Type 2 Diabetes

- Physical activity, consumption of healthy foods, and smoking are all important contributing factors for development of heart disease and stroke. Heart disease and stroke are two of the leading causes of death in San Diego, with over 4,000 deaths reported annually from heart disease and over 1,000 deaths from stroke.20 Over five percent of the adult population reported having heart disease in 2011 to 2012 and two percent of the population reported ever having a stroke.21

- Cancer is the number one leading cause of death in San Diego County. Cancer takes many forms and diet and physical activity are important contributing causes for many cancers. There are 384.2 new cases per 100,000 people diagnosed in San Diego every year and over 4,000 people die annually from cancer.22

- In 2009, approximately 5.6 percent of San Diego region residents suffered from diabetes, below the national average of 7.8 percent. Death rates from the disease were highest in the East region, followed by the North Inland, Central, and South regions.

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19 CDC, 2012
21 2009, 2011-2012 California Health Interview Survey. Accessed 12/5/13, Chronic Disease and Health Equity Program
22 2009, 2011-2012 California Health Interview Survey. Accessed 12/5/13, Chronic Disease and Health Equity Program
Asthma and Other Pulmonary Diseases

Roughly 12.3 percent of residents in the San Diego region had been diagnosed with asthma in 2009, and approximately 33 residents die each year from the disease. The Central and East regions had the highest rate of asthma hospitalization in 2009, another indication of asthma incidence rates. At 3.0 deaths per 100,000 residents, the asthma death rate among the region’s residents over age 65 is disproportionately high relative to other population groups, although it is slightly below state and national trends for this age group.


24 Health and Human Services Agency
1. LAND USE AND URBAN FORM

In a healthy community, the built environment promotes physical activity because daily goods and services are within walking or biking distance, and the walking and biking environment is safe and attractive.

COMMUNITY HEALTH BENEFITS AND IMPACTS

Studies demonstrate a link between the built environment and human activity patterns. Key built environment indicators assessed in this report will help the San Diego Association of Governments (SANDAG) identify the extent to which the region’s built environment facilitates a healthy lifestyle and opportunities for its residents. Built environment indicators measure the social and physical environments, which are preconditions for positive public health outcomes. Walking access to neighborhood goods and services promotes physical activity, reduces vehicle trips and miles traveled, and increases neighborhood cohesion and safety. For the purposes of this report, walking access is defined as just over half a mile (0.6 miles), or a six to eight minute walk. The analysis in this report are based upon data collected in geographic information systems maps developed for the SANDAG Healthy Communities Atlas, which divides Census block groups into five categories (very high, high, neutral, low, and very low) according to their composite category (walkability, access to transit, physical activity, etc.) score. To calculate the composite score, each of the base map measures was first given a standardized value (z-score) for each block group. The final composite score per block group is the average of the base map z-scores. To create the five categories, the Census block groups were separated into five roughly equal groups (quantiles) based on their composite score and assigned both a value and category of very low to very high. Although only the western third of the region is shown in the maps, the analysis was based on all 1,762 block groups in the San Diego region.

Complete neighborhoods provide:

- Access to goods and services
- Access to healthy food options
- Access to public transit and active transportation infrastructure, such as biking amenities
- Access to parks and open space
- Access to schools, libraries and child care
- Access to healthcare facilities and clinics
- Access to social support and amenities


26 PolicyLink, the Prevention Institute, and the Convergence Partnership. Healthy, Equitable Transportation Policy: Recommendations and Research. 2009.
KEY FINDINGS

Complete Neighborhoods

Areas with access to multiple destinations (also known as “complete neighborhoods”) are more prevalent in the southern part of the urban core, which encompasses many areas in the City of San Diego. Many Communities of Concern also are areas with walking access to many amenities, but Communities of Concern in the northern part of the region lack this cohesive access. Due in part to the region’s historical development patterns and the location of major population centers, residents in the southern part of the urban core have the best access to multiple amenities and services. Many of the region’s smaller cities and suburban downtowns also are well-served, with multiple amenities and community support networks in or near the town centers. Few outlying areas have multiple amenities within walking distance.27

Many residents in the region live within walking distance of daycare facilities, and some residents live within walking distance of elementary schools. Over 60 percent of residents live within walking distance of a daycare facility, while just over 40 percent—and half of all multi-family households—are within walking distance of an elementary school. Access to daycare facilities is particularly good in San Diego’s urban core, and in the centers of other towns and cities. Block groups with high levels of access to elementary schools are found throughout the region, but are more concentrated in urban and close-in suburban areas. These trends held true across Communities of Concern as well.28

Few residents in the region have walking access to libraries, hospitals, or medical clinics. Only a small number of census block groups surveyed—approximately 15 percent—had a significant percentage of households within walking distance of one of these two significant resources. Urban households and households in Communities of Concern were more likely to be within walking distance of a library and/or a health care facility. Libraries are spread across the region, and consequently the areas within walking distance of a library also were spread across the region. Because most of the region’s hospitals and clinics are predominantly located in urban areas, very few residents outside of these areas live within walking distance of hospitals or clinics.29

Walkability

Walkability is highest in Downtown San Diego and other downtown areas, as well as in older pre-World War II residential neighborhoods. The urban core of San Diego forms the region’s largest contiguous high-walkability area. Much of San Diego’s urban core, including Downtown and surrounding communities such as North Park, South Park, Mission Hills, Hillcrest, Golden Hill, Sherman Heights, and others is in the highest walkability class, and is surrounded by a smaller ring of block groups in the next highest classes. The core zone of high walkability extends out to La Mesa in the east and to the southern edge of Downtown San Diego. There also are a number of smaller walkable areas outside the urban core, largely the urban villages and pre-World War II neighborhoods found in many of the region’s cities. These areas include San Diego’s coastal neighborhoods (Mission Beach, Ocean Beach, Point Loma, La Jolla, Coronado, and Pacific Beach) and the coastal cities of Del Mar, Solana Beach, Encinitas, Carlsbad and Oceanside. A similar pattern exists along State Route 78 heading inland through the cities of Vista, San Marcos, and Escondido, and inland from the urban core to the City of El Cajon. South of central San Diego along Interstate 5, National City,
Chula Vista, and Imperial Beach make up another contiguous zone of high and medium-high walkability areas.  

In 2013, pedestrian advocacy organization WalkSanDiego released the annual Regional Walk Scorecard, a tool that measures walkability, identifies projects and policies that cities have adopted to improve walkability, and makes policy recommendations to improve pedestrian conditions. The annual scorecard gathers data on mode share, policy implementation, and resident observations of walking conditions and pedestrian infrastructure to rank overall walkability in each of the region’s 18 cities. The top ranking cities in 2013 were La Mesa, National City, and Imperial Beach, respectively. The Cities of Santee and El Cajon received the lowest scores on the Regional Walk Scorecard.

**Transit-Oriented Development**

SANDAG is currently preparing a Regional Transit-Oriented Development (TOD) Strategy to assist the region in creating TOD projects and neighborhoods that will reduce greenhouse gas emissions; increase transit ridership, walking, and biking; and provide housing and employment opportunities for all residents of the region. The TOD Strategy is expected to be completed in 2015.

This TOD strategy coincides with the SANDAG vision to promote Smart Growth through the implementation of the Smart Growth Concept Map. This map identifies locations in the region that can support smart growth and transit, and currently there are 200 existing, planned or potential smart growth locations. The Smart Growth Concept Map serves as the foundation for prioritizing transportation investments and determining eligibility for Smart Growth Incentive Funds.

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30 SANDAG. Healthy Communities Atlas.
2. MOBILITY

A healthy community promotes walking, biking, and public transit through the design of its built environment through convenient access and various mode choices.

COMMUNITY HEALTH BENEFITS AND IMPACTS

Streets that are designed for multiple users—including pedestrians of all ages, bicyclists, people with disabilities, and automobile drivers—reduce the risk of pedestrian and bicycle injuries. Walking or biking to school, work, daily errands, and recreation activities increases physical activity.

Health benefits of physical activity include reduced illness and death from heart disease, stroke, some cancers, and diabetes. Regular participation in physical activity can reduce depression and anxiety, improve mood, and enhance ability to perform daily tasks throughout the life span.  

Using public transit and active transportation options such as walking and biking has been shown to reduce vehicle miles traveled and vehicle emissions, and may reduce respiratory disease, hypertension from noise, and exposure to environmental contamination due to fuel and oil spills, among other benefits. Proximity to transit is associated with reduced vehicle trips and improved access to social, medical, employment, and recreational activities. Using public transit has been shown to help people meet minimum requirements for physical activity.

Pedestrian and bicycle trips also are beneficial as they do not contribute to noise or air pollution emissions. Air pollutants, including ozone and particulate matter, have been determined to be risk factors for cardiovascular mortality and respiratory disease and illness.

KEY FINDINGS

Pedestrian, Bicycle, and Public Transit Infrastructure

Areas with the highest levels of transportation infrastructure to support pedestrians, cyclists, and public transit riders are in the region’s core neighborhoods across much of the City of San Diego and south into the City of Chula Vista, west of Interstate 805. In the northern part of the county, pockets of supportive transportation infrastructure emerge in the Cities of Oceanside, San Marcos, and Escondido, largely mirroring the SPRINT light rail corridor along State Route 78. The lack of bicycle and pedestrian facilities coverage reduces the overall level of transportation infrastructure support in urban areas; other elements, including a fairly complete sidewalk network and access to transit, are generally present in the urban areas. Many of the region’s outlying communities have transportation systems that are largely auto-oriented and therefore less supportive of transportation-related physical activity.

A wide range of transit providers serve the region through a variety of service types. According to the 2012-2016 Coordinated Public Transit-Human Services Transportation Plan developed by the San Diego

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35 SANDAG. Healthy Communities Atlas.
Association of Governments (SANDAG), public transit service is provided throughout the region by two transit agencies, Metropolitan Transit System (MTS) and North County Transit District (NCTD). These agencies cover nine public transit operators, including three fixed-route bus operators (Chula Vista Transit, San Diego Transit Corporation, and MTS Contract Services consolidated under MTS Bus), COASTER commuter rail operations, San Diego Trolley Incorporated (SDTI), SPRINTER light rail operations, Sorrento Valley COASTER Connection (SVCC), and two Americans with Disabilities Act (ADA) complementary paratransit operators. These operators provide service in the SANDAG area of jurisdiction covering 4,261 square miles and encompassing 18 incorporated cities and the County of San Diego.\[36\]

Service types include Regional Service (commuter rail lines such as the COASTER and premium express bus routes); Corridor Service (high-frequency rapid transit routes along major travel corridors, such as the San Diego Trolley or the NCTD SPRINTER); Local Bus Service (both short-distance and cross-town urban and suburban routes, as well as lifeline routes in rural low-density areas); and Community Bus Service (local shuttles that provide neighborhood service and provide intra-community circulation, including feeder service to major regional routes).\[37\]

Some Communities of Concern have very high and high levels of existing bicycle, pedestrian, and public transit infrastructure, although this infrastructure is not always in good condition.\[38\] However, personal safety concerns may still discourage residents from walking or biking in some of these communities. The presence of infrastructure indicates that there may be opportunities to support transportation-related physical activity in these areas.

Several cities in the San Diego region now have pedestrian or combined bicycle/pedestrian plans and other policies in place to support accessibility for pedestrians. A 2013 analysis by WalkSanDiego found that five cities in the San Diego region—Carlsbad, Chula Vista, La Mesa, Oceanside, and San Diego—had pedestrian or bicycle/pedestrian master plans in place; three had received funding to create a Comprehensive Active Transportation Strategy or Bicycle/Pedestrian Plan; and six had some type of trail plan.\[39\] Six cities with recently updated General Plans also had Complete Streets policies in place, and five cities were in the process of developing policies. The same analysis found that four cities—Carlsbad, San Marcos, Encinitas, and Del Mar—were in the process of updating or had recently updated its ADA Transition Plans. Other cities in the region did not have recently updated plans in place, although SANDAG provides communities with a policy guide called “Planning and Designing for Pedestrians: Model Guidelines for the San Diego Region.”

**Sidewalks**

Sidewalk coverage is high over much of the urban core; most of the region’s urban areas have complete or nearly complete sidewalk networks, although condition of these networks varies. Many of these areas overlap with one or more of SANDAG Communities of Concern. Half of all block groups in the San Diego region have sidewalk networks that are 73 percent complete or more. The areas with complete or nearly complete sidewalk networks largely overlap with the region’s high-walkability areas. Although there are gaps in the

\[36\] SANDAG. 2012-2016 Coordinated Public Transit-Human Services Transportation Plan.

\[37\] SANDAG. 2012-2016 Coordinated Public Transit-Human Services Transportation Plan.

\[38\] Levels of transportation infrastructure are drawn from the Healthy Communities Atlas analysis. For the purposes of this analysis, San Diego region Census blocks were divided into five categories (very high, high, neutral, low, and very low) according to their composite transportation infrastructure support score. To calculate the composite score, each of the Healthy Communities Atlas base map measures was first given a standardized value (z-score) for each block group. The final composite score for each block group was the average of the base map z-scores. See the Healthy Communities Atlas for more information on this analysis.

\[39\] WalkSanDiego. 2013 San Diego Regional Walk Scorecard.
region’s sidewalk network, it will ultimately be up to local communities and decision makers to assess where gaps exist and make improvements where needed. In addition, while cities or San Diego County are responsible for the maintenance of sidewalk damage caused by vehicle accidents, water main breaks, grade subsidence, and trees within the right-of-way, normal sidewalk wear and tear or age damage is the responsibility of homeowners. 40

Physical Activity Inhibitors and Supports

Physical activity inhibitors, or elements of the built environment that might act as barriers to walking, biking, and other physical activity, are distributed relatively evenly across the San Diego region, with block groups characterized as “high” and “low” found in all parts of the region. Concentrations of inhibitors—a composite measure of traffic volume density, arterial density, vacant parcels, physical disorder, and violent crime—are most clearly seen in and along major transportation corridors. Many Communities of Concern overlap with the “low” and “very low” areas of physical activity inhibitors. This indicates that barriers to physical activity may actually be less of a problem for some Communities of Concern; however, these dynamics (and areas where physical activity inhibitors are present) should be examined in more detail before drawing conclusions.

The areas, most supportive of youth physical activity, are largely concentrated in the southern part of the region. There are concentrations of sidewalks, parks and open space, elementary schools, and bicycle and pedestrian trails in the southern half, reflecting the predominant development pattern and major population concentrations. The outlying parts of the urban area generally lack support for youth physical activity, although the rural or large lot, single-family development patterns in these areas may provide opportunities for other types of physical activity.

Bicycle Facilities and Amenities

Within the region, there are approximately 1,340 miles of existing bikeway facilities, with 806 bike lockers in 64 locations. In early 2014, DecoBike anticipates the launch of San Diego’s first bike-sharing program with 1,800 bicycles at 180 to 220 stations initially planned from Downtown and Hillcrest areas up the coast to La Jolla.

Class II facilities are the predominant type of bikeway at roughly 66 percent of the total, followed by Class III facilities at 18 percent of the regional total. Class I facilities comprise about 12 percent of the regional total. Although there are gaps in the region’s bike network, new facility designs are currently being developed and implemented across the region, and it will ultimately be up to local communities and decision makers to assess where gaps exist and make improvements where needed.

The existing bike lockers are strategically placed at Trolley, COASTER, and Bus Rapid Transit (BRT) stations and park-and-ride lots. There are three types of lockers, one (1) mechanical (with a one-to-one user to locker ratio) and two (2) types of electronic lockers (with an average of 4 to 1 users to locker ratio).

Public Transit and Paratransit Access

Within the San Diego region, access to transit tends to be either very good or very limited. Few block groups fall into the middle categories. This is largely due to the concentration of all modes of transit service along the region’s major rail corridors, since these corridors run through more densely settled areas, and many bus routes feed rail stations. In total, nearly 40 percent of households in the region—and over half of all multi-family households—are within walking distance of high-quality transit service. Although there are many

40 SANDAG. Healthy Communities Atlas.
Communities of Concern with a high level of public transit access, many others have very low access to transit. For these populations, mobility may already present challenges, and the lack of transit access will exacerbate those challenges.

Residents with disabilities who live within three-quarters of a mile of a bus or rail stop/station have access to no-cost Americans with Disabilities Act of 1990 (ADA) paratransit services, but those who do not live within close proximity to transit do not have the option of using paratransit. Paratransit service is available through the MTS Access program and the NCTD LIFT program, which operates wheelchair lift-equipped buses that provide transportation to transit riders whose disabilities prevent them from using fixed route bus or rail services. To comply with the ADA, MTS and NCTD must provide services that “mirror” the level of MTS service being offered within a three-quarter-mile radius of a bus route or rail station. In order to use ADA services, passengers must first apply to be certified. The service is only available for trips where both the origin and the destination are within three quarters of a mile of an operating fixed bus route or Trolley line. Social Service agencies often provide transportation services where cost is prohibitive, where individuals may live outside of the three-quarter mile boundary, or where individuals may prefer other services due to time of travel, driver sensitivities, need to reach multiple destinations, or other reasons. SANDAG provides funding to eligible organizations that provide transit services to elderly or disabled individuals through grant programs. Job Access and Reverse Commute (JARC) and New Freedom are federal programs authorized under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. JARC seeks to improve access to transportation services to employment-related activities. New Freedom seeks to expand transportation mobility options for individuals with disabilities. The Senior Mini-Grant Program authorized under the TransNet Extension Ordinance funds innovative transportation services for seniors.

**Transit Frequency**

Corridor services provide high-frequency rapid transit services along major travel corridors, usually in urban areas. The San Diego Trolley provides corridor service along its network while the NCTD SPRINTER provides corridor service in North County. Urban corridor routes generally serve medium-to-high land use densities with good transit and pedestrian orientation. Mixed-use development can be generally found along the route, and boardings are typically consistent along the route and throughout the day. Due to the number of people and destinations served, along with streamlined routing, urban corridor routes are generally the most productive and cost-effective within the system. Corridor service also can serve in suburban areas with greater spacing between stops.

**Local Bus Service**

Local service can serve urban, suburban, and some rural areas. Usually made by bus, the local service network serves shorter-distance trips, with routes making frequent stops. These types of services can include line haul routes or cross-town routes.

**Urban Routes**

- Urban routes generally serve medium-to-high land use densities and often provide the core routes of the transit system, with feeder services to suburban and outlying areas. Service is typically productive with higher frequencies and longer service spans than suburban and rural routes.
Suburban Routes

- Suburban routes generally serve low-to-medium land use densities and often provide intercommunity service and feeder service to major regional routes. Stop spacing may be less consistent than urban routes due to the changing land uses and densities along the route. Suburban routes are not expected to perform as well as urban routes due to the lower travel demand, particularly during off-peak time periods.

Rural Routes

- Access routes provide a lifeline level of service to rural and low-density areas. These services have low frequencies and a constrained span of service. Therefore, productivity and cost-effectiveness are low due to the limited ridership and service levels.

Community Bus Service

Community bus services are local shuttles that provide neighborhood service and generally have shorter routings compared to other services and often provide intra-community circulation, including feeder service to major regional routes. These services generally have short routings that provide access within neighborhood or business communities. Productivity and cost-effectiveness are reflective of the localized travel market. Community bus services also can serve specialized routes tailored for specific niche travel markets, such as school trips. Since limited service is provided only at the optimal time to capture the majority of the travel market, specialized services tend to achieve high levels of productivity, but low cost-effectiveness due to low passenger turnover and high nonrevenue to revenue service ratios, particularly during peak-hour periods.

General Public Demand Response

- General public demand response service is provided to areas with no defined travel patterns, discontinuous and circuitous street patterns, and low travel demand. SVCC service is classified by MTS as demand response because the service accommodates some on-call demand response needs into its routes and schedules. NCTD introduced a demand response service called FLEX in Escondido-Ramona and Southwest Carlsbad which provides reservation-only (usually) rides to individuals whose needs cannot be met by the fixed-route scheduling. FLEX vehicles take passengers anywhere within the designated FLEX zone or to the nearest transfer point with the BREEZE, COASTER, or SPRINTER. 41

TRANSIT FACILITIES

Passenger Facilities

MTS currently serves 4,617 bus stops throughout the region, and NCTD serves 1,992 bus stops in the North County area 42. Stops range in complexity; while some stops are marked with only a pole and bus stop sign, others contain passenger facilities such as benches and shelters.

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41 Appendix B from the SANDAG’s FY 11 Coordinated Plan/Short Range Transit Plan.
42 HASTUS Stops export Fall 2012
**MTS Bus Shelters**

The MTS Transit Shelter Program currently has approximately 500 shelters throughout the City of San Diego and nearly 900 throughout the entire system. These shelters are placed at 838 different stops (348 of those stops are within the City of San Diego). However, redevelopment projects often require temporary removal or relocation of these shelters.

**Trolley Stations**

SDTI maintains a total of 53 stations, most of which consist of two platforms, a large shelter, supplementary smaller shelters, and information signage and ticket vending machines. Most of the stations include facilities for connecting bus routes, with the largest of these designated as transit centers (discussed below). Twenty-three stations have free park-and-ride lots adjacent to them, while the 12th and Imperial Transfer Station and Santa Fe Station have an adjacent, paid-parking facility.

**COASTER Stations**

COASTER service, operated by NCTD, provides service to eight stations located in Oceanside, Carlsbad (two stations), Encinitas, Solana Beach, Sorrento Valley, Old Town Transit Center, and Downtown San Diego. Free parking lots are provided at each of the COASTER stations, except Santa Fe Depot in Downtown San Diego. Passengers can connect to Metrolink and Greyhound at the Oceanside Transit Center, and can connect to Amtrak at the Oceanside Transit Center, Solana Beach Station, and Santa Fe Depot. All COASTER stations also include facilities for connecting bus routes.

**SPRINTER Stations**

The 22-mile SPRINTER light rail service along the State Route 78 corridor in North County between the Oceanside and Escondido Transit Centers includes a total of 15 stations.

**Transit Centers**

Major off-street passenger stations are situated at high-volume boarding and transfer locations. The region’s existing bus transit centers are listed below.

<table>
<thead>
<tr>
<th>Bus Only</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>College Grove Center</td>
<td>North County Fair</td>
</tr>
<tr>
<td>Plaza Bonita</td>
<td>Carlsbad Village</td>
</tr>
<tr>
<td>Parkway Plaza – El Cajon</td>
<td>Plaza Camino Real</td>
</tr>
<tr>
<td>Southwestern College</td>
<td>Kearny Mesa (on street)</td>
</tr>
<tr>
<td>University Towne Centre</td>
<td>I-15 Bus Rapid Transit (BRT) Stations at Rancho Bernardo, Sabre Springs, and Del Lago</td>
</tr>
</tbody>
</table>
### Bus and Rail

<table>
<thead>
<tr>
<th>Chula Vista Bayfront/E Street</th>
<th>Grossmont Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chula Vista H Street</td>
<td>12th and Imperial Transfer Station</td>
</tr>
<tr>
<td>Chula Vista Palomar Street</td>
<td>Old Town Transit Center</td>
</tr>
<tr>
<td>El Cajon Transit Center</td>
<td>Santee Town Center</td>
</tr>
<tr>
<td>Iris Avenue</td>
<td>Encinitas COASTER Station</td>
</tr>
<tr>
<td>National City 24th Street</td>
<td>San Ysidro/Tijuana</td>
</tr>
<tr>
<td>Solana Beach COASTER Station</td>
<td>VA Hospital/UCSD</td>
</tr>
<tr>
<td>Oceanside Transit Center</td>
<td>San Diego State University</td>
</tr>
<tr>
<td>Grantville LRT Station</td>
<td>Escondido Transit Center</td>
</tr>
<tr>
<td>Sorrento Valley</td>
<td>70th Street LRT Station</td>
</tr>
<tr>
<td>America Plaza</td>
<td>Palomar College</td>
</tr>
<tr>
<td>Euclid Avenue</td>
<td>Vista Transit Center</td>
</tr>
<tr>
<td>Fashion Valley Transit Center</td>
<td></td>
</tr>
</tbody>
</table>

Additional transit centers are under construction or planned as listed below.

- Mira Mesa
- Kearny Mesa (off street facility)
- Spring Valley
- Carmel Valley
- San Luis Rey

**Park-and-Ride Lots**

Park-and-ride lots are designed to provide convenient automobile access to the regional fixed-route transit system. These parking lots offer an important transit access for those areas not served by transit. Park-and-ride lots are most effective to transit when situated along regional transit routes, such as the COASTER, SPRINTER, Trolley, and express bus service.

**Bicycle Access**

All of the region’s bus operators, the Coronado-San Diego Ferry, SPRINTER, and the Trolley operate bicycle-accessible service. All buses are equipped with front-mounted or side compartment racks, and all SPRINTER and Trolley cars and stops can accommodate bicycles. All COASTER train cars have stalls for securing bicycles (many of which utilize electronic bike lockers), and SPRINTER vehicles have a designated striped bicycle area. Permits are not required to take a bike on the bus, Trolley, COASTER, or SPRINTER.\(^\text{43}\)

\(^{43}\) Appendix B from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan
TRANSPORT COSTS

FARE POLICY AND STRUCTURE

With the approval of Senate Bill 1703 (Peace, 2002), SANDAG is now responsible for developing a regional fare policy, including setting fares for transit services in the region. SANDAG and transit agency staffs currently completed a new regional fare system in FY 2009 to correspond to the full deployment of the Compass Card.

A uniform fare structure is not only a convenience for the public that rides services provided by multiple operators, it also is an important tool for coordinating the regional public transportation system. Average fare levels have increased over the years to reflect annual increases in areawide operating cost indicators and to keep up with inflation. A unified regional fare ordinance was adopted in 2006, consolidating all regional fares into a single document approved by the SANDAG Board of Directors. This ordinance has since been amended in 2007, 2008, 2009, and 2011. Table B.10 illustrates the fare structure corresponding to the most recent ordinance update (December 16, 2011).

MTS and NCTD currently have an adopted transfer agreement. In addition, NCTD has transfer agreements with Orange County Transportation Authority and Metrolink. These agreements not only help to create seamless travel throughout the system within the SANDAG jurisdiction, but also help link our system to bordering communities and cities. Additionally, specific regional transit fares (such as the RegionPlus Day Pass) have been added to allow travelers to cross transit jurisdictional boundaries without the need of multiple fares or transfers tickets.

Fares have been established for complementary paratransit services as called for by the ADA of 1990. According to the ADA regulations and regional plans, fares for complementary paratransit services are set at no more than twice the fare of the corresponding fixed-route service.

Smart Card Fare Technology Project

SANDAG completed the deployment of the regional automated fare collection system called the “Compass Card” in FY 2010. Smart Card technology has replaced currently outdated fare collection equipment used by the fixed-route bus and rail transit operators in the County. Operator-specific fare collection systems in San Diego have been upgraded to a single, regional, integrated, and uniform fare collection system using new electronic-based smart card technology (Compass Card).

This automated fare collection system involves the use of technology to enhance the ability to manage fares and implement a fare policy in a customer-oriented fashion. The system creates the first impression for the transit user and provides the necessary support systems for all operators. The project has created seamless travel throughout the region since one card and one system allow patrons to go anywhere, customer and operator interaction is improved, confusion is eliminated, and transit is made more accessible. The system also provides more accurate transit data, which will improve service planning and monitoring. Recent experience with similar automated fare collection systems throughout the country has shown significant increases in revenue with a more accurate collection process and the reduction of potential fraud. Regiona Fare Structure Summary as of December 16, 2011, is listed below. 44

44 Appendix B from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan
45 Appendix B from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan
### Single-Ride Fares

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTS and NCTD</td>
<td></td>
</tr>
<tr>
<td>Shuttle</td>
<td>$1.00</td>
</tr>
<tr>
<td>Local Circulator/Feeder</td>
<td>$2.25</td>
</tr>
<tr>
<td>Line Haul Bus (Urban)</td>
<td>$2.25</td>
</tr>
<tr>
<td>Express Bus</td>
<td>$2.50</td>
</tr>
<tr>
<td>Commuter Express Bus</td>
<td>$5.00</td>
</tr>
<tr>
<td>Trolley</td>
<td>$2.50</td>
</tr>
<tr>
<td>Senior/Disabled/Medicare - Bus and Light Rail</td>
<td>50% of Single-Ride Fare</td>
</tr>
<tr>
<td>Transfers</td>
<td>No Transfers</td>
</tr>
<tr>
<td>Coronado-San Diego Bay Ferry Commuter Service</td>
<td>$4.25</td>
</tr>
<tr>
<td>Rural Routes</td>
<td>$5.00 to $10.00</td>
</tr>
<tr>
<td>Sports Express Bus</td>
<td>$5.00 OW to $12.00 RT</td>
</tr>
</tbody>
</table>

### NCTD Only

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular - BREEZE</td>
<td>$1.75</td>
</tr>
<tr>
<td>Regular - SPRINTER</td>
<td>$2.00</td>
</tr>
<tr>
<td>Regular - COASTER</td>
<td>$4.00 to $5.50</td>
</tr>
<tr>
<td>Senior/Disabled - BREEZE</td>
<td>$0.75</td>
</tr>
<tr>
<td>Senior/Disabled - SPRINTER</td>
<td>$1.00</td>
</tr>
<tr>
<td>Senior/Disabled - COASTER</td>
<td>$2.00 to $2.75</td>
</tr>
<tr>
<td>LIFT Services</td>
<td>$3.50</td>
</tr>
</tbody>
</table>

### Multi-Ride Fare Media

#### Day Passes (MTS and NCTD)

<table>
<thead>
<tr>
<th>Pass Type</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Day Pass</td>
<td>$5.00</td>
</tr>
<tr>
<td>RegionPlus Day Pass</td>
<td>$12.00</td>
</tr>
<tr>
<td>Region 2-Day Pass (Bus and Light Rail)</td>
<td>$9.00</td>
</tr>
<tr>
<td>Region 3-Day Pass (Bus and Light Rail)</td>
<td>$12.00</td>
</tr>
<tr>
<td>Region 4-Day Pass (Bus and Light Rail)</td>
<td>$15.00</td>
</tr>
<tr>
<td>NCTD Only (Senior/Disabled/Medicare)</td>
<td>$2.25</td>
</tr>
</tbody>
</table>

#### Monthly Passes (MTS and NCTD)

<table>
<thead>
<tr>
<th>Pass Type</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region Regular</td>
<td>$72.00</td>
</tr>
<tr>
<td>Regional Senior/Disabled/Medicare</td>
<td>$18.00</td>
</tr>
<tr>
<td>Regional Youth (ages 6-18)</td>
<td>$36.00</td>
</tr>
<tr>
<td>Regional Premium</td>
<td>$100.00</td>
</tr>
<tr>
<td>Regional Premium Senior/Disabled/Medicare</td>
<td>$25.00</td>
</tr>
<tr>
<td>Regional Premium Youth (ages 6-18)</td>
<td>$50.00</td>
</tr>
<tr>
<td>MTS College Monthly Pass</td>
<td>$57.60</td>
</tr>
</tbody>
</table>

#### Monthly Passes (NCTD Only)

<table>
<thead>
<tr>
<th>Pass Type</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular - BREEZE/SPRINTER</td>
<td>$59.00</td>
</tr>
<tr>
<td>Regular - COASTER</td>
<td>$120.00 to $165.00</td>
</tr>
<tr>
<td>Senior/Disabled - COASTER</td>
<td>$41.25</td>
</tr>
<tr>
<td>Youth COASTER Pass</td>
<td>$82.50</td>
</tr>
<tr>
<td>NCTD College Monthly Pass</td>
<td>$29.00 to $47.00</td>
</tr>
</tbody>
</table>

### Other Passes

<table>
<thead>
<tr>
<th>Pass Type</th>
<th>Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Tokens (MTS and NCTD)</td>
<td></td>
</tr>
<tr>
<td>20-Pack Bus and Trolley Fares up to $2.50</td>
<td>$50.00</td>
</tr>
<tr>
<td>40-Pack Bus and Trolley Fares up to $2.50</td>
<td>$100.00</td>
</tr>
</tbody>
</table>
Transit Service Hours

SANDAG has now fully deployed its 511 service across San Diego County. The 511 service (and www.511sd.com) is a free phone and web service that consolidates the San Diego region’s transportation information into a one-stop resource. The service provides schedule, route, and fare information for public transportation services and also provides up-to-the-minute information on traffic conditions, incidents, and driving times. The service is available 24 hours a day, 7 days a week. The service is managed by a partnership of public agencies led by SANDAG, the California Highway Patrol, Caltrans, MTS, NCTD, and San Diego SAFE. SANDAG also deployed the iCommute website (icommutesd.com), which provides a gateway to the commute choices, including transit, that are available in the San Diego region. The iCommute program is managed as a part of the 511 transportation information program.

MTS and NCTD also both maintain informative websites at www.sdmts.com and www.gonctd.com. Those sites provide fares, schedules, rider alerts, etc. for the host of MTS and NCTD services. They also provide administrative information on the two Board of Directors, meetings, agendas, and employment opportunities.46

FY 2011 transit service hours for MTS and NCTD bus, trolley, ferry, and rail services in San Diego County are listed below:47

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46 Appendix B from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan
47 Appendix C from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan
<table>
<thead>
<tr>
<th>Route</th>
<th>Type of Route</th>
<th>Days of Operation</th>
<th>Operating Hours (Weekday)</th>
<th>Frequency (Minutes)</th>
<th>Vehicles</th>
<th>One Way Length (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Peak</td>
<td>Base</td>
<td>Night</td>
</tr>
<tr>
<td>1</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>5:00A - 12:30A</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:29A - 1:00A</td>
<td>11</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:55A - 12:12A</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Urban Standard</td>
<td>Monday - Sunday</td>
<td>4:42A - 11:51P</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>5:23A - 11:29P</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:30A - 2:08A</td>
<td>6</td>
<td>24-Dec</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>5:36A - 12:38A</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>5:52A - 10:37P</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:48A - 12:21A</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>11</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:36A - 11:46P</td>
<td>7.5</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>13</td>
<td>Urban Standard</td>
<td>Monday - Sunday</td>
<td>5:55A - 10:12P</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>14</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:30A - 1:15A</td>
<td>10</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>15</td>
<td>Urban Standard</td>
<td>Monday - Saturday</td>
<td>6:40A - 6:00P</td>
<td>30</td>
<td>30</td>
<td>---</td>
</tr>
<tr>
<td>16</td>
<td>Circulator</td>
<td>Monday - Friday</td>
<td>4:41A - 11:39P</td>
<td>15/30</td>
<td>15/30</td>
<td>60</td>
</tr>
<tr>
<td>17</td>
<td>Urban Standard</td>
<td>Monday - Sunday</td>
<td>6:25A - 7:09P</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>18</td>
<td>Urban Standard</td>
<td>Monday - Sunday</td>
<td>6:30A - 10:04P</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>20</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>4:57A - 12:49A</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>21</td>
<td>Urban Standard</td>
<td>Monday - Friday</td>
<td>5:37A - 7:08P</td>
<td>30</td>
<td>30</td>
<td>---</td>
</tr>
<tr>
<td>22</td>
<td>Urban Standard</td>
<td>Monday - Sunday</td>
<td>5:11A - 11:10P</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>23</td>
<td>Urban Frequent</td>
<td>Monday - Sunday</td>
<td>5:25A - 11:48P</td>
<td>15</td>
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### MTS CONTRACT SERVICES RURAL FY 11 TRANSIT SERVICE DATA

**Operations Data**

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### MTS CONTRACT SERVICES RURAL FY 11 TRANSIT SERVICE DATA

**Operations Data**

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### CITY OF CORONADO – CORONADO FERRY FY 09 TRANSIT SERVICE DATA

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**NORTH COUNTY TRANSIT DISTRICT – COASTER FY 11 TRANSIT SERVICE DATA**

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**NORTH COUNTY TRANSIT DISTRICT BREEZE FY 11 TRANSIT SERVICE DATA**

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37
AUTOMOBILE INFRASTRUCTURE

Arterials and high traffic volume roads are concentrated along the region’s major transportation corridors. There are several high traffic volume roads that run from the City of Escondido to the City of San Marcos to the City of Carlsbad, and from the City of San Marcos to the City of Vista. Block groups with lower levels of arterial and traffic volume density, and consequently healthier air quality, are found in urban, suburban, and rural areas, as well as along much of the shoreline. High traffic volume roadways contribute to air and noise pollution, and air pollution has been linked to increased risk of asthma and other respiratory conditions for nearby residents.

The Downtown San Diego core is currently served by two carshare programs: ZipCar, which rents cars by the hour or day, and car2go, which rents cars by the minute. Both programs are available on a membership basis. However, other areas of the region do not currently have carshare programs in place. Carshare programs help to reduce the number of vehicle miles traveled by residents each year by making single-car or no-car households possible. Other technologies are making ridesharing more prevalent and user friendly as well. “Lyft” is a peer-to-peer ride-matching service that matches needed rides with an eligible Lyft-certified driver. Ride requests take place through a mobile application. Uber and Sidecar are two other real-time ride-sharing services operating in San Diego that offer a taxi alternative.

PARKING

Policies for shared or reduced parking are growing in the region. Policies that effectively manage the supply of parking can assist the region in meeting goals to reduce vehicle miles traveled and greenhouse gas emissions. Sixteen cities in the San Diego region have either adopted or implemented policies for shared parking according to a 2013 SANDAG parking policy inventory. Five jurisdictions have implemented remote parking which encourage travelers to “park once” and walk to their destination, while two other cities feature this strategy during special events. Twelve jurisdictions offer reduced ratios for affordable or senior housing, seven offer reduced ratios within specific plan areas, districts, or corridors, and eight cities either have a parking in-lieu fee program or are in the process of developing one.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Transportation demand management (TDM) strategies are becoming more widespread in the San Diego region. The regional TDM program, iCommute, provides options and resources for residents interested in carpooling and vanpooling, and carpool lanes on many area highways create incentives to share rides. TDM refers to a variety of strategies that change travel behavior (how, when, and where people travel) in order to improve transportation system efficiency and achieve key regional objectives, such as reduced traffic congestion, increased safety and mobility, and energy conservation and emission reductions. TDM is a key component of the 2050 Regional Transportation Plan and Sustainable Communities Strategy as a way to reduce greenhouse gas emissions in accordance with Senate Bill 375 (Steinberg, 2008). The iCommute program, sponsored by SANDAG, assists commuters throughout the region by providing free ridematching services, a subsidized vanpool program, transit solutions, regional support for bicycling, the Guaranteed Ride Home program, SchoolPool, and support for teleworking. As of June 30, 2013, the iCommute program managed 738 vanpools with 5,714 daily passengers; 834 bike locker spaces at more than 62 locations were available with 512 bicycle commuters participating in the bike locker program; and 68 schools were registered for SchoolPool during the 2012 to 2013 school year. During FY 2013, there were 981,593 trips

48 SANDAG. Transportation Committee Presentation. May 17, 2013
49 Victoria Transportation Policy Institute TDM Encyclopedia.
logged in iCommute which had a positive impact on the regional commute, the environment, and public health. These alternative trips were equivalent to 139 million miles not driven alone, six million gallons of gasoline not used, and 119 million pounds of carbon dioxide not emitted into the air. Local governments, employers, and schools participate in annual campaigns offered by iCommute that raise awareness for alternative modes of travel. Sixty-four organizations representing approximately 91,000 employees competed in the 2013 Bike-to-Work Corporate Challenge and 48 organizations representing 87,000 employees competed in the Rideshare 2012 Corporate Challenge reflecting a more than 25 percent increase from 2011. Twenty-nine schools representing more than 19,000 students participated in the 2012 Walk, Ride, and Roll to School Challenge during which participating students logged more than 7,500 miles.\(^{50}\)

**MOBILITY TECHNOLOGY**

SANDAG has been funding Intelligent Transportation Systems (ITS) as an alternative to building large infrastructure projects. The goal of the ITS is to maximize the effectiveness of the transportation system by utilizing technology to delay or mitigate a freeway expansion by increasing the efficiency of that roadway. Traditionally, these technologies can be segmented into vehicle systems, roadway systems, traveler information, and transportation payment systems.

Technology has the potential to impact individual and community health profiles by providing alternatives to commuting alone. ITS creates a better transit alternative by making transit easier to use. Studies have shown that commuters who rely on transit are more active than those who drive.\(^{51}\) Additionally, ITS can support active transportation options such as biking, walking, and other alternatives through the use of bike or pedestrian detection and specialized signal treatments – i.e., bicycle queue jumpers.

Advances in smartphones, geo-location services, and mobile applications have unleashed a number of innovative transportation options including carsharing, ridesharing, and transit trip planners that are helping travelers to make more rational decisions about the mode of travel for each trip. An increased consciousness about how one gets around often leads to an increase in physical activity, as travelers often access travel modes such as carsharing and transit on foot.

Bikesharing systems are another innovative transportation solution enabled by technology, including geo-location services, pay-as-you–go systems, mobile applications, and wireless communications. Bikesharing systems provide individuals with convenient access to a bike when they need one for short trips. In addition to reducing greenhouse gas emissions and reducing single occupant vehicle trips, bikeshare services enable individuals to combine physical activity with their trip, resulting in health benefits for the individual and community at-large.

\(^{50}\) SANDAG. iCommute Measures Up (FY 2013)

3. HOUSING

A healthy community provides a diversity of affordable housing choices integrated across neighborhoods.

COMMUNITY HEALTH BENEFITS AND IMPACTS

Lack of adequate affordable housing may force families to seek forms of shelter that can compromise their health and well-being. This can result in overcrowding, overpayment, substandard housing, infestation by pests, mold, longer work commutes, and other deficiencies. Excessive rent or housing cost burdens could contribute to hunger, mental stress, harsh parenting (hitting or shouting at children), and overcrowding. Lower housing costs result in more disposable income for essential non-housing needs.

A wider variety of affordable housing types, from small studios to larger homes with multiple bedrooms to accommodate families, could alleviate overcrowding and lessen related negative health impacts. Residents of substandard housing are at increased risk for fire, electrical injuries, lead poisoning, falls, rat bites, childhood asthma, and other illnesses and injuries. Overcrowded housing conditions also can contribute to infectious disease risk, childhood development issues tied to lack of quiet spaces, and stress.

KEY FINDINGS

Combined Housing and Transportation Cost

In the San Diego region, moderate-income homeowners typically spent about two thirds, 67 percent, of their household income on housing and transportation combined, according to a housing and transportation cost index developed by the Center for Neighborhood Technology. For moderate-income renters, this number was 60 percent.

Existing Housing Problems

Housing Cost

The cost of housing is rising for both renters and homeowners across the region. The median price for a single-family home in the San Diego region was $483,000 in August 2013, while the median price for a condominium unit was $310,000. Both prices were up significantly from 2012. The median monthly housing cost paid by homeowners in 2012, the most recent year for which data are available, was $2,282 for housing units with a mortgage and $486 for units without a mortgage.

Among homeowners with a mortgage, 36.9 percent paid over 35 percent of household income in housing costs, while another 10.9 percent paid between 30 and 34.9 percent. Among homeowners without a

53 Ibid.
54 Ibid.
55 Ibid.
56 Center for Housing Policy and Center for Neighborhood Technology. Losing Ground: The Struggle of Moderate-Income Households to Afford the Rising Costs of Housing and Transportation. Moderate income is defined as households earning between $32,919 and $65,839 each year.
57 Ibid.
58 Greater San Diego Association of Realtors.
mortgage, however, only 12.8 percent paid over 35 percent of household income for housing. These percentages track closely to the statewide averages.

Median rent in the San Diego region was $1,253 in 2012, close to the $1,200 statewide average. Nearly half (48.1 percent) of renters in the region paid over 35 percent of household income in rent, and another 9.9 percent paid between 30 and 34.9 percent of household income in rent.

**Affordable Housing Availability**

Waiting lists for affordable subsidized housing units are often long. For instance, the current wait for affordable Section 8 housing in the city of San Diego is approximately eight to ten years. The SANDAG 2010-2011 RCP Biennial Performance Monitoring Report indicates that in 2011 the region had approximately 92,615 households on Section 8 waiting lists. There are six jurisdictions in the San Diego region that issue Section 8 vouchers: Carlsbad, Encinitas, National City, Oceanside, the City of San Diego, and the County of San Diego.

Based on the 2003-2010 Regional Housing Needs Assessment (RHNA) adopted by SANDAG in February 2005, building permits were issued for 19 percent of the very low income, 26 percent of the low income, 18 percent of the moderate income, and 152 percent of the above moderate income regional housing needs. The percent of goal produced in the above moderate income group has been exceeded, while the housing needs for very low, low, and moderate income households fell short of its respective goals.

According to the RHNA Plan for the 2010-2020 housing cycle, approximately 36,450 units are needed to meet near-term needs for very low income households, 27,700 units needed for low income households, 30,610 units needed for moderate income households, and 67,220 units needed for above-moderate income households.

**Overcrowding and Doubling Up**

Overcrowded housing continues to be a concern. Based on the 2012 American Community Survey, 6.2 percent of housing units in the San Diego region were overcrowded, meaning that they had more than 1.0 residents per room. About 2.1 percent of housing units were severely overcrowded, with more than 1.5 residents per room. Some overcrowding results from families “doubling up,” or moving in with friends or relatives when they lose their own homes or because of the high cost of rents and housing prices relative to incomes. Efforts to provide a wide variety of affordable housing types may help to alleviate overcrowding and avoid resulting negative health impacts.

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59 County of San Diego. “Section 8 Rental Assistance Program.” www.sdcounty.ca.gov/sdhcd/renters/section_eight.html
63 2012 American Community Survey.
64 Regional Comprehensive Plan, SANDAG, 2004
Foreclosure Rate

Foreclosures and notices of default have fallen substantially since the peak of the foreclosure crisis, and the current rate of foreclosures is consistent with the historical average for the region. In September 2013, there were 662 Notices of Default and 170 Trustee’s Deeds issued in the San Diego region. Both numbers were down substantially from peaks in March 2009, when 4,260 notices of default were issued, and July 2008, when 2,285 Trustee’s Deeds were issued. The current rates are comparable to monthly averages throughout the late 1990s and early 2000s, when the region’s housing market was relatively stable, and are well below historic monthly averages over the last 25 years, indicating that the foreclosure crisis has subsided locally. 65

Diversity of Housing Type

In 2008 there were 692,382 single family housing units and 405,023 multiple family housing units in the region. 66 By 2050, it is projected that there will be 333,000 more housing units, of which 82 percent are estimated to be multi-family.

The majority of housing in the region is comprised of two- or three-bedroom units. Region-wide in 2012, approximately 13.4 percent of housing units were studios or one-bedrooms. Just over a quarter, or 26.9 percent, were two-bedroom units, while almost 40 percent were three-bedroom units. 67 About 15.9 percent had four bedrooms, and 4.2 percent had five or more bedrooms. The majority of homes in the region were built after 1950; only one in five was built before then. About 15 percent of homes were built after 2000. 68

Housing Tenure

Just over half of housing units are owner-occupied, and most homeowners have mortgages. In 2012, there were 1,169,225 housing units in the San Diego region, of which a majority 91.9 percent were occupied. Approximately 7.7 percent of housing units were vacant region-wide, compared to 8.4 percent statewide. A little over half—53.1 percent—of housing units were owner-occupied, while 46.9 percent were renter-occupied. These percentages parallel statewide percentages. Both regionally and across the state, the percent of homes that are owner-occupied has fallen since the peak of the housing boom. Of owner-occupied housing, about three quarters (74.9%) had a mortgage, also in keeping with statewide trends. 69

Housing Safety

Lead paint, common in homes built before 1979, remains the top source of lead poisoning, and yearly there are approximately 114 cases of childhood lead poisoning in the San Diego region. The highest incidence of lead poisoning occurred within the Central County area, followed by North Coastal and North Inland Counties. Approximately 51.2 percent of cases occurred in rental dwellings, and 23.2 percent of cases

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67 2012 American Community Survey.
68 Ibid.
occurred in personally-owned properties. About 24.4 percent of the cases occurred in homes built between 1960 and 1979, and 20 percent in structures built from 1980 onwards.\textsuperscript{70}

Cultural home remedies and traditional pottery also can expose residents to lead. Lead-safe housing programs in the area seek to educate residents about risks and ensure that lead dust in older homes where paint is deteriorating or where renovations are occurring is addressed to prevent poisoning.

\textit{Senior Housing}

In 2012, roughly 15 percent of homeowners and 11 percent of all renters in the San Diego region were over the age of 65. More than half of all seniors (54\%) in the region spent more than a third of their income on housing. Nearly 33 percent of homeowners and 63 percent of renters ages 65 and up paid 30 percent or more for their housing. County-wide, 9.5 percent of all people living below the poverty rate were seniors.\textsuperscript{71}

With seniors comprising just 12 percent of the population in 2012, the SANDAG Series 13 Regional Growth Forecast projects that by 2050 almost 20 percent of the region’s population will be ages 65 and over.\textsuperscript{72} There are more than 300 private senior care facilities throughout the region including assisted living facilities, nursing homes, memory care communities, continuing care retirement communities, and independent living communities.\textsuperscript{73} As of 2012, the County of San Diego’s Department of Housing and Community Development reported roughly 105 affordable housing resources available to low and moderate income seniors throughout the region.

Seniors are a priority group for both Section 8 vouchers and public housing programs throughout San Diego County. Care management and coordination services are available through the San Diego County’s Aging and Independence Services to seniors who may not be eligible for other housing assistance programs. Some local jurisdictions such as the City of San Diego and the City of Santee provide programs and services that specifically target the elderly, such as rental assistance, affordable housing development, and housing rehabilitation programs.\textsuperscript{74}

\textit{Homelessness}

In 2012, the overall homelessness rate of San Diego was 0.3 percent.\textsuperscript{75} Homeless individuals and families were housed in emergency shelters, transitional housing, permanent supportive housing, and through safe havens programs. In 2012, the region’s homeless shelters operated at or near capacity throughout the year, with emergency shelter use peaking in the winter months. While there are emergency shelters and transitional housing located throughout the region, the majority of facilities are within the City of San Diego, which also is where nearly two thirds (65\%) of homeless residents lived in 2012. Just over half of homeless residents were unsheltered at the time that the 2012 count was conducted.\textsuperscript{76}

\begin{flushright}
\textsuperscript{70} San Diego County. Childhood Lead Poisoning Prevention Program. www.sdcounty.ca.gov/hhsa/programs/phs/child_lead_poisoning_prevention_program/clppp_surveillance_graphs_maps_reports.html
\textsuperscript{71} 2012 American Community Survey 1-year Estimate.
\textsuperscript{72} SANDAG Series 13 Regional Growth Forecast. October 2013.
\textsuperscript{75} San Diego County Regional Task Force on the Homeless. The 2012 San Diego regional Annual Homeless Assessment Report.
\textsuperscript{76} San Diego County Regional Task Force on the Homeless. The 2012 San Diego regional Annual Homeless Assessment Report.
\end{flushright}
Jobs/Housing Balance

In 2008 the California Planning Roundtable published a report entitled, “Deconstructing Jobs-Housing Balance.” This report provides an overview of jobs-housing balance issues for planning practitioners. It outlines the objectives such a policy hopes to achieve (such as reduced driving and congestion, reductions in air pollutants, and lower costs to businesses and commuters, among others) and the strengths and shortcomings of the various ways of measuring this balance. The conclusion of the report is that jobs-housing balance ratios should be used as generalized indicators, and that regional and local policies such as the smart growth, affordable housing, economic prosperity, transit-oriented transportation, congestion pricing, and transportation demand and system management strategies that the region is pursuing through the implementation of the San Diego Association of Government (SANDAG) Regional Comprehensive Plan, 2050 Regional Transportation Plan and its Sustainable Communities Strategy, and Regional Housing Needs Assessment will assist in meeting the objectives associated with jobs-housing balance. The variables that make assessing jobs-housing balance difficult include the types of jobs available, job skills and education of residents, availability (or lack thereof) of a range of housing choices that are affordable to a variety of income levels, households with multiple workers, job changes, and quality of schools.\textsuperscript{77}

Over the past few years, growth in the number of new housing units has slowed significantly; growth in the number of new jobs began to slow in 2006. The region experienced net job losses in 2008, 2009, and 2010, although in 2010 the loss is not as substantial as in 2009. The loss of 68,400 jobs in 2009 caused the significant drop in the ratio of new jobs to new units as well as the drop in the ratio of total jobs to total housing units. As the economy recovers in future years, this indicator (and others because of the complicated nature of this issue) may provide a more useful measure of whether the region is achieving a balance between jobs and housing units.\textsuperscript{78}


4. ENVIRONMENT

A healthy community promotes environmental protection and conservation through the design of its built environment.

COMMUNITY HEALTH BENEFITS AND IMPACTS

The health of the environment is fundamentally linked to the health of its residents. Epidemiological studies have found consistent associations between living in proximity to a busy roadway and respiratory disease symptoms, including asthma and poor lung function.\textsuperscript{79} Diesel particulate matter from truck and train engine exhaust has been shown to have acute short-term impacts and disproportionate effects on the elderly, children, and people with illnesses or others who are sensitive to air pollutants.\textsuperscript{80}

In addition to contributing to air pollution, traffic also is a significant source of environmental noise. Chronic noise exposure can result in sleep disturbance, cognitive impairment in children and adults, adult hypertension, and stress hormone activation.\textsuperscript{81}

Pervious surfaces allow natural ground absorption of rainfall, replenishing groundwater tables, and reducing the amount of stormwater runoff to the region’s rivers, bays, and beaches. With less stormwater runoff, contaminant runoff also is reduced, and residents swimming or fishing in the region’s water bodies have reduced exposure to oils, lead, and other toxins.

Trees provide natural cooling through shading thereby reducing exposure to ultra violet radiation and the risk of skin cancer, as well as energy demand and consumption. Presence of trees has been shown to slow down traffic, potentially reducing risk for pedestrian and bike injuries.\textsuperscript{82} Trees capture air pollution, reduce carbon dioxide, increase oxygen, and help capture storm-water runoff, reducing the amount of mercury, oil, and lead that flows into waterways.

KEY FINDINGS

Climate Change

The transportation sector accounts for the greatest portion of Greenhouse Gas (GHG) emissions in California, and in the San Diego region.\textsuperscript{83,84} California is the 12th largest GHG worldwide.\textsuperscript{85} Statewide, 38 percent of GHG emissions came from the transportation sector (see Figure 1); of that 38 percent, personal passenger

\textsuperscript{79} United States Environmental Protection Agency. Our built and natural environments: A technical review of the interactions between land use, transportation, and environmental quality. 2001
vehicles were responsible for 79 percent of emissions. In San Diego County in 2010, emissions from cars and light-duty trucks were estimated to comprise 43 percent of total greenhouse gas emissions (see Figure 2), and more than 70 percent of all regional emissions were related to individual activities. Climate change linked to GHG emissions is the preeminent public health threat of the 21st century, according to the Center for Climate Change and Health at the Public Health Institute.

Figure 1. California Greenhouse Gas Emissions Inventory

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According to the County of San Diego’s Climate Action Plan (CAP), climate change is beginning to affect California residents and businesses through events such as reduced snow pack in the Sierra Nevada Mountains—affecting drinking water supplies in San Diego County—and increased salinity in the Bay Delta. The CAP notes that the San Diego region is likely see the following climate change effects:

- Higher temperatures
- A greater number of extremely hot days
- Changes in the pattern and amount of precipitation
- Sea level rise
- Rise in the spread of diseases and pests
- Decreased water supplies accompanied by increased demand
- Increased wildfire risk

Source, Energy Policy Initiative Center, University of San Diego, San Diego County Updated Greenhouse Gas Inventory, December 2013
• Changes in ecosystems

• Decline or loss of plant and animal species

The CAP also describes how climate change may potentially affect community health by altering the region’s agriculture and food production through increased instances of drought and extreme weather events. Climate change could strain the local health care system due to health-related illnesses and deaths, particularly among residents who are already vulnerable to health problems, including chronic diseases and other health concerns related to air quality and heat. 

All nineteen jurisdictions in the San Diego Region have completed a GHG Inventory. In June 2012 the County of San Diego adopted a CAP for the unincorporated communities in the San Diego region that included the development of California Environmental Quality Act Thresholds of Significance for GHG emissions for use in all areas of the region.

Of the 19 jurisdictions, 13 (representing over 87% of the region’s population) have developed or are in the process of developing a CAP.

Air Quality

The concentrations of air pollutants currently being measured closely follow the region’s major highway corridors. This is expected as the highway corridors were a major focus of the analysis, which was conducted by the San Diego Association of Governments (SANDAG) for the Healthy Communities Atlas. The specific impacts of the Port of San Diego, San Diego International Airport, San Ysidro and Otay Ports of Entry, and rail yards are not clearly evident in the analysis because these areas are also adjacent to a number of highway corridors, particularly Interstate 5. Other areas in the region also may have high concentrations of air pollutants due to air inversions or to non-transportation sources.

Relatively few housing units are within the air quality impact zones, even in Communities of Concern. However, 108 block groups had 50 percent or more of their housing units within the zone of impact. Although the pattern of impacts for Communities of Concern generally mirrors that of the region as a whole, inferential testing could be performed to confirm that this is the case. A more detailed analysis of specific neighborhoods and other pollutants may identify areas suffering from disparate impacts.

Secondhand Smoke

Several state and local laws protect the public from exposure to secondhand smoke. In 1988, the California State Workplace Smoking Law banned smoking in all public working places. The law prohibits smoking within 20 feet of main entrances, exits, and operable windows of any building owned, leased, and occupied by the state, county, or city and buildings of the University of California, California State University, and California community colleges. All 18 incorporated cities in San Diego County have adopted local ordinances as well. The unincorporated areas follow the County of San Diego smoking ordinances.

Other smoking laws in place in the San Diego region include:

89 County of San Diego. County of San Diego Climate Action Plan. 
www.sdcounty.ca.gov/pds/advance/Climate_Action_Plan.pdf

90 SANDAG. Healthy Communities Atlas.

91 SANDAG. Healthy Communities Atlas.
• At this time, the City of El Cajon is the only jurisdiction in San Diego County that restricts smoking in common areas (inside and outside) of multiunit housing complexes. Currently, no laws in the San Diego region prohibit smoking inside apartments and condominium complexes, although some developments have their own voluntary policies in place to restrict smoking.

• Smoking is not permitted on San Diego County Beaches. All parks are now tobacco free, except in the City of Santee. All other cities and the unincorporated areas of San Diego County are smoke-free.

• The Cities of El Cajon, San Diego, Solana Beach, and Vista all have Tobacco Retail Licensing ordinance in place to require all merchants who sell tobacco to purchase a new license in addition to the existing State of California tobacco retail license required to sell tobacco in California. The fees collected from the license are mainly used for enforcing the laws that forbid the sale and distribution of tobacco products to minors.

• Eight of the nineteen colleges in the region have smoke-free campus policies: MiraCosta College, Palomar College, Point Loma Nazarene College, San Diego City College, San Diego Mesa College, San Diego State University, Southwestern College, and the University of California, San Diego.

• The Cities of Chula Vista, Del Mar, El Cajon, Encinitas, National City, and Solana Beach prohibit smoking on outdoor dining patios at restaurants.\(^92\)

• Third-hand smoke in rental units has been recognized as a concern in some communities. The City of Encinitas’s public health working group identified third-hand smoke, or the indirect smoke effects from living in a housing unit previously occupied by a smoker, as a health determinant.

**CalEnviroScreen**

CalEnviroScreen is a screening methodology developed by California Environmental Protection Agency and the Office of Environmental Health Hazard Assessment that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution. In the San Diego region, ZIP codes with high CalEnviroScreen scores indicating that communities are disproportionately burdened by multiple sources of pollution include the following.\(^93\)

- 92113 (City of San Diego, Logan Heights/Barrio Logan neighborhood): top five percent of statewide ZIP codes
- 91950 (City of National City): top five percent of statewide ZIP codes
- 92025 (City of Escondido): top five percent of statewide ZIP codes
- 92020 (City of El Cajon): top ten percent of statewide ZIP codes

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\(^92\) County of San Diego. County of San Diego Tobacco Control Resource Program. [http://www.sdcounty.ca.gov/hhsa/programs/phs/tobacco_control_resource_program/smoking_laws.html](http://www.sdcounty.ca.gov/hhsa/programs/phs/tobacco_control_resource_program/smoking_laws.html)

\(^93\) California Office of Environmental Health Hazard Assessment. *California Communities Environmental Health Screening Tool*. [http://oehha.ca.gov/ej/ces11.html](http://oehha.ca.gov/ej/ces11.html)
Water

Water Supply

Overall, the San Diego region imports 85 percent of its water supply. In 1991, San Diego County was 95 percent reliant on a single source for water, the Metropolitan Water District (MWD) of Southern California, making the region more vulnerable to drought impacts. In 2012, the region had reduced dependence on MWD water to about 45 percent.

The chart below shows the percentage of the water supply by source. Efforts toward conservation and diversification have helped create a more stable water supply. San Diego County Water Authority (SDCWA) anticipates that by 2020, an increasing portion of the water supply will come from desalinated seawater. Scheduled for completion in 2016, the Carlsbad Desalination Project will assume production of 7 percent of the region’s fresh water supply, and is projected to yield 50 million gallons of water per day.

Figure 3. Increasing San Diego County’s Water Supply Reliability through Supply Diversification

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96 Ibid.

97 Ibid.

98 Ibid.


**Water Conservation**

Per capita water usage within the state varies greatly between cities and communities. Since 2007, regional per capita water use decreased by more than 27 percent and regional potable water consumption in dropped by 24 percent, despite of a 30 percent increase in population since 1990.\(^{101}\) With this decrease in water consumption, local cities and water districts are on schedule to meet the state-mandated water efficiency targets for 2020.\(^{102}\)

![Figure 4. San Diego County Potable Water Use Per Capita by Year](image)

In January 2014, a state of drought emergency was declared throughout the State of California.\(^{103}\) The San Diego region has historically been impacted by cycles of drought.\(^{104}\) Droughts can lead to increased risks of fire threat, water shortages for both agricultural uses and human consumption, and can have negative environmental impacts on local wildlife.\(^{105}\) Droughts tend more often to have localized impacts, and may not affect the region equally.\(^{106}\) In 2006, the SDCWA adopted a Drought Management Plan to guide equitable

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105 Ibid.

106 Ibid.
allocation and effective action in the case of a water shortage in the region. Additionally, the SDCWA Board of Directors has considered the adoption of voluntary guidelines promoting increased conservation measures.

Figure 5. California Drought Conditions\textsuperscript{107}

**Drinking Water Quality**

The San Diego County Water Authority serves approximately 95 percent of the region’s residents, and is responsible for treating untreated water that it receives from the the MWD of Southern California before the water can be used by the public. The Water Authority owns the Twin Oaks Valley Water Treatment Plant, which produces up to 100 million gallons of potable water each day.\textsuperscript{108}

In addition to the Water Authority, other agencies that own and operate treatment plants within the San Diego region include:

- City of Escondido (joint ownership with Vista Irrigation District)
- Helix Water District

\textsuperscript{107} Source, California Drought Monitor, February 18, 2014.

\textsuperscript{108} Ibid.
• City of Oceanside
• Olivenhain Municipal Water District
• City of Poway
• City of San Diego
• Santa Fe Irrigation District (joint ownership with San Dieguito Water District)
• Sweetwater Authority (operating for South Bay Irrigation District and National City)

The Water Authority also purchases treated water from the MWD, the Helix Water District, the Olivenhain Municipal Water District and the Cities of Oceanside, San Diego, and Poway. Treated water can be delivered directly into member agency’s distribution systems for customer use.

**Surface Water Quality and Stormwater Management**

The County of San Diego Stormwater Protection Program manages stormwater quality, including flood control, stormwater pollutants, and water conservation. Specific contaminants managed by the program include the following:

- **Flood control:** Drainage and hydrology
- **Residential-based stormwater pollutants:** Fertilizers/pesticides; home repair waste; litter; manure; pet waste; soil, dirt and gravel; solvents/degreasers; vehicle fluids; wash water; and yard waste
- **Stormwater commercial activities:** Automotive; botanical, zoos, and exhibits; cement mixing and cutting; eating and drinking establishments; equine facilities; golf courses, parks, and recreation facilities; landscaping; marinas; masonry; mobile carpet and drape cleaning; mobile vehicle washing; nurseries and greenhouses; painting and coating; parking lots and storage facilities; pest control; pool and fountain cleaning; portable sanitary toilet cleaning; power washing; retail and wholesale fueling; and vehicle auto body repair, painting, and maintenance
- **Stormwater residential activities:** Conservation; home improvement; horses and livestock, pets, pool and spas; rain barrels; vehicle care; and yard and lawn care

The San Diego Regional Water Quality Control Board is currently in the process of developing a new Urban Runoff Management Program as part of its newly adopted Municipal Stormwater Permit and expects to have new permit requirements in place by mid-2015. ¹⁰⁹

**Other Water Monitoring Programs**

Other water monitoring programs in the San Diego region include the following:

- The County of San Diego Department of Environmental Health’s Beach and Bay Water Quality Monitoring Program monitors the quality of beach water through testing and is responsible for public

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¹⁰⁹ County of San Diego Watershed Protection Program.
education, outreach, and beach postings when necessary to protect public health when poor water quality is found.

- The San Diego County Department of Environmental Health (DEH) Monitoring Well Program regulates wells, inclinometers, vapor probes, cathodic protection wells, and enhanced leak detection systems. The San Diego County DEH Monitoring Well Program permits the drilling, installation, and destruction of borings and wells, educates the public regarding potential monitoring well hazards, and works to minimize any risks to public health with compliance in bringing deficient monitoring wells to proper standards.

Soil

The San Diego region has one site on the Federal Superfund list: the Camp Pendleton Marine Corps Base. The Barrio Logan neighborhood in San Diego also is an Environmental Protection Agency Brownfields site. The County of San Diego Land and Water Quality Division, Site Assessment, and Mitigation Program also oversee the cleanup of clandestine methamphetamine laboratory sites within San Diego County.

Energy

Energy Sources

Only a small percentage of energy used in the region comes from renewable sources. In 2011, 43 percent of the power in the San Diego region came from natural gas, according to the San Diego Gas & Electric Power Content Label. An additional 20 percent was nuclear power, while 3 percent came from coal and 18 percent was from unspecified sources. The remaining power (20%) came from a range of renewable sources, including large hydro, wind, biomass, geothermal, small hydro, and solar.\(^\text{110}\) The Strategy presented a range of recommended actions for SANDAG and local jurisdictions to undertake to increase the percent of power being generated by renewable sources. The Strategy also proposed potential actions to address water and energy use associated with the wastewater treatment system, technologies that could help reduce peak period demand for energy, desalination and water recycling and reclamation, energy used for transportation, and the influence of the built environment on the demand for energy and water.

Energy Roadmap Program

In addition to the Regional Energy Strategy, SANDAG also has developed an Energy Roadmap Program that provides free energy assessments and energy management plans, or “energy roadmaps,” to SANDAG member agencies. Each energy roadmap provides a framework for a local government to reduce energy use in municipal operations and in the community, and can result in economic savings and environmental benefits. Within the energy roadmap are eight general categories:

1. Saving Energy in City Buildings and Facilities
2. Demonstrating Emerging Energy Technologies
3. Greening the City Vehicle Fleet
4. Developing Employee Knowledge of Energy Efficiency
5. Promoting Commuter Benefits to City Employees

6. Leveraging Planning and Development Authority

7. Marketing Energy Programs to Local Residents and Businesses

8. Supporting Green Jobs and Workforce Training

After receiving their energy roadmap, municipalities can request assistance from SANDAG in developing projects and/or programs in the eight focus areas. The Energy Roadmap Program is a collaboration between SANDAG and San Diego Gas & Electric. It is funded primarily by California utility customers under the auspices of the California Public Utilities Commission. Transportation components of the program are funded by SANDAG.

Currently, the Cities of Del Mar, Chula Vista, Coronado, Encinitas, Escondido, Imperial Beach, La Mesa, National City, Oceanside, San Marcos, Santee, and Vista have Energy Roadmaps in place.

Noise

Decibel limits are in place near the San Diego Airport to control noise in surrounding residential areas. The California Airport Noise Standards limit the acceptable level of aircraft noise for residents living in the vicinity of airports to a Community Noise Equivalent Level of 65 decibels. The San Diego Airport Noise Information Department monitors noise level associated with San Diego International Airport to ensure that the airport is in compliance. Noise is currently monitored through 24 remote monitoring sites in communities such as Golden Hill, Ocean Beach, and Mission Beach. The data are measured and compiled for reports required by the State of California, Division of Aeronautics. This information is used to enforce curfew violations and respond to aircraft noise complaints from community members.

Tree Canopy

Several cities in the region have very little tree canopy coverage. Tree canopies provide shade, capture air pollution, and help capture storm-water runoff, among other benefits. A 2012 analysis by WalkSanDiego determined that tree canopy coverage varies relatively little—just nine percent—among San Diego region cities. However, several cities have very little tree canopy coverage. The City of Del Mar has the greatest coverage at 9.4 percent, while Coronado has the least at 0.3 percent. Other low-scoring communities included National City (0.5%), Santee (0.8%), El Cajon (1.5%), and Chula Vista (1.7%). Mid-scoring cities included La Mesa (2.3%), Lemon Grove (3.0%), San Diego (3.4%), Vista (3.4%), and Imperial Beach (3.7%). The analysis did not look at tree canopy coverage at the neighborhood-level within cities. 111

Open Space and Trails

Only about one-fifth of the region’s households have access to a bicycle or pedestrian trail within 1.2 miles. Access to trails is largely focused in linear zones distributed throughout the region. A few larger pockets of access along the coast illustrate that these areas—particularly San Diego’s waterfront—are more consistently served by regional waterfront trails, although in some areas there are barriers to accessing these trails. Nearly two-thirds of block groups have no nearby access to trails, while about 10 percent of block groups have very good access. In these high-access block groups, over 90 percent of households have trail access.

Residents in the western portion of the region, and especially those in communities with high concentrations of low-income households and people of color, have access to fewer acres of park space per capita than residents of other areas. A 2010 report by the San Diego Foundation on access to parks in the San Diego region found that although 45 percent of the total land area in the region is green space, many communities were still park-poor, meaning that there were fewer than three acres of park space per thousand residents. The report also noted that the majority of residents lived within the western portion of the region, where there were far fewer acres of green space. Consequently, not all residents of the region had equal access to green space. The report also found that the most park-poor areas of the region were the areas with the highest concentrations of low-income households and people of color. Overall, the analysis found few areas in the region with high concentrations of low-income households and people of color that were not park-poor.\textsuperscript{112}

A number of trail corridors provide connections between communities in the region and between the region and other parts of California. According to the San Diego County Community Trails Master Plan, the north-south and east-west trail corridors that cross the San Diego region include:

- California Coastal Trail
- California Riding and Hiking Trail
- Coast to Crest Trail (San Dieguito River Park Trail)
- Juan Bautista De Anza Trail
- Otay Valley Regional Park Trail
- Pacific Crest Trail
- San Diego River Park Regional Trail
- Sweetwater River and Loop Trail
- Trans-County Trail

The Master Plan includes details on how complete each trail is and where additional connections are needed to connect each trail.

\textsuperscript{112} The San Diego Foundation. Parks for Everyone: Green Access for San Diego County. 2010.
5. ECONOMIC DEVELOPMENT

A healthy community provides adequate jobs that pay living wages and opportunities for home ownership or other stable housing.

COMMUNITY HEALTH BENEFITS AND IMPACTS

Unemployment and lack of income is one of the strongest determinants of all health outcomes.\textsuperscript{113} Individuals in neighborhoods where households make less than a living wage have shorter life expectancies.\textsuperscript{114} Children who grow up in low-income neighborhoods are less likely to graduate from high school.\textsuperscript{115} Residents who have enough income to meet all of their basic needs are likely to have better health, improved nutrition, and lower mortality, and indirect health benefits such as reduced communicable diseases and reduced exposure to community violence.\textsuperscript{116}

KEY FINDINGS

Commute Time

The total average one-way commute time for all modes of transportation in the San Diego region was 25.5 minutes in 2012. This is based on data from the 2012 American Community Survey compiled by the San Diego Association of Government (SANDAG) iCommute, on par with the national average. The average commute times for Single Occupancy Vehicles, High Occupancy Vehicles, and Transit were 24.5, 27.9, and 53.3 minutes, respectively.

However, residents of areas farther from large employment centers like the City of San Diego often have longer commutes.\textsuperscript{117} Commute time influences where residents are able to work, and also can affect access to well-paying jobs if large job centers are located far from affordable residential areas. This, in turn, can affect income and the overall ability of residents to participate in local community activities if they must commute long distances for work each day.

Unemployment Rate

The unemployment rate of the San Diego region is slightly below state and national trends, and has seen a slight decline in rates from July 2013 to December 2013. The regional rate of unemployment in December 2013 was 6.4 percent, compared to the statewide rate of 8.3 percent and the national rate of 6.7 percent. Unemployment was highest in areas such as National City (15.2%), El Cajon (10.7%), Chula Vista (9.1%), and Vista (8.7%). Rates were lowest in areas such as Encinitas (5.5%) and Carlsbad (5.2%).


\textsuperscript{117} SANDAG. State of the Commute 2012.
Employers

The San Diego region’s economy is currently growing, and is expected to continue growing in the near future. Economic indicators show consistent growth over the last year that slightly outpaces national economic growth. In addition, building permits, home prices, construction jobs, and help wanted advertising are all up.\(^{118}\)

According to the Bureau of Economic Analysis, San Diego’s real Gross Domestic Product (GDP) has increased from 2.1 percent in 2011 to 2.7 percent in 2012. San Diego’s regional GDP is $177.4 billion, and it is ranked 16th in the country. In terms of export value and GDP, it is the third largest producing California city, following San Francisco in eighth place, and Los Angeles in second.

According to the California Employment Development Department, the San Diego region hosted 1,258,800 jobs in 2012. Major employment sectors in the region included:

- Government (17.33%)
- Professional and Business Services (17.12%)
- Trade, Transportation, and Utilities (16.62%)
- Leisure and Hospitality (12.63%)
- Retail Trade (10.93%)
- Local Government (10.91%)
- Education and Health Services (10.57%)

Workforce Development/Adult Education

A developed workforce which is highly skilled and educated can have a profound impact on the socioeconomic well-being of an individual, and to the community the workforce serves. Not only can this union bring about individual benefits such as economic security, but it also can accelerate economic growth of the region. Workforce Development is the coordination of public and private sector policies and programs that provide individuals with the opportunity for a sustainable livelihood, and helps organizations achieve goals consistent with the societal context. Workforce development encompasses a myriad of training and educational programs in different areas of training or business activity. Improving skills to enhance productivity is critical, as most of the training that occurs after initial vocational preparation happens within the context of corporations or in response to business needs.\(^{119}\)

The San Diego Workforce Partnership (SDWP) is an organization which looks at the current and projected future workforce skills and needs of the region. The SDWP receives state and federal funds to develop job training programs to enable youth and adults to develop the skills needed to meet the needs of regional needs.


The development of the San Diego workforce includes growth in the healthcare, technology, and sports and active sectors. A SDWP study on the occupational outlook in San Diego notes that the healthcare industry has been experiencing strong employment growth, and the healthcare occupations that are expected to grow considerably over five years include Radiological Technologists and Technicians (16.6%), Dental Assistants (6.3%), and Registered Nurses (10.2%). However, San Diego’s healthcare employers are still largely uncertain about the employment and economic impact from the January 2014 implementation of the Patient Protection and Affordable Care Act.\textsuperscript{121}

With San Diego’s weather, diverse and abundant natural resources, and physically active population, the sports and active industry is an immense contributor to the region’s economic and employment sectors. According to an SDWP study on Sports and Active Lifestyle (SAL) industry clusters, San Diego is viewed as an excellent location to start and grow a SAL business. Industry clusters are defined as groups of similar firms in a geographic area, which have common markets, technologies, and worker skill needs that drives wealth creation in a region.\textsuperscript{122} San Diego’s SAL cluster includes the second largest number of jobs in the nation for sporting, athletic goods, and manufacturing, and the region includes more than 1,200 businesses and 23,000 employees for this segment. The SAL direct economic impact in San Diego is measured at $1.35 billion, and the total contribution reaches $2.24 billion including indirect and induced effects, with 32,407 total jobs dependent upon sports and recreation related activities.\textsuperscript{123}

\begin{itemize}
\item[] \textsuperscript{122} SANDAG. “What are Industrial Clusters?” http://www.sandag.org/rtta/transfer/industrial_clusters.pdf
\end{itemize}
6. SOCIAL EQUITY AND ENVIRONMENTAL JUSTICE

A healthy community fosters positive health outcomes for all residents, regardless of socioeconomic status, race, ethnicity, or ZIP code, and provides strong support structures to ensure that vulnerable populations can thrive.

COMMUNITY HEALTH BENEFITS AND IMPACTS

Significant health disparities have been shown to affect vulnerable populations such as seniors, children, low-income households, residents of color, and people with disabilities. In many Communities of Concern, there may be poor access to essential amenities and services such as employment opportunities, health clinics, school, grocery stores, and other basic needs. Residents in these communities may have limited mobility and low access to transit, paratransit, or other critical links. There also is often low community engagement in these areas, due in part to language barriers, limited time for participation in community meetings and other activities, and lack of childcare to allow adults to participate. Neighborhoods where there is poor access to healthy foods, few opportunities to use parks or recreation spaces, and unsafe conditions for walking also can put residents at greater risk for health issues such as obesity, asthma, cancer, and diabetes.

KEY FINDINGS

Income

The median household income in the San Diego region in 2012 was $60,330. That year, the wealthiest 20 percent of households in the San Diego region had half (49.8%) of all income. The top 5 percent of households had 21 percent of all income. The bottom 20 percent of households received only 3 percent of income in the region. The Gini index, an international economic measure of income inequality, rose 46.7 percent in 2012 from 45.1 percent in 2007 prior to the recession. A measurement of 0 indicates perfect equality of income while a measurement of 100 percent indicates perfect inequality.

Exposure to Environmental Toxins

Some communities within the San Diego region, including neighborhoods such as Barrio Logan in the City of San Diego and the areas along the border, face disproportionate exposure to environmental toxins. In Barrio Logan, for example, toxic air emissions have historically been related to small industries such as chemical supply businesses, past use of toxic fumigants, and fumes emitted by the San Diego sewage pumping station located in the neighborhood. In 2013, the Final Program Environmental Impact Report for the Barrio Logan Community Plan Update found that, “the mix of neighborhood uses, truck traffic through the neighborhood, and overhead freeway traffic has implications for air quality and the health and safety of residents in the [neighborhood].” The final environmental impact report also concluded that specific cancer risks from the Burlington Northern Santa Fe Railyard, as estimated by the California Air Resources Board, is

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greater than 100 per million close to the source. Cancer risks from port sources range from 25 per million to 250 per million depending on proximity to port uses.\textsuperscript{127}

In the border neighborhoods, tractor trailers serving maquiladora assembly plants emit high levels of diesel emissions as they cross into the United States, exposing residents to diesel particulate matter and other toxins.\textsuperscript{128} Exposure to pollutants varies depending on whether the sources are stationary or mobile, and on factors such as time of day and wind direction.


\textsuperscript{128} Environmental Health Coalition.
7. **PUBLIC FACILITIES AND AMENITIES**

A healthy community promotes physical activity, social cohesion, and contact with natural areas through the design of its built environment.

**COMMUNITY HEALTH BENEFITS AND IMPACTS**

Residents with convenient access to a park are more likely to use parks for recreation and physical activity.\(^{129}\) Quality recreational facilities and programs also can increase physical activity.

Health benefits of physical activity include a reduced risk of premature mortality, coronary heart disease, hypertension, stroke, some cancers, and diabetes mellitus.\(^{130}\) This is particularly significant for the San Diego region because heart disease and cancer are the leading causes of death for San Diego County residents.\(^{131}\) Regular participation in physical activity also can reduce depression and anxiety, improve mood, and enhance ability to perform daily tasks throughout the life span.\(^{132}\)

Contact and exposure to open spaces can reduce stress, improve mental health, and facilitate recovery from illness.\(^{133}\) Open space can encompass pocket, neighborhood or regional parks, publicly accessible shoreline, or trails. School grounds that are available after school and on weekends for community gathering, recreation and fitness promote physical activity, social cohesion, and neighborhood safety.

**KEY FINDINGS**

**Parks and Playgrounds**

Most households in the urban areas of the region have walking access to community parks and public open space, while most households in the rural areas do not. Access to parks appears to be either very high or very low in urban areas, with few block groups falling in between. Only rarely do households in rural areas have park access within walking distance.

A significant portion of Communities of Concern block groups have low levels of park access. Although close to half of the block groups designated as Communities of Concern have the highest level of park access, many also have very low levels of access, a condition that can potentially be addressed through the development of new neighborhood parks or by improving access to existing parks.

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8. PUBLIC SAFETY

A healthy community promotes safety, social interaction, cohesion, and sense of place through the design of its built environment.

COMMUNITY HEALTH BENEFITS AND IMPACTS

Environmental design affects social interactions, which in turn may affect violence. Violence has a negative effect on the physical and mental health of victims and their families, friends, and neighbors. It also negatively impacts the social and economic well-being of the neighborhood, influencing business investment, job and housing security, educational attainment, and resident participation in community development and community integration.\textsuperscript{134} When neighborhoods are well designed, the resulting neighborhood social cohesion contributes to lower crime and violence and therefore better health outcomes.\textsuperscript{135}

Environmental design factors associated with levels of perceived and actual neighborhood safety include sidewalk cleanliness and width, street design for pedestrian safety and speed control, street lighting, number of liquor outlets, degree of community isolation and access to services and housing for low-income persons, as well as other factors including presence of drugs or gangs, police presence, availability of weapons, employment, degree of community isolation and access to community activities for families and youth.\textsuperscript{136} The density of alcohol outlets also correlates with density of physical assaults and is closely related to crime and violence.\textsuperscript{137}

The perceived safety of a neighborhood, often as important as the actual safety, impacts the health/well-being of children and adults by affecting engagement in physical and social activities, which subsequently impacts levels of isolation, obesity, diabetes, and high blood pressure. Well-lit areas decrease the likelihood of violence and increase the feeling of safety and security.

KEY FINDINGS

Crime

Urban areas appear to attract a disproportionate amount of vandalism, malicious mischief, and violent crime. Based on an analysis of parcels that are vacant, rates of physical disorder and rates of violent crime, there is a clearly discernible regional pattern of physical disorder and crime, even when crime is expressed as a rate based on population. The same pattern is evident for violent crime, which also is disproportionately borne by urban areas. While this result is consistent with intuition, a map-based analysis may overstate the effect. Downtown areas have large daytime populations that are not reflected in residential Census numbers. Therefore, crime rates calculated using Census population figures will be inflated in large commercial areas and job centers. The pattern of crimes in Communities of Concern mirrored the overall regional distribution.

\textsuperscript{134} Ozer, E.J., and K.L. McDonald. Exposure to violence and mental health among Chinese American urban adolescents. 2006.
The violent crime rate in the San Diego region fell 6 percent during the first six months of 2013 compared to the same period in 2012, although the property crime rate increased 4 percent during that time period. There were fewer homicides, rapes, robberies, and aggravated assaults, in addition to fewer residential burglaries and vehicle thefts. However, year-over-year\textsuperscript{138} crime rates per thousand residents were up in several communities based on the FBI crime index, which includes property crime—most notably in Solana Beach (+25\%), Lakeside (+21\%), Oceanside (+16\%), Santee (+16\%), and Lemon Grove (+16\%). Year-over-year crime fell in other areas, including Ramona (-47\%), Imperial Beach (-16\%), Del Mar (-15\%), and Escondido (-10\%).\textsuperscript{139}

Vacant Parcels

Vacant parcels are slightly more distributed across the region. The majority of the region has very low vacancy rates, with the lowest vacancy areas tending to concentrate along the highway network. In some instances, there is dramatic variation between even adjacent block groups. For example, in the Downtown San Diego inset, some of the lowest vacancy rates are found immediately adjacent to block groups with high vacancy rates. In a fully developed urban setting such as the downtown, this likely reflects strong location preferences. In outlying areas, the same spatial phenomena may be caused by new development patterns. Nearly thirty percent of block groups have no vacant parcels at all.\textsuperscript{140}

Traffic Safety: Pedestrians and Cyclists

Pedestrian and cyclist crashes occur throughout the region, but are somewhat concentrated in more densely populated areas where use is highest.

Over the last ten years, the San Diego region has seen an average of over 1,000 pedestrian crashes and 800 cyclist crashes per year.\textsuperscript{141} High numbers of pedestrian- and bicycle-involved crashes were observed in areas throughout the region, with some concentration in Downtown San Diego, where there is both more pedestrian traffic and more motor vehicle traffic. High crash rates also were found in the centers of other cities throughout the region, and along highway corridors. Cyclist crash rates were only slightly lower than pedestrian crash rates, with high rates occurring in roughly the same areas.\textsuperscript{142}

Pedestrians are most at risk along the region’s major roadway corridors and near commercial and employment centers where traffic exceeds 25 miles per hour (mph). Various studies indicate a correlation between a small increase in roadway traffic speeds to a disproportionately large increase in pedestrian fatalities\textsuperscript{143}. The relationship between vehicular travel speeds and resulting pedestrian injury is reflected in a National Highway Traffic Safety Administration study which estimates that only 5 percent of pedestrians may die when struck by a vehicle travelling at 20 miles per hour or less, which compared to the fatality rates of 40, 80, and nearly 100 percent for striking speeds of 30, 40 and 50 mph respectively. Reductions in vehicle

\textsuperscript{138} Year-over-year rates represent comparisons of the same time period between one year and the previous year.

\textsuperscript{139} SANDAG. Crime in the San Diego Region: Mid-Year 2013 Statistics. September 2013.

\textsuperscript{140} SANDAG. Healthy Communities Atlas.

\textsuperscript{141} SANDAG. Healthy Communities Atlas.

\textsuperscript{142} SANDAG. Healthy Communities Atlas.

travel speeds can be achieved through traffic calming, lowered speed limits, police enforcement of speed limits, and associated public information.\textsuperscript{144}

Pedestrian crash rates largely correlate to areas with the highest traffic and arterial densities in block groups adjacent to large roadways (freeways and arterials) and/or containing concentrations of commercial activity or employment. However, sidewalks serve as a mitigating factor, particularly in the southern part of the urban area that has a robust sidewalk network. The pedestrian traffic safety analysis does not account for pedestrian volumes. Areas that have more pedestrians will also have more potential conflict points and may therefore have more crashes. Currently, there is no systematic, region-wide data available on pedestrian volumes, which would provide a more nuanced analysis of risk and where risk is truly disproportionate. The analysis, however, is still able to call attention to potentially higher risk areas where more investigation and focus may be needed to create a safer, more welcoming walking environment.\textsuperscript{145}

The areas of highest risk for cyclists are generally concentrated along major roadway corridors and near commercial and employment centers. Shoreline areas, which are well served by trails and have fewer large roads, appear to carry less risk for cyclists. One important caveat is that the base maps for this analysis largely show the major attractors of cyclist activity, both routes and destinations. Areas with more cyclists also will have more potential conflict points and may therefore have more crashes.\textsuperscript{146} San Diego State University (SDSU) is currently conducting a regional bike count, the first systematic, region-wide count of cyclist trips. This project involves a network of automated bicycle and pedestrian count stations along the proposed regional bicycle network, which was recently adopted in the San Diego Association of Governments (SANDAG) 2050 Regional Transportation Plan. The implementation of this counting program grew out of collaboration between Health and Human Services Agency, SDSU, public health, and city planning researchers, and active transportation planning professionals at SANDAG. This data will distinguish between areas with higher cyclist traffic and areas that truly carry disproportionate risk.

While cyclist safety in Communities of Concern tracks relatively closely to cyclist safety in the region overall, there are slightly more block groups containing Communities of Concern in the “very low safety” category. More detailed investigation of the overlap between the different Communities of Concern and areas with potentially high-risk for cyclists could help to identify possible barriers to physical activity in these areas. Improvements and mitigation in these areas would provide extra benefits for low-income and low-mobility populations in particular.\textsuperscript{147}

Safe Routes to Transit projects that enhance bicycle and pedestrian access in transit stop and station areas are being identified in the development of \textit{San Diego Forward: The Regional Plan}.

\textbf{Youth Trips/Safe Routes to School}

Areas of potential high-risk for youth walking and cycling trips to school and other destinations are found most often in the older suburbs. Less than one-third of the 1,762 block groups in the region were included in the analysis as being likely locations for youth trips. The bulk of the block groups selected for study by SANDAG in the \textit{Healthy Communities Atlas} are found in the southern half of the urban area, as most of the relevant destinations—particularly elementary schools—are found in this part of the region. Few discernible


\textsuperscript{145} SANDAG. Healthy Communities Atlas.

\textsuperscript{146} SANDAG. Healthy Communities Atlas.

\textsuperscript{147} SANDAG. Healthy Communities Atlas.
patterns of risk exist, however, and in some cases very high risk block groups are directly adjacent to very low-risk block groups. The analysis does not account for actual youth walking and cycling trip volumes. Areas with more youth activity also will have more potential conflict points and, without systematic counts, it is impossible to separate areas with higher youth pedestrian/cyclist traffic from areas that truly carry disproportionate risk. Region-wide data on cyclist and pedestrian volumes (either for youth or for the broader population), which would contribute to a more accurate assessment of risk, is not currently available. The analysis, however, is still able to call attention to potentially higher risk areas, where programs and investment may be appropriate to reduce traffic safety risks for youth.\footnote{SANDAG. Healthy Communities Atlas.}

Increasing numbers of schools in the San Diego region are participating in Safe Routes to School programs. The \textit{San Diego Regional Safe Routes to School Strategic Plan}, developed by SANDAG, found that as of March 2012, eight districts in the region had adopted Safe Routes to School supportive policies: Alpine Union, Encinitas Union, Escondido Union, Escondido High School Union, Grossmont Union High School, La Mesa-Spring Valley, San Pasqual Union, and Solana Beach School Districts. Twenty-two schools in the region hosted Walk, Ride, and Roll to School Days in 2011; many also participated in SchoolPool, a program sponsored by SANDAG and managed by iCommute that helps families find partners to walk, bike, or carpool to school.

\textbf{Emergency Medical Care}

\textit{Response Time}

\textbf{Emergency response time for first responders, including police, fire, and emergency medical technicians, varies in different areas of the region.} In the city of San Diego, a recent study found that although first responders have a goal of reaching high-priority calls in less than seven minutes and 30 seconds 90 percent of the time, they did not reach this goal during a 21-month period ending in March 2013. Areas of the city with the highest risk for delayed response included the Home Avenue area in City Heights, Paradise Hills, College Area, Skyline, and Encanto.\footnote{Dillon, Liam. “Close Calls: When Emergency Help Comes Late.” Voice of San Diego. 22 July 2013.} City leaders have announced plans to build additional fire stations to serve the neighborhoods most affected by the delays by 2017, although funding for the new stations is not yet identified.\footnote{County Fire Authority Travel Time Requirements & Land Use Designation}

Generally speaking, emergency response times are estimated to vary from 5 to 20 minutes, with shorter response times occurring in urbanized areas of the region, and longer response times in rural areas further from the urban core.\footnote{Ibid.} Emergency Services are required to respond to incidents within specific travel time criteria, all of which are solely based on land use designations. Any Regional Category (and/or Land Use designation) that is defined as a Village (VR-2 to VR-30), or where a development is located within a Village Boundary, mandates a five minute response from the closest fire station. Similarly, areas designated as Semi-Rural (more than SR-1 and SR-2 and SR-4) or development within a Rural Village Boundary mandate a ten minute response. Any limited Semi-Rural Residential areas (more than SR-4, SR-10) and Rural Lands (RL-20) mandate a 20 minute response time. Finally very-low Rural Land densities (RL-40 and RL-80) require a more than 20 minute response time.\footnote{Ibid.}
**Disaster Preparedness**

The San Diego County Office of Emergency Services (OES) coordinates the overall county response to disasters, including most evacuations. According to the County, OES is responsible for alerting and notifying appropriate agencies when disaster strikes; coordinating all agencies that respond; ensuring resources are available and mobilized in times of disaster; developing plans and procedures for response to and recovery from disasters; and developing and providing preparedness materials for the public.

OES also staffs the Operational Area Emergency Operations Center (a central facility which provides regional coordinated emergency response), and acts as staff for the Unified Disaster Council (UDC), a joint powers agreement between all 18 incorporated cities and the County of San Diego. The UDC provides for coordination of plans and programs countywide to ensure protection of life and property.

OES coordinates disaster preparedness for disasters such as earthquakes, flooding, pandemic influenza, tsunamis, and wildland fires. Residents of the San Diego region also can find information on disaster preparedness at the website www.readysandiego.org and through the 211 service. Finally, OES also provides templates for community preparedness and evacuation plans to communities in the unincorporated County. The following unincorporated communities have plans in place: Alpine, Boulevard, Campo/Lake Morena, Descanso, Dulzura/Barrett, Fallbrook, Jamul, Potrero/Tecate, and Ramona. Cities in the San Diego region manage their own disaster preparedness plans and protocols.

**Evacuation Routes**

An Evacuation Steering Committee consisting of various jurisdictions and agencies in the region worked with State and Federal agencies to develop primary evacuation routes in 2006. These routes consist of the major interstates, highways, and prime arterials within the San Diego region. Local jurisdictions are responsible for working with the regional agencies, law enforcement officials, Caltrans, California Highway Patrol, and other applicable agencies and departments to identify evacuation points and transportation routes. The Operational Area Emergency Operations Center coordinates this information at the regional level and is responsible for evacuations affecting more than two communities.

Evacuation routes were determined by:

1. Shortest route to the designated destination areas
2. Maximum capacity
3. Ability to increase capacity and traffic flow using traffic control strategies
4. Maximum number of lanes that provide continuous flow through the evacuation area
5. Availability of infrastructure to disseminate real-time conditions and messages to evacuees en-route, such as changeable message signs
6. Minimal number of potentially hazardous points and bottlenecks, such as bridges, tunnels, lane reductions, etc.

Based on these factors, Highway 101 was not designated as a primary evacuation route.
9. HEALTHY FOOD AND NUTRITION

A healthy community promotes affordable and accessible healthy food options, including grocery stores and food markets, through the design of its built environment.

COMMUNITY HEALTH BENEFITS AND IMPACTS

The presence of a grocery store or food market in a neighborhood correlates with higher fruit and vegetable consumption, reduces the prevalence of overweight and obesity, and reduces the incidence of hunger. A grocery store is defined as a retail outlet where a variety of fresh fruits, vegetables, and meats could be purchased. A food market is a store that carries some fruits and vegetables.

Farmers markets provide another source of fresh, locally produced fruits, vegetables, and other food products. This in turn may help residents meet the recommended daily servings of healthy foods such as fruits and vegetables. Healthy food is generally low in fat and saturated fat, contains limited amounts of cholesterol and sodium, and provides natural vitamins. Small food markets may be particularly important in areas poorly served by full-service grocery stores.

Community gardens also can provide a source of fresh fruits and vegetables for users, increase physical activity, and provide opportunities for social interaction and community cohesion. Locally produced food helps attain other benefits, such as sustaining the local economy and reducing long-distance shipping, thereby decreasing vehicle emissions, which are associated with chronic diseases and global warming.

Neighborhood studies demonstrate that where there are high numbers of fast food restaurants compared to grocery stores, there also are higher rates of diabetes, cardiovascular disease and cancer. Increasing the number of full-service grocery stores relative to fast food restaurants in neighborhoods can help to combat these conditions.

Destinations providing healthy food include:

- Full-service grocery stores
- Produce markets
- Corner stores that carry fresh fruits and vegetables
- Farmers markets and farm stands
- Community gardens

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155 Inagami, S., et al. “You are where you shop: Grocery store locations, weight and neighborhoods.”
KEY FINDINGS

Healthy Food Access

Healthy food access is relatively high, particularly in the urban core and the central cities across the region. Over 80 percent of multi-family households and 60 percent of all households had access to a grocery store within walking distance. Pockets of high access also emerge along some of the major roadway corridors. Most urban Census block groups had 100 percent of households within walking distance of healthy food. A much smaller, but significant, number of block groups had little or no access to healthy food and would be considered “food deserts,” defined as areas with no access to fresh food and produce within one mile in an urban area or ten miles in a rural area. Although rural block groups were more likely to be food producers, they generally had low access to healthy foods for purchase. Generally, the patterns of access in Communities of Concern mirrored those of the region overall. Within the region, there are approximately 29 Certified Farmers’ Markets (CFM). To qualify as a CFM, the market must be certified by the County and be located in a County approved location where the agricultural products they grow themselves, or products from another certified farmer may be sold.

Areas with a higher density of fast food outlets can be found along the region’s major highway and arterial corridors and near interchanges. “Corridors” of high fast food density are most visible along State Route 78 and Interstate 8 (I-8), south of downtown between Interstate 5 and I-805, and along University Avenue to La Mesa. A few smaller pockets of high fast food density areas emerge along the shoreline. However, over 50 percent of block groups had a fast food restaurant density of zero. No relationship between fast food density and Communities of Concern was immediately apparent; the distribution mirrors that of the region as a whole. Obesity is 20 percent higher in the least healthy food environments.

The San Diego region overall has more than four times as many fast-food restaurants and convenience stores as supermarkets and other produce vendors, potentially contributing to chronic diseases and obesity. In 2007, the California Center for Public Health Advocacy analyzed retail food outlets across the state and found that in the San Diego region, there were 4.20 times as many fast-food restaurants and convenience stores, which sometimes sell liquor as well, as supermarkets and produce vendors, slightly above the statewide ratio. In the city of San Diego, the only city in the region for which local data were available, there were 4.58 times as many fast-food restaurants and convenience stores as produce vendors and supermarkets. The report also noted that based on previous studies, where there are high numbers of fast-food restaurants compared to grocery stores, there also are higher rates of diabetes, cardiovascular disease, and cancer. People who live near supermarkets are more likely to eat more fruits and vegetables and less likely to be obese. Similarly, the report noted that eating at fast-food restaurants is associated with consuming more calories and fewer vegetables, and is associated with higher rates of obesity.

Several cities within the San Diego region have specific ordinances in place to facilitate the sale of healthy food. The Cities of Chula Vista, San Diego, and Lemon Grove all have healthy vending and concessions ordinances in place to promote the sale of healthy food. The City of Chula Vista also has

156 SANDAG. Healthy Communities Atlas.
158 California Center for Public Health Advocacy (CCPHA), the UCLA Center for Health Policy Research, and PolicyLink. Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes. April 2008
implemented a “Cilantro to Stores” Program working with Local Farmers to provide fresh fruit and vegetables in corner markets. The City of La Mesa has a Wellness Task Force that developed a La Mesa Community Wellness Program in 2006 to promote overall health in the community through a number of measures, including improving access to healthy food.\footnote{San Diego County Childhood Obesity Initiative. Policy Clearinghouse. \newline http://www.ourcommunityforkids.org/resources/policy-clearinghouse.aspx}

**Agriculture**

Few San Diego region communities have urban agriculture ordinances in place, although the City of San Diego is considered a California model for encouraging urban homesteads. The City of San Diego has several city ordinances in place to allow residents to keep chickens, goats, and bees in their backyards, a policy that also has fostered the growth of urban nurseries. While the ordinances restrict the type and numbers of goats, chickens, and bees that can be kept, they are considered models for California communities.\footnote{Wolf, Kate. “Cities Cultivate New Approaches to Urban Agriculture.” California Planning & Development Report. 17 August 2012. http://www.cp-dr.com/node/3252}

Although the San Diego region is home to more farms than any other county in the nation, land for major crops declined in all but one year from 2006 through 2011, and water prices and development pressures continue to strain farmers and ranchers in the region. Agricultural uses range from flower nurseries in North County to food crops such as eggs, avocados, citrus, and tomatoes. Although acreage devoted to agricultural uses has declined in recent decades in the region, however, the financial output of agricultural operations has risen considerably.\footnote{Nichols, Chris. “Water Prices Threaten to Further Shrink Region’s Ag Land.” U-T San Diego. 28 May 2013. http://www.utsandiego.com/news/2013/May/28/san-diego-county-agriculture-economy-water-prices/}

Two communities in the region have specific ordinances designed to encourage the development of community gardens. The Cities of Chula Vista and San Diego both have ordinances in place to encourage community gardens and, in San Diego, to allow the sale of agricultural products grown in the city under specific circumstances.\footnote{San Diego County Childhood Obesity Initiative. Policy Clearinghouse. \newline http://www.ourcommunityforkids.org/resources/policy-clearinghouse.aspx}

**Food Assistance**

While thousands of residents in the region receive food benefits, many still live in food insecure households and are unsure of where their next meals will come from. In 2010, California Food Policy Advocates estimated that over 30 percent of San Diego region adults lived in food insecure households, meaning they did not have regular and reliable access to food.\footnote{California Food Policy Advocates. 2010 San Diego County Nutrition and Food Insecurity Profile.} San Diego County Health and Human Services Agency (HHSA) estimates that two thirds (67\%) of eligible residents were enrolled in CalFresh, the state food stamps program, as of November 2012, more than double the participation rate in 2006. HHSA is working to enroll an additional five percent of eligible residents by 2015.\footnote{San Diego County Health and Human Services Agency CalFresh Participation Plan, January 2013.} In addition, over 75,000 residents in the San Diego region receive Women, Infants, and Children (WIC) benefits.\footnote{California Food Policy Advocates. 2010 San Diego County Nutrition and Food Insecurity Profile.} In 2008, the City Height’s Farmer’s Market
became the first in the region to accept Supplemental Nutrition Assistance Program/Electronic Benefits Transfer/WIC in an effort to increase access to healthy food.

**School Lunch Programs**

Over two-thirds of students eligible for free or reduced price lunches were enrolled and participating in the National School Lunch Program as of 2010. Over 155,000 students received free or reduced price lunches in 2010; only 32 percent of eligible students in the San Diego region were not participating in the federally-funded program. Enrolling all eligible students would have brought districts an additional $32 million in 2010. However, over half (54%) of eligible students were not enrolled in the school breakfast program, meaning schools in the region forfeited nearly $20 million in food program funding.

San Diego Unified School District is currently the only district in the San Diego region with a formal Farm to School lunch program, but other districts have smaller scale programs to provide students with fresh fruits and vegetables and are interested in expanding existing programs. As the largest school district in the San Diego region, San Diego Unified School District (SDUSD) serves 119,000 students. SDUSD launched the Farm to School initiative in October 2010 to include locally grown fruits and vegetables in school meals. According to SDUSD, the program is designed to serve healthy meals in school cafeterias; improve student nutrition; provide agriculture, health and nutrition education opportunities; and support local and regional farmers. The goals of the program are:

- To ensure that 15 percent of fresh fruits and vegetables purchased are sourced locally
- To serve one “all local” lunch per month
- To use sustainably raised hormone and antibiotic free meat and/or protein sources in school meals, use locally raised proteins when possible
- To develop supplemental Farm-to-School activities and experiential learning opportunities for students
- To create community partnerships

The Farm to School program also supports local food-related curriculum development and experiential learning opportunities through school gardens, farm tours, farmer-in-the-classroom sessions, chefs in the classroom, culinary education, educational sessions for parents and community members, and student visits to farmers’ markets.

In addition to the SDUSD program, Coronado Unified School District offers its families a weekly Community-Supported Agriculture program. Oceanside Unified School District is exploring how to create a Farm to School program, and Poway Unified School District is beginning to develop seasonal menus. San Marcos Unified School District received a grant to offer fresh fruits and vegetables to students during recess and offers an on-site farmers’ market to families.

167 California Food Policy Advocates. 2010 San Diego County Nutrition and Food Insecurity Profile.
168 California Food Policy Advocates. 2010 San Diego County Nutrition and Food Insecurity Profile.
169 California Food Policy Advocates. 2010 San Diego County Nutrition and Food Insecurity Profile.
170 San Diego Unified School District.
171 San Diego Unified School District.
172 San Diego County Farm to School Task Force.
Senior Food Programs

San Diego region seniors are served by three food banks in the region, in addition to local community food programs. The San Diego Food Bank runs the Senior Food Program, a federal program that provides monthly food packages to eligible low-income senior citizens age 60 years and over. The Food Bank administers the program and distributes United States Department of Agriculture-provided food at 51 distribution sites every month throughout San Diego County. In 2010 to 2011, the last year for which data is available, the program served 8,500 seniors each month.173 In addition, the North County Food Bank in San Marcos, which serves North County communities, and the Feeding America Food Bank in San Diego, which serves families across the San Diego region, also provides food, including fresh produce, to smaller numbers of seniors and other residents.

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173 San Diego Food Bank.
CONTRIBUTING REPORTS

The following reports served as data sources for this assessment:

- 2050 Regional Transportation Plan and Sustainable Communities Strategy. SANDAG, October 2011.
- Healthy Communities Atlas. SANDAG, March 2012.
- Appendix B from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan
- Appendix C from the SANDAG FY 11 Coordinated Plan/Short Range Transit Plan