

Chapter 3

Forging a Path Toward More Sustainable Living: A Sustainable Communities Strategy

Chapter Contents

A Sustainable Strategy for the San Diego Region	3-2
SCS Public Involvement Activities	3-4
Land Use and Transportation Connection	3-5
A Sustainable Land Use Pattern	3-7
Protecting Resource Areas and Farmland	3-44
The 2050 RTP Transportation Network	3-63
Transportation Demand Management Measures	3-65
Transportation System Management Measures	3-65
Pricing Measures	3-66
Meeting Targets for Reducing Greenhouse Gas Emissions	3-66
Considering Social Equity in the SCS.....	3-70
Considering Energy Consumption and Cutting Greenhouse Gas Emissions.....	3-70
Meeting Federal Air Quality Requirements ...	3-72
Climate Change Impacts and Adaptation.....	3-72
Considering Public Health in the SCS.....	3-72
Promoting Sustainability through Incentives and Collaboration.....	3-73
Consultation with the Local Agency Formation Commission	3-75
Streamlining the Process for CEQA	3-75
Conclusion	3-78



2050 Regional Transportation Plan

The 2050 Regional Transportation Plan (RTP) and its Sustainable Communities Strategy (SCS) seek to guide the San Diego region toward a more sustainable future by integrating land use, housing, and transportation planning to create communities that are more sustainable, walkable, transit oriented, and compact. Planning for future patterns of density, how people get around, and how land is used is really driven by one goal: creating great places to live, work, and play.

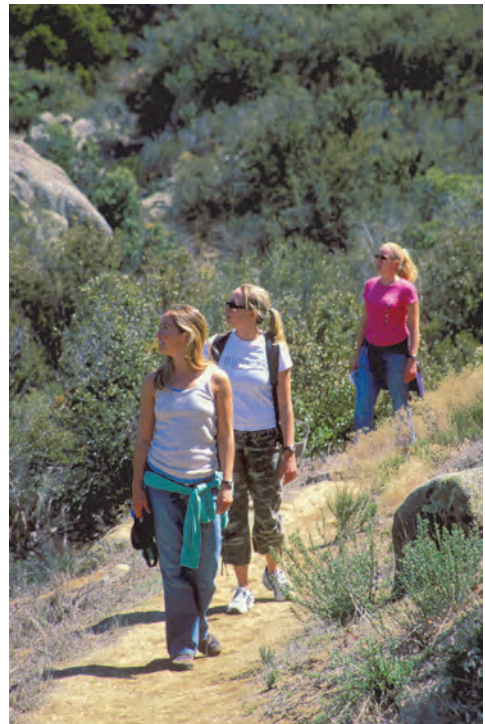
Senate Bill 375 (SB 375), which went into effect in 2009, added statutes to the California Government Code to encourage planning practices that create sustainable communities. It calls for each metropolitan planning organization to prepare an SCS as an integrated element of the Regional Transportation Plan. This new element shows how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks.

Government Code sections are referenced throughout the SCS to show how the region is meeting the requirements of SB 375. In addition, Appendix D includes a matrix that specifies the page number of the SCS or other sections of the 2050 RTP where each of the requirements of SB 375 can be found.

A Sustainable Strategy for the San Diego Region

“Each metropolitan planning organization shall prepare a sustainable communities strategy.” (Government Code Section 65080(b)(2)(B))

Achieving sustainability will require living and working in ways that protect and sustain our region’s vital social, environmental, and economic resources.



The strategy for the San Diego region is to use existing and reasonably expected funding to achieve our region’s transportation and housing needs, while also respecting, and enhancing our natural resources.

The path toward living more sustainably is clear: focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, protect sensitive habitat and open space, invest in a transportation network that provides residents and workers with transportation options that reduce GHG emissions, and implement the plan through incentives and collaboration.

Although SB 375 went into effect recently, the building blocks of the SCS have formed the foundation of transportation planning in the San Diego region for many years. For example, regional habitat planning efforts began in the 1990s. The Regional Comprehensive Plan (RCP), which integrates transportation, land use and housing planning

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to create a more sustainable region, was adopted by SANDAG in 2004.

The RCP was built on the principles of sustainability and smart growth. Sustainability is defined in the RCP as “simultaneously meeting our current economic, environmental, and community needs, while also ensuring that we aren’t jeopardizing the ability of future generations to meet their needs.” A prosperous economy, a healthy environment, and social equity are described as the “Three Es” of sustainability.

The RCP set forth our regional vision which is being furthered through the 2050 RTP and its SCS. That vision is:

“To preserve and enhance the San Diego region’s unique features – its vibrant and culturally-diverse communities, its beaches, deserts, mountains, lagoons, bluffs, canyons, and its international setting – and promote sustainability, economic prosperity, and an outstanding quality of life for everyone.”

The 2050 RTP and its SCS build on these ongoing planning efforts, with the added focus on reducing GHG emissions as the region strives to meet new requirements mandated by SB 375.

“Prior to adopting a sustainable communities strategy, the metropolitan planning organization shall quantify the reduction in greenhouse gas emissions projected to be achieved by the sustainable communities strategy.” (Government Code Section 65080(b)(2)(H))

As part of its mandate under SB 375, in 2010, the California Air Resources Board (CARB) set specific targets for reducing GHG emissions for cars and light trucks for each of the state’s regions from a 2005 base year. The GHG targets set for the San Diego region call for a

7 percent per capita reduction by 2020, and a 13 percent per capita reduction by 2035.

As shown in Table 3.1 our region will meet or exceed these targets by, among other means, using land in ways that make developments more compact, conserving open space, and investing in a transportation network that gives residents transportation options.

It is important to note that the 2050 RTP addresses GHG and vehicle miles traveled from a broader range of vehicles – such as public transit buses, heavy duty trucks, and school buses – than those addressed in SB 375. This chapter focuses only on the requirements of SB 375 which call for GHG reductions for the specific vehicle classes, cars and light trucks. Other performance metrics related to GHG emissions are addressed in the balance of the 2050 RTP chapters where appropriate. A further discussion of how the targets are met and the relationship to VMT and GHG emissions is provided later in this chapter in the Meeting Targets for Lowering GHG Emissions section.

The 2050 RTP horizon year extends well beyond the target years of 2020 and 2035 outlined in SB 375. So what happens beyond 2035? While growth will continue in the region, after the urbanized areas have been developed according to current local general plans, development could gradually move toward more remote areas where fewer transportation options are available if local plans are not changed. The growth forecast shows this happening simply because most local general plans have a horizon year prior to 2050. Although, it is expected that local plans will be updated and revised between now and 2050 to reflect more development in the urbanized areas of the region, based on current plans, the projected growth beyond 2040 would likely result in an increased demand for driving. The results now shown

Sustainability is defined in the RCP as “simultaneously meeting our current economic, environmental, and community needs, while also ensuring that we aren’t jeopardizing the ability of future generations to meet their needs.”

Table 3.1 – 2050 RTP – Results of Greenhouse Gas Emissions and Vehicle Miles Traveled Reductions

Average Weekday Per Capita CO2 and VMT Reductions for Cars and Light Trucks from 2005			
Target Year	CARB Target	GHG	VMT
2020	7%	14%	12%
2035	13%	13%	10%
2050	N/A	10%	7%

Source: SANDAG and CARB

Thousands of residents, community leaders, academics, business leaders, elected officials, and representatives from underrepresented groups have participated in the development of the 2050 RTP and its SCS.

for 2050 are best estimates based on historical and current empirical observations in the region and do not reflect future attitude changes about transportation and where people will choose to live and work as a result of significant investments in transportation options.

In addition, the GHG modeling for 2050 uses emission factors for the year 2040 (EMFAC 2007 includes emissions factors through 2040 only) and assumes no technological improvements to vehicles or fuels in the final ten years of the plan (This is due to the lack of accepted published data beyond 2040).

In accordance with SB 375, the building blocks of the SCS include:

- A land use pattern that accommodates our region’s future employment and housing needs, and protects sensitive habitats and resource areas
- A transportation network of public transit, managed lanes and highways, local streets, bikeways and walkways built and maintained with reasonably expected funding
- Managing demands on our transportation system (also known as Transportation Demand Management or TDM) in ways that reduce or eliminate traffic congestion during peak periods of demand

- Managing our transportation system (also known as Transportation System Management, or TSM) through measures that maximize the efficiency of the transportation network
- Innovative pricing policies and other measures designed to reduce vehicle miles traveled and traffic congestion during peak periods of demand

The key difference between past and current regional planning efforts is a sharper focus on reducing GHG emissions from cars and light trucks. For these vehicles, the state has developed a three-tiered approach to reducing GHG emissions. In addition to the regional land use policies and transportation investments contained in the 2050 RTP, the state has enacted laws to increase vehicle fuel efficiency and to increase the use of alternative, lower carbon transportation fuels. SANDAG, and other regional stakeholders, are supporting infrastructure planning for alternative fuels, which is addressed later in this chapter.

SCS Public Involvement Activities

“The metropolitan planning organization shall conduct at least two informational meetings in each county within the region for members of the board of supervisors and city councils on the sustainable communities strategy.” (Government Code Section 65080(b)(2)(E))

Involving the public in the development of the SCS was a major priority in the San Diego region. On October 8, 2010, SANDAG conducted an informational meeting on the SCS at the SANDAG Board of Directors meeting. Pursuant to Government Code Section 65080(b)(2)(E), only one informational meeting is required if it is attended by the county board of supervisors and city councilmembers who represented a majority of the cities with a majority of the population in the incorporated areas of the county. The minutes and attendance by jurisdiction for this meeting can be found in Technical Appendix 6, entitled 2050 RTP and SCS Public Outreach Program. These documents show that the meeting was attended by all jurisdictions within San Diego County. SANDAG has exceeded the statutory requirement by holding discussions concerning the SCS at several other public meetings of the Board of Directors since October 2010. The documentation from these meetings also is included in Technical Appendix 6.

“Each metropolitan planning organization shall adopt a public participation plan, for development of the sustainable communities strategy.” (Government Code Section 65080(b)(2)(F))

Through an extensive public outreach program, thousands of residents, community leaders, academics, business leaders, elected officials, and representatives from underrepresented groups have participated in the development of the 2050 RTP and its SCS. The 2050 RTP Public Involvement Plan (PIP) established a process and outlined specific activities for communicating with, and obtaining input from, the public throughout the RTP development process. The PIP is based on the SANDAG Public Participation Plan adopted by the Board of Directors on December 18, 2009.



SANDAG’s efforts to involve the public in the development of the 2050 RTP and its SCS have been tracked and recorded to chronicle the large number, and wide range of activities organized and held by SANDAG. This record shows that SANDAG exceeded the public involvement requirements, including informational meetings mandated by SB 375 and federal regulations. The details of these activities are included in Chapter 9 and Technical Appendix 6.

Drawing a Closer Connection to How Land Is Used, and How We Get Around: the Land Use and Transportation Connection

For some time, SANDAG has been drawing an increasingly closer connection between how land is used, and how we get around. Since the late 1990s, the principles that guide our vision for the future have deepened and matured. The cities and County of San Diego have begun to integrate local and regional plans for accommodating the region’s growing population, preserving open space, and reducing GHG emissions. This holistic approach to planning is referred to as “smart growth.”

Acting individually and collectively, local jurisdictions have taken and are continuing to take significant steps to protect the environment. These include creating plans for conserving valuable natural habitats, better protecting watersheds, conserving energy, and reducing reliance on petroleum.

Some of the region's largest initiatives to protect natural habitats include the Multiple Species Conservation Program (MSCP) and the Multiple Habitat Conservation Program (MHCP). Adopted in 1997 and 2003, respectively, the MSCP and MHCP span the region. Collectively, these initiatives establish a "greenprint" for the region.

The Regional Comprehensive Plan sets forth a regional strategy to promote smarter growth, focusing on locating higher density and mixed-use development close to existing, and planned transportation infrastructure.

The Regional Comprehensive Plan (RCP), adopted by the SANDAG Board of Directors in 2004, serves as a blueprint for the region's future growth and development. It sets forth a regional strategy to promote smarter growth, focusing on locating higher density and mixed-use development close to existing, and planned transportation infrastructure. This strategy focuses particularly on elevating the role of public transit in people's daily lives. The RCP is based upon three themes:

- Improving the connections between land use and transportation plans by using smart growth principles
- Using land use and transportation plans to guide decisions about environmental and public facility investments
- Focusing on collaboration and incentives to achieve regional goals and objectives

The RCP and RTP planning processes are iterative, each informing the other. Upon adoption of this RTP, SANDAG will begin work to update the RCP to reflect its SCS.

Shortly after the adoption of the 2004 RCP, SANDAG worked closely with the 18 cities

and the County of San Diego to develop the regional Smart Growth Concept Map (accepted in 2006, and updated in 2008). This map illustrates where smart growth development exists or could occur in our region. The map was used to prioritize transportation investments in the 2030 RTP, and to identify locations for *TransNet* Smart Growth Incentive Program funding. It also has been used by local jurisdictions as a tool for local plan updates and the development of specific plans that locate more housing and employment near transit stations and along major (high frequency) bus routes. Many of these land use plan changes have occurred over the past five or six years and some are still in progress. These plan changes are reflected in the land use pattern of the SCS. The Smart Growth Concept Map is included in Technical Appendix 9 entitled, Additional SCS Background Material. Because the Smart Growth Concept Map has not been updated since 2008, it does not include some of the concepts and recommended actions that are contained in the 2050 RTP and its SCS. Therefore, SANDAG plans to update the map to reflect the changes that have been made to local land use plans (and are contained in the SCS), and the regional transportation network after the adoption of the 2050 RTP.



A Sustainable Land Use Pattern

“Each metropolitan planning organization shall prepare a sustainable communities strategy, subject to the requirements of Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, including the requirement to utilize the most recent planning assumptions considering local general plans, and other factors.”

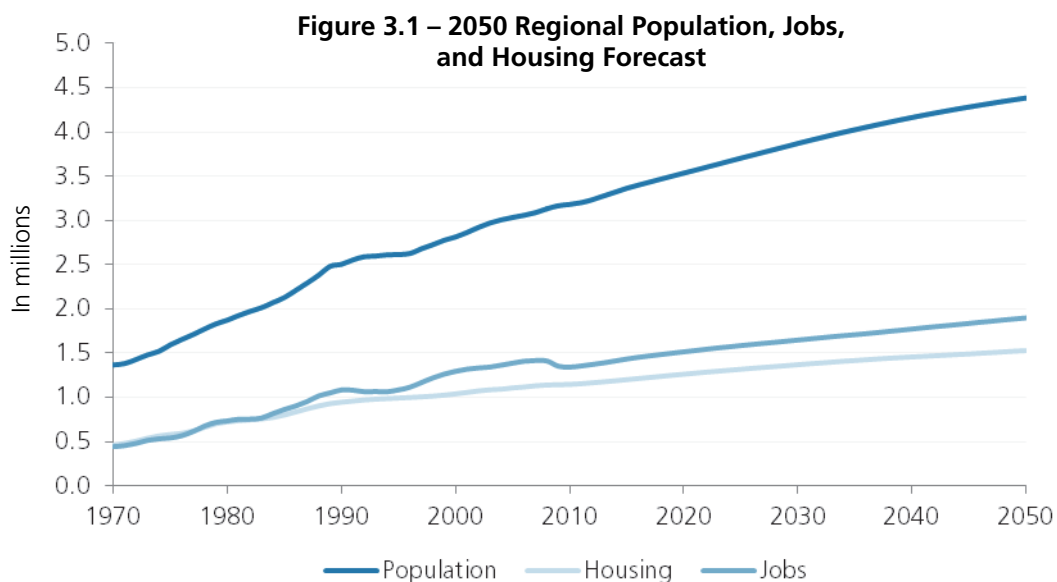
(Government Code Section 65080(2)(B))

“Identify the general location of uses, residential densities, and building intensities within the region.” (Government Code Section 65080(b)(2)(B)(i))

In 2008, the San Diego region included about 3.1 million people, 1.1 million homes, and 1.5 million jobs. Most of the homes and jobs are located within the western third of the region, and in areas served by public transit. The 2050 Regional Growth Forecast projects that the region will grow by another 1.25 million people by 2050. Nearly 400,000 new homes and 500,000 new jobs will be added during this time frame (Figure 3.1). The base year for the 2050 RTP is 2008, the year

the data collection effort began to prepare the regional growth forecast (2008-2050). The San Diego region has made great strides in planning for more compact, higher density, and walkable development located near transit and in the incorporated areas of the region already served by water, sewer, and other public facilities. Evidence of the region’s success can be found in the 2050 Regional Growth Forecast, which is the foundation of the SCS land use pattern. The SCS land use pattern accommodates 79 percent of all housing and 86 percent of all jobs within the Urban Area Transit Strategy Study Area where the greatest investments in public transit are being made (see Urban Area Transit Strategy Study Area Map in Technical Appendix 7). About 80 percent of new housing in the region will be attached multifamily. The SCS land use pattern also protects and preserves about 1.3 million acres of land, more than half the region’s land area. These open space lands include habitat conservation areas, parks, steep slopes, floodplains, and wetlands. This information is documented in Table 3.2.

The 2050 Regional Growth Forecast projects that the region will grow by another 1.25 million people by 2050. Nearly 400,000 new homes and 500,000 new jobs will be added during this time frame.



Source: SANDAG 2050 Regional Growth Forecast

Table 3.2 – 2050 Regional Growth Forecast Projections

					2008 to 2050 Change	
	2008	2020	2035	2050	Numeric	Percent
Total Population	3,131,552	3,535,000	4,026,131	4,384,867	1,253,315	40%
Household Population	3,033,985	3,405,068	3,873,175	<i>4,210,591</i>	1,176,606	39%
Group Quarters Population	97,567	129,932	152,956	<i>174,276</i>	76,709	79%
Jobs	1,501,080	1,619,615	1,813,372	2,003,038	501,958	33%
Civilian Jobs	1,411,811	1,515,346	1,709,103	<i>1,898,769</i>	486,958	34%
Military Jobs	89,269	104,269	104,269	<i>104,269</i>	15,000	17%
Total Housing Units	1,140,654	1,262,488	1,417,520	1,529,090	388,436	34%
Single Family	692,382	728,566	755,477	<i>761,699</i>	69,317	10%
Multiple Family	405,023	493,243	624,419	<i>732,832</i>	327,809	81%
Mobile Homes	43,249	40,679	37,624	<i>34,559</i>	-8,690	-20%
Households	1,074,896	1,200,966	1,357,084	1,467,026	392,130	36%
Vacancy Rate	5.8%	4.9%	4.3%	4.1%	0.0	-29%
Household Size	2.82	2.84	2.85	2.87	0.05	2%
Total Acres	2,727,197	2,727,197	2,727,197	2,727,197	0	0%
Residential	335,895	403,440	544,868	634,498	298,603	89%
Employment	88,177	91,286	95,610	99,905	11,728	13%
Parks and Constrained Lands	1,539,657	1,540,164	1,540,966	1,541,314	1,656	0%
Vacant Land	386,266	327,972	209,005	136,183	-250,083	-65%
Distribution of Projected Housing Growth						
	2008	2020	2035	2050	Percent of Regional Change 2008-2050	Numeric Regional Change 2008-2050
Region	1,140,654	1,262,488	1,417,520	1,529,090	100%	388,436
Urban Area Transit Strategy	900,342	989,075	1,108,835	1,205,613	79%	305,271
Distribution of Projected Job Growth						
	2008	2020	2035	2050	Percent of Regional Change 2008-2050	Numeric Regional Change 2008-2050
Region	1,501,080	1,619,615	1,813,372	2,003,038	100%	501,958
Urban Area Transit Strategy	1,301,242	1,394,320	1,554,630	1,712,639	82%	411,397

Note: The 2050 Regional Growth Forecast represents a combination of economic and demographic projects, existing land use plans and policies, as well as potential land use plan changes that may occur in the region between 2030 and 2050 (data shown in italics). In general, growth between 2008 and 2030 is based on adopted land use plans and policies, and growth between 2030 and 2050 includes alternatives that may, in some cases, reach beyond existing adopted plans.

Source: SANDAG 2050 Regional Growth Forecast



2050 Regional Growth Forecast and Establishing the SCS Land Use Pattern

Our region’s 2050 Regional Growth Forecast is the foundation of the SCS land use pattern, and it was used to plan the 2050 RTP transportation network. This forecast extends to 2050, allowing our region to incorporate all transportation projects and programs that voters approved in the *TransNet* Ordinance.

The Ordinance authorizes a half-cent sales tax, and the 40-year extension (2008 to 2048) was approved by San Diego region voters in 2004 to help pay for important transportation improvements in the region. The growth forecast is based on economic and demographic projections out to 2050, existing local land use plans and policies, and reasonably anticipated changes to local plans and policies. It estimates how much and where future growth is likely to occur, and it serves as the land use pattern for the SCS.

The 2050 Regional Growth Forecast was the result of a collaborative effort among demographers, planners, and policy makers. A multi-step process was followed that involved the input and review of a wide range of local, regional, and subject-area experts.

The first step in the forecast process was to develop growth projections for the region’s population, jobs, housing, and other

demographic and economic characteristics. These projections were developed using the Demographic and Economic Forecasting Model (DEFM). DEFM uses demographic assumptions including age and ethnicity-specific birth rates, death rates, and migration trends (domestic and international). It also uses economic assumptions including labor force participation, labor productivity, and unemployment rates. Input, assumptions, and results from DEFM were reviewed twice by a panel of subject-area experts, including representatives from local universities, economic and workforce development agencies, resource providers, public sector partners, and key industries. The panel represented several areas of expertise ranging from economic and demographic trends to housing and resource issues. Further details about DEFM can be found in the 2050 Regional Growth Forecast Process and Model Documentation in Technical Appendices 2 and 15, respectively.

These regionwide projections were then used to develop neighborhood level growth forecasts that distributed population, housing, and employment growth projections among the 19 jurisdictions. The neighborhood level growth forecasts also considered local land use data, which was developed through



extensive collaboration between SANDAG and the region's 18 cities and the County of San Diego, as well as with other land use agencies such as tribal governments and the Department of Defense. The local land use data incorporated information on existing development, general plans, constraints to development (e.g., flood plains, steep slopes, habitat preserves, historic districts, building height restrictions, and zoning), and permitted projects in the development pipeline.

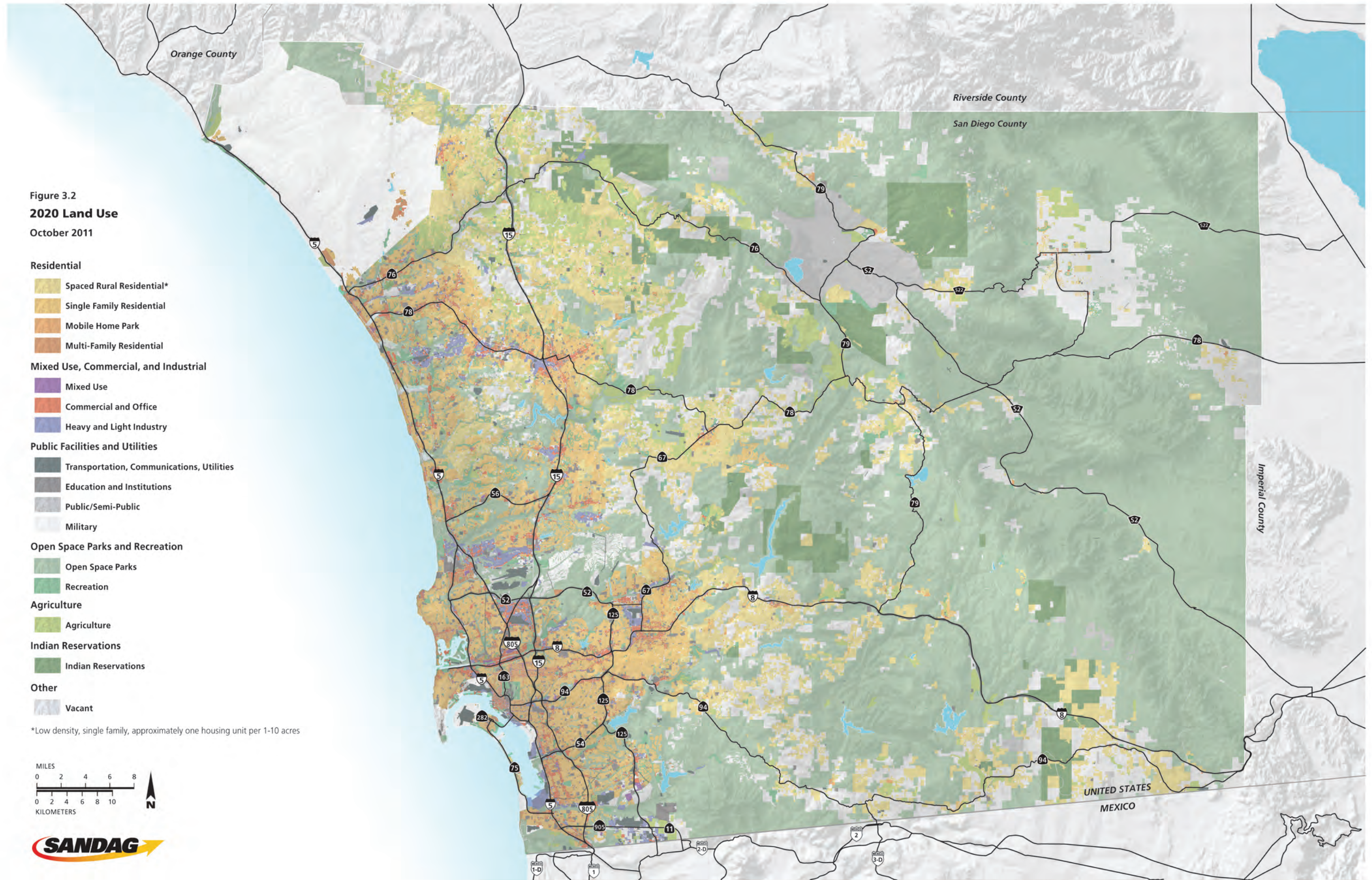
SANDAG has prepared maps that identify the general location of land uses in the region. The maps also show residential densities and commercial development types (Figures 3.2, 3.3, and 3.4 for 2020, 2035, and 2050, respectively). The maps for 2020 and 2035 also are provided at a subregional level in Appendix D.

Neighborhood level growth forecasts take into consideration a neighborhood's proximity to existing job centers (along with travel time estimates and information on local commuting choices) as well as historical development patterns. How land in a neighborhood is used today, how it's

expected to be developed, how close the neighborhood is to job centers, and historical patterns of land use all offer clues to how a neighborhood is expected to grow.

For the last step, each jurisdiction's staff reviewed model results. The final forecast was adjusted based on local feedback to ensure that the most current land use information and assumptions including types of use, densities, and intensities were correctly identified and included. In addition to working with local jurisdiction staff, SANDAG conducted workshops and made presentations to city councils and the County Board of Supervisors to obtain input on the land use assumptions used in the subregional forecast. This latest growth forecast looks out 40 years to 2050. This is further into the future than any previous forecast and extends two years beyond the life of the *TransNet* Extension Ordinance.





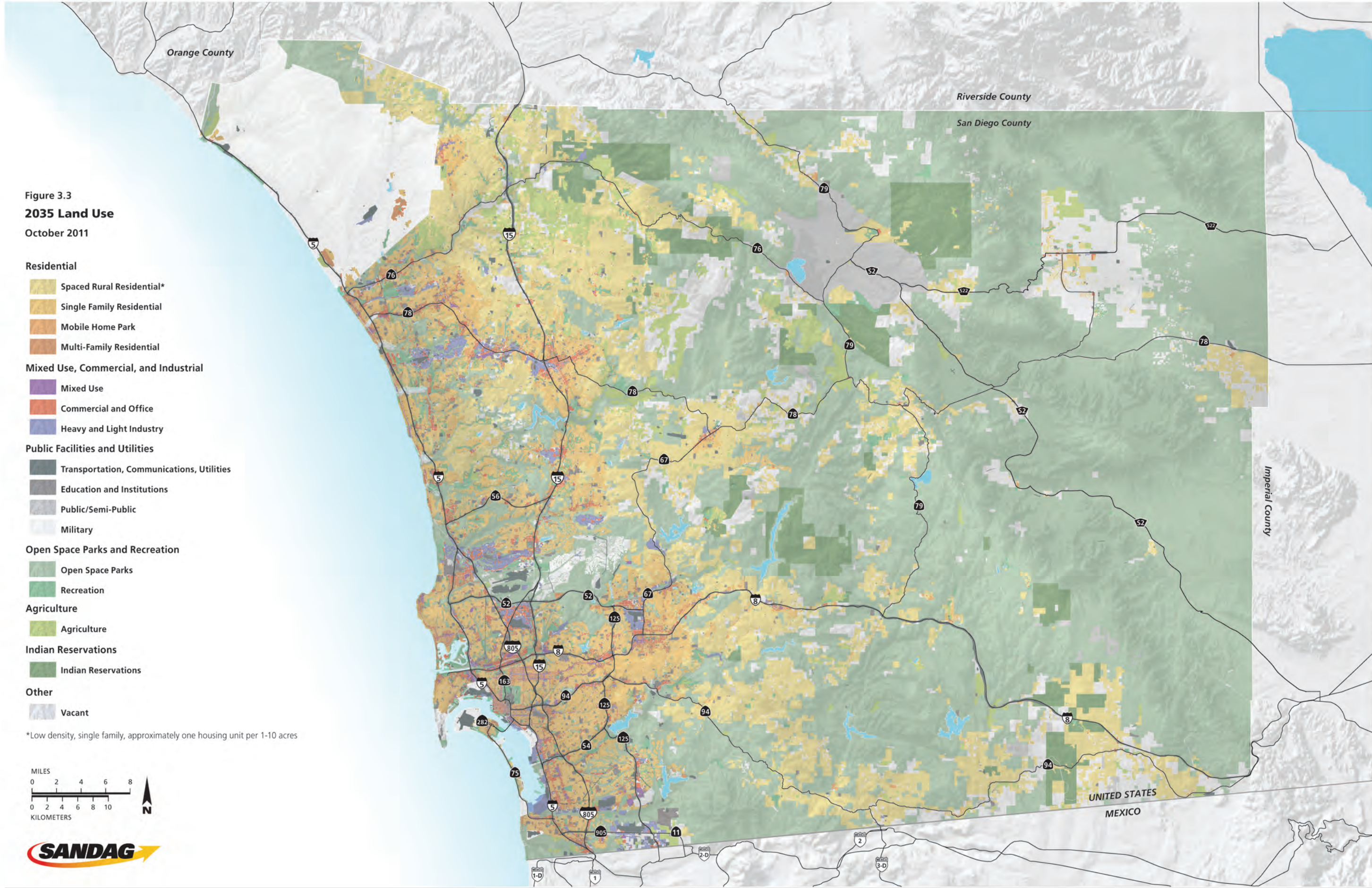
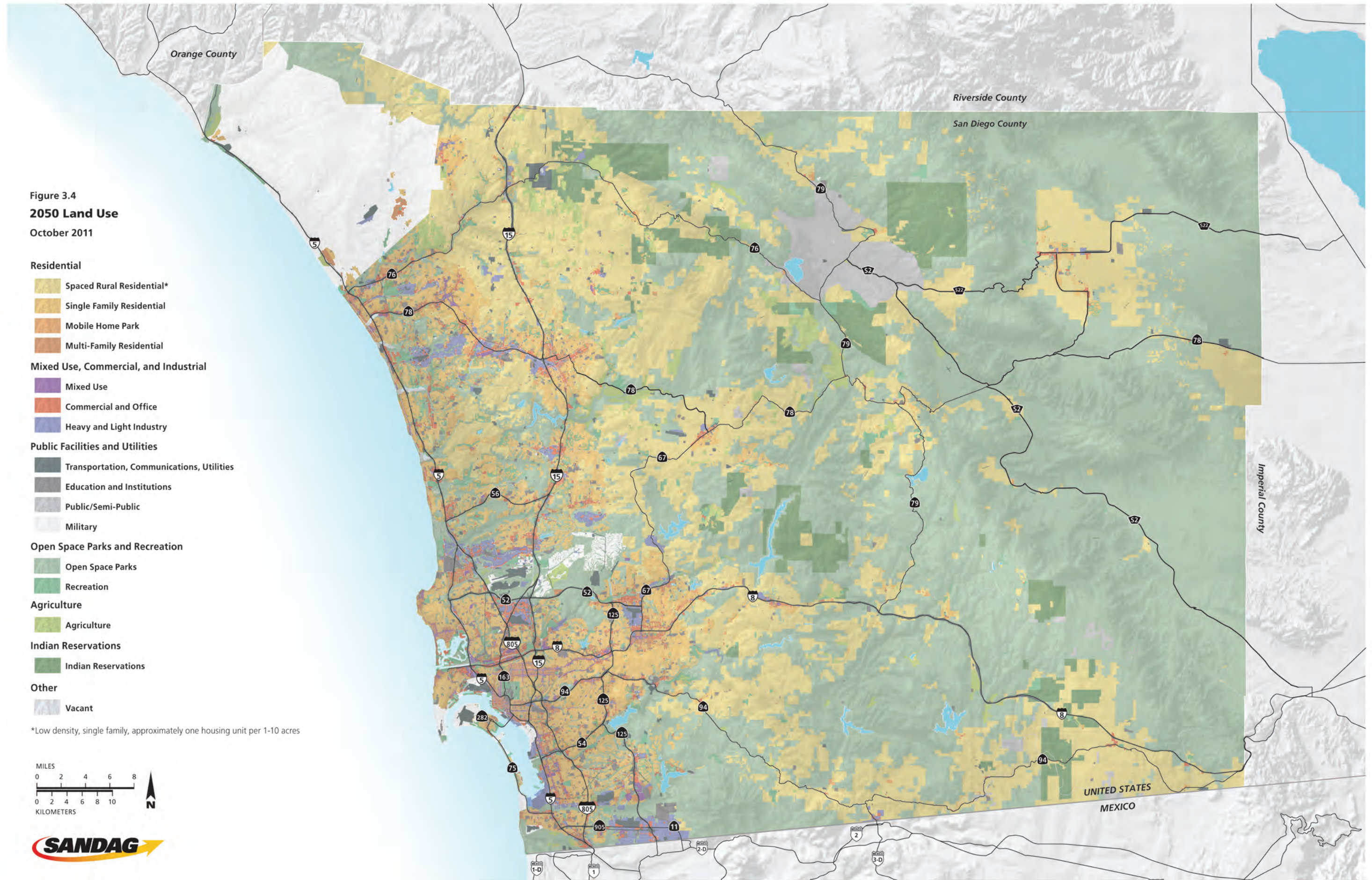


Figure 3.3
2035 Land Use
 October 2011

- Residential**
- Spaced Rural Residential*
 - Single Family Residential
 - Mobile Home Park
 - Multi-Family Residential
- Mixed Use, Commercial, and Industrial**
- Mixed Use
 - Commercial and Office
 - Heavy and Light Industry
- Public Facilities and Utilities**
- Transportation, Communications, Utilities
 - Education and Institutions
 - Public/Semi-Public
 - Military
- Open Space Parks and Recreation**
- Open Space Parks
 - Recreation
- Agriculture**
- Agriculture
- Indian Reservations**
- Indian Reservations
- Other**
- Vacant

*Low density, single family, approximately one housing unit per 1-10 acres





During the past ten years, development patterns and local plans have aligned more closely with the goals and objectives of the RCP, which include focusing more on urban infill and redevelopment and improving accessibility to jobs, housing, education and recreation opportunities. Thus, the SCS land use pattern for the San Diego region contributes to reducing GHG emissions, meeting our GHG targets, and reducing VMT.

Figures 3.5, 3.6, and 3.7 depict the 2050 Regional Growth Forecast and SCS land use pattern by showing population densities of the region (persons per by acre) in 2020, 2035, and 2050, respectively. Together the maps show that population growth will be concentrated in the western third of the region and along major transportation corridors. The maps also show the extensive system of habitat areas, open space, and parkland that the region is preserving for the future. These natural resources are described in more detail later in this chapter.

Table 3.2 provides detailed numerical information about the 2050 Regional Growth Forecast, which shows the projected changes in population, housing, and employment between 2008 (the base year), 2020, 2035, and 2050. It shows a breakdown of how many acres are planned for residential, employment, parks and preserved open spaces.

The SCS land use pattern for the San Diego region contributes to reducing GHG emissions, meeting our GHG targets and reducing VMT.



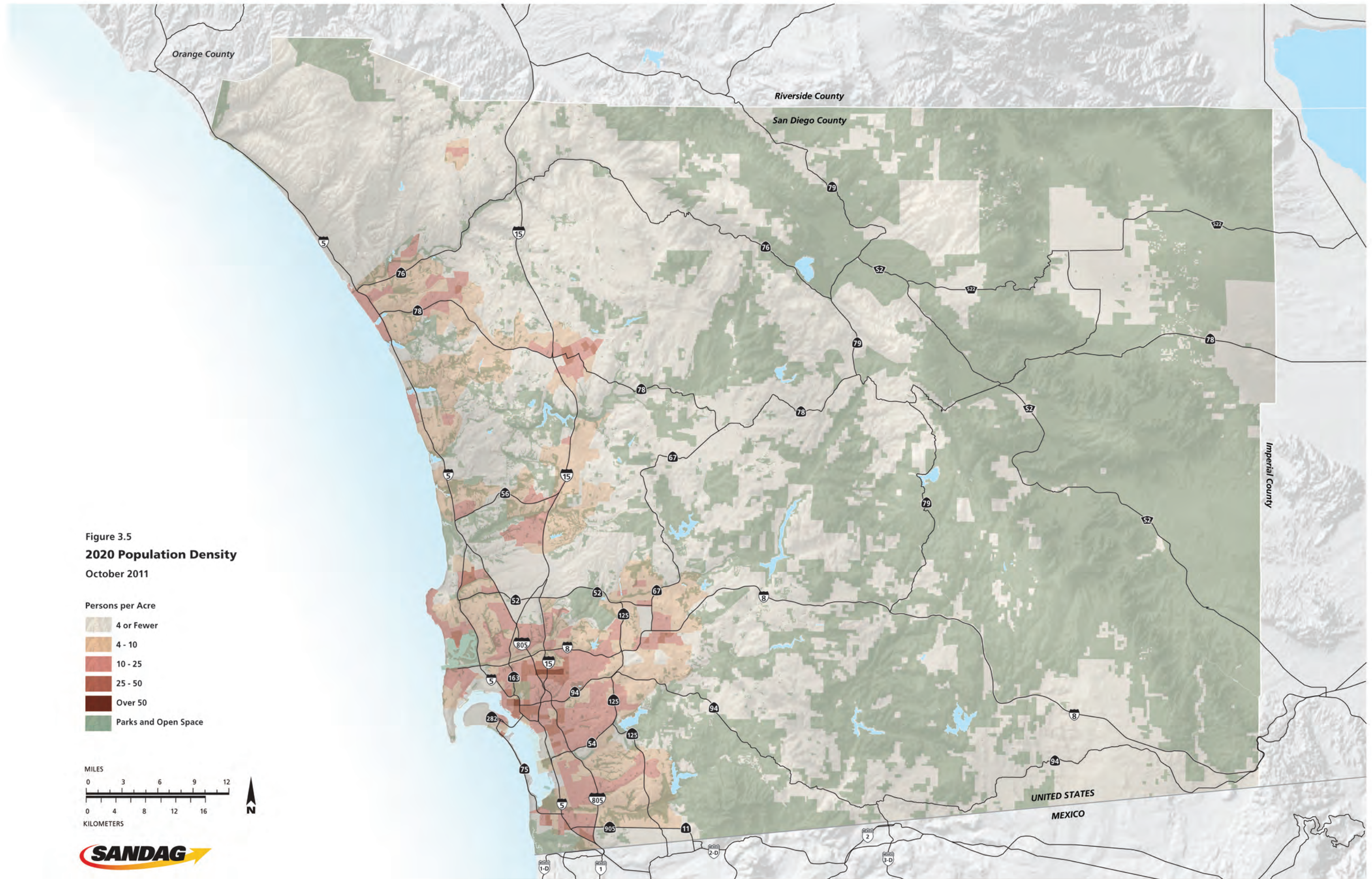


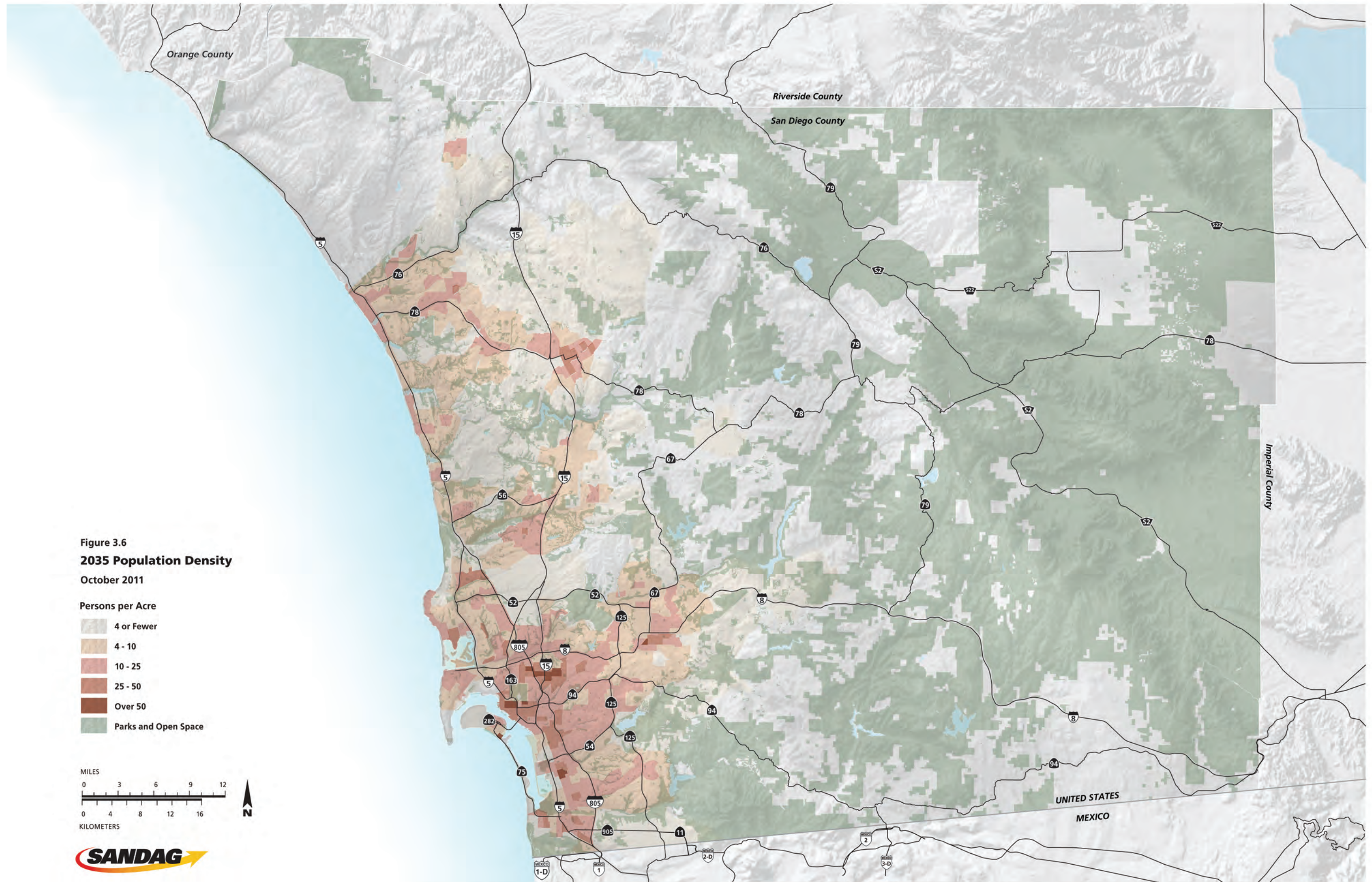
Figure 3.5
2020 Population Density
 October 2011

Persons per Acre

- 4 or Fewer
- 4 - 10
- 10 - 25
- 25 - 50
- Over 50
- Parks and Open Space

MILES
 0 3 6 9 12
 KILOMETERS
 0 4 8 12 16





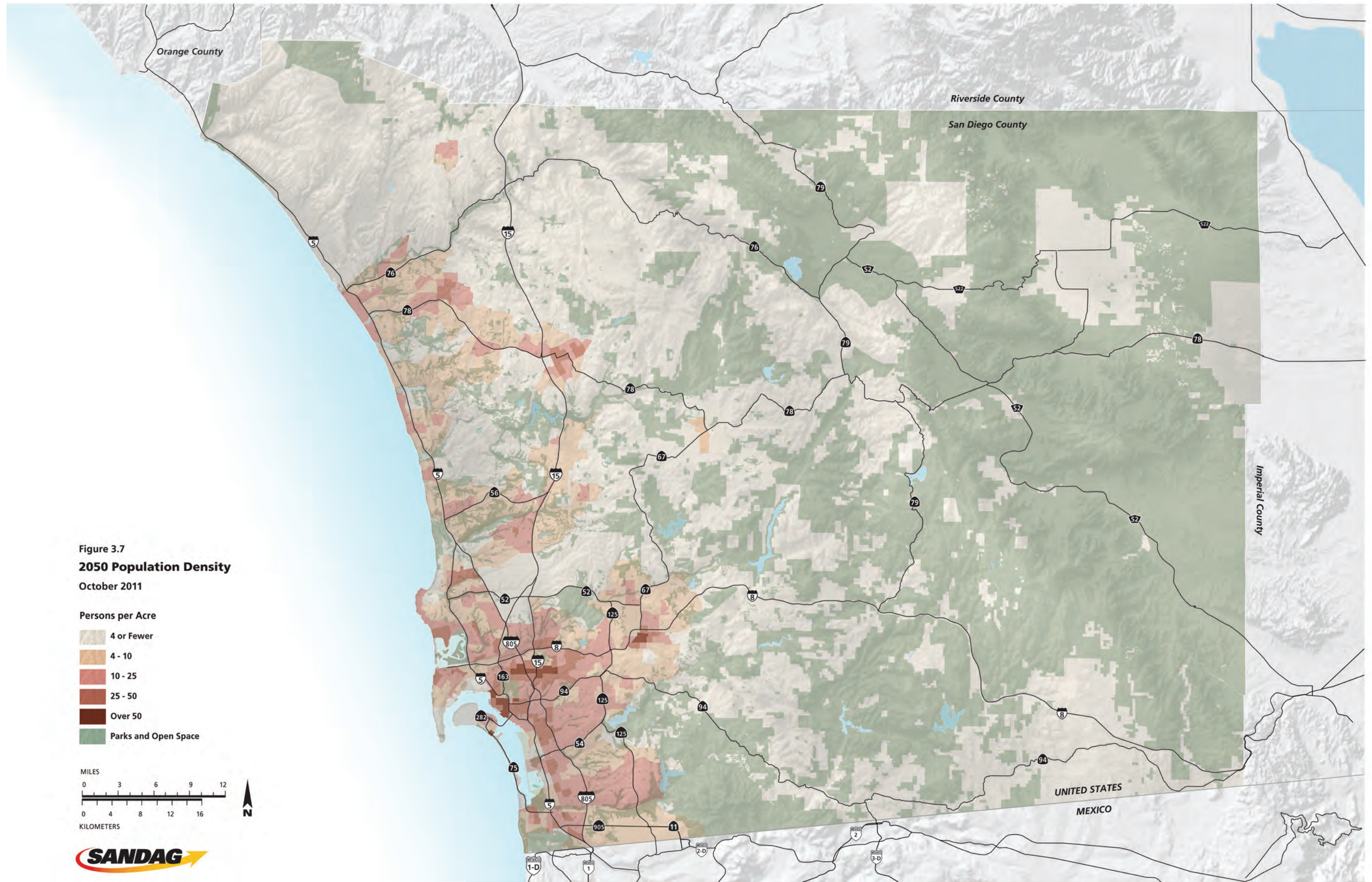


Figure 3.7
2050 Population Density
 October 2011

Persons per Acre

- 4 or Fewer
- 4 - 10
- 10 - 25
- 25 - 50
- Over 50
- Parks and Open Space

MILES
 0 3 6 9 12
 KILOMETERS
 0 4 8 12 16

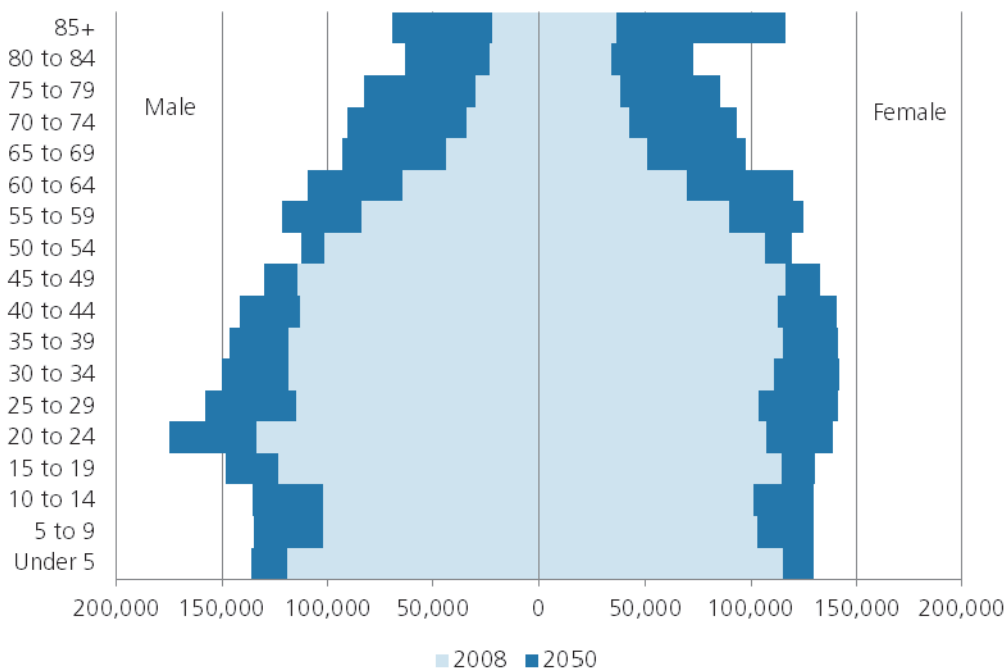


Figure 3.8 shows the aging of the region's population between 2008 and 2050. The number of people aged 65 and older is expected to increase by 143 percent. The number of people older than 85 is projected to increase by 214 percent. The aging of the population is a significant demographic trend, and the 2050 RTP/SCS places more attention on transportation for seniors, people with limited means, and individuals with disabilities. These specialized services are coordinated with transit services. The 2050 RTP/SCS includes an expansion of the Senior Mini-Grant program and other specialized transportation grant programs to meet this need.

80 percent of new growth will be in the urban areas. Figure 3.10 shows the changes in housing capacity that have occurred over time in the SANDAG growth forecasts. The projected increase in housing capacity is dramatic for areas with densities between 20 and 39.9 dwelling units per acre and 40-plus dwelling units per acre. The increases reflect extensive work by local jurisdictions to update general and specific plans to accommodate future growth and development in the urbanized areas of the region where existing and planned public transit is located.

Figure 3.9 shows that the number of homes located within one half-mile of public transit services will increase from 45 percent in 2008 to 64 percent in 2050. This increase is based on new transit services, detailed in Chapter 6 and also on the fact that approximately

**Figure 3.8 – Population by Age
2008 and 2050**

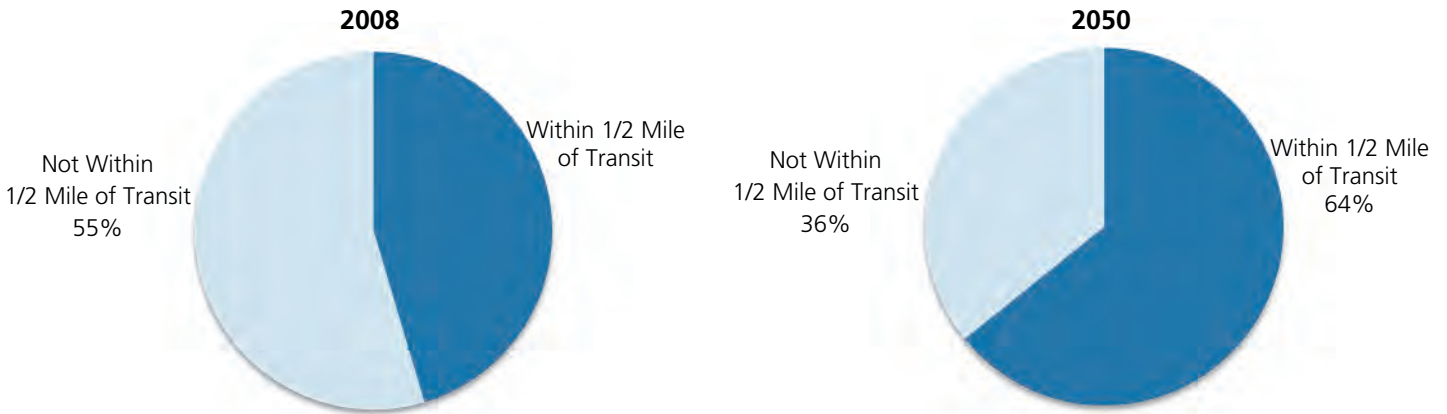


Source: SANDAG 2050 Regional Growth Forecast

Figures 3.11 through 3.13 (employment density) and Figures 3.14 through 3.16 (housing density) show that most growth in housing and employment is expected to occur in incorporated cities in the western third of the region in the years 2020, 2035, and 2050, respectively. The California Transportation Commission’s Regional Transportation Plan Guidelines (Guidelines) provide that density and clustering of land uses are “typically

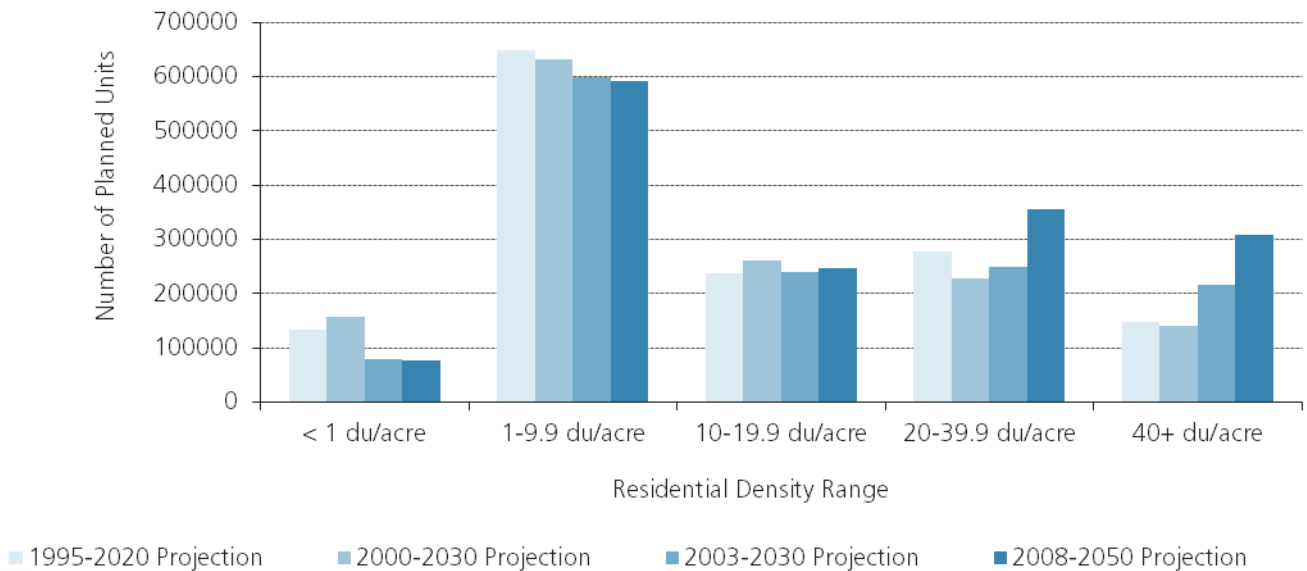
measured by the number of dwelling units, shops, and/or employees per acre or square mile, floor area ratio (FAR), and other similar measures.” (Guidelines, p. 134) In order to identify intensity for non-residential land uses, SANDAG has relied upon the best available information, which is employment density or jobs per acre.

Figure 3.9 – Housing Near Public Transit



Source: SANDAG 2050 Regional Growth Forecast

**Figure 3.10 – Housing Capacity
(Number of Existing Plus Additional Housing Units Planned)**



Source: SANDAG Regional Growth Forecasts

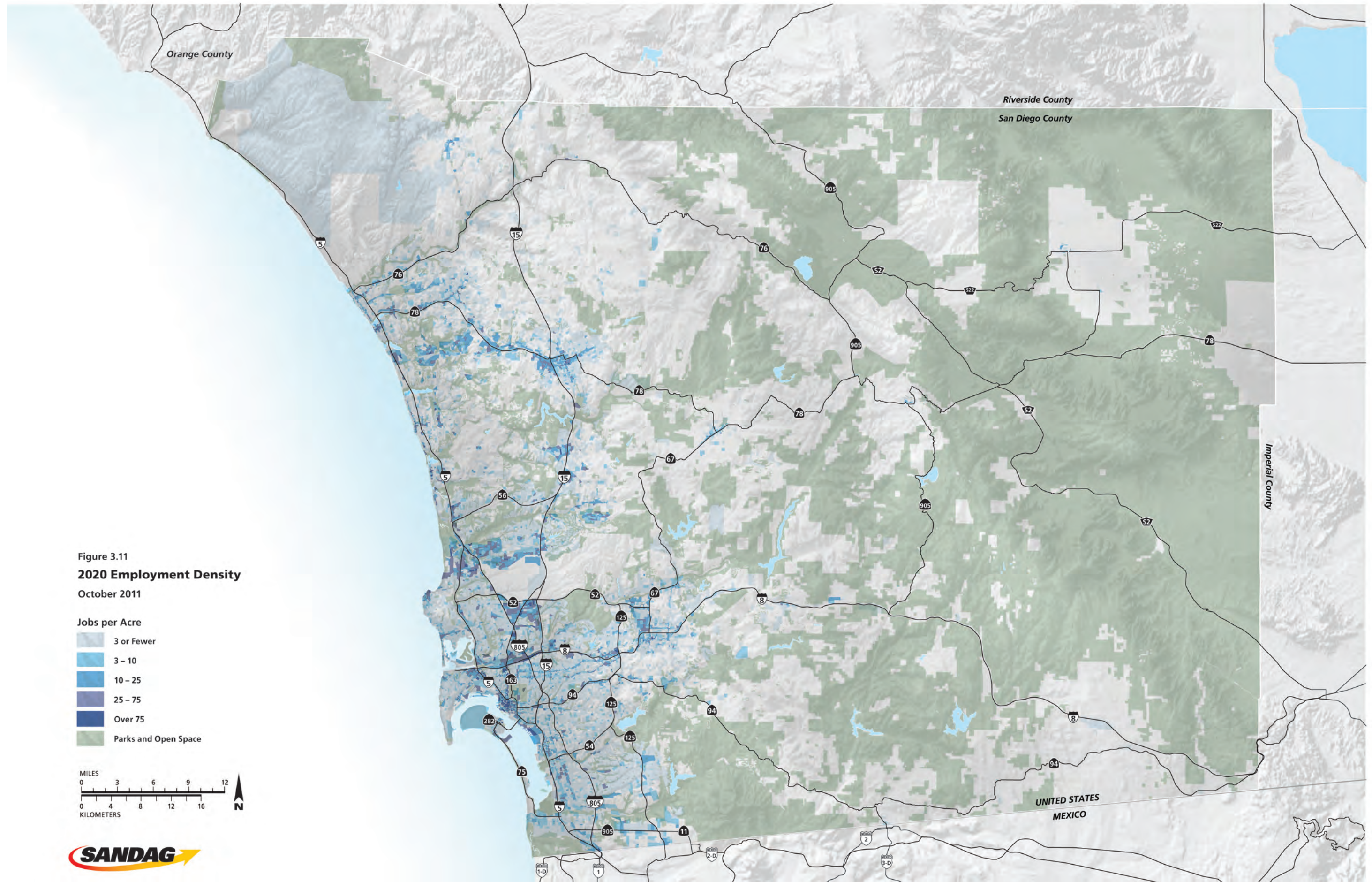


Figure 3.11
2020 Employment Density
 October 2011

- Jobs per Acre
- 3 or Fewer
 - 3 – 10
 - 10 – 25
 - 25 – 75
 - Over 75
 - Parks and Open Space



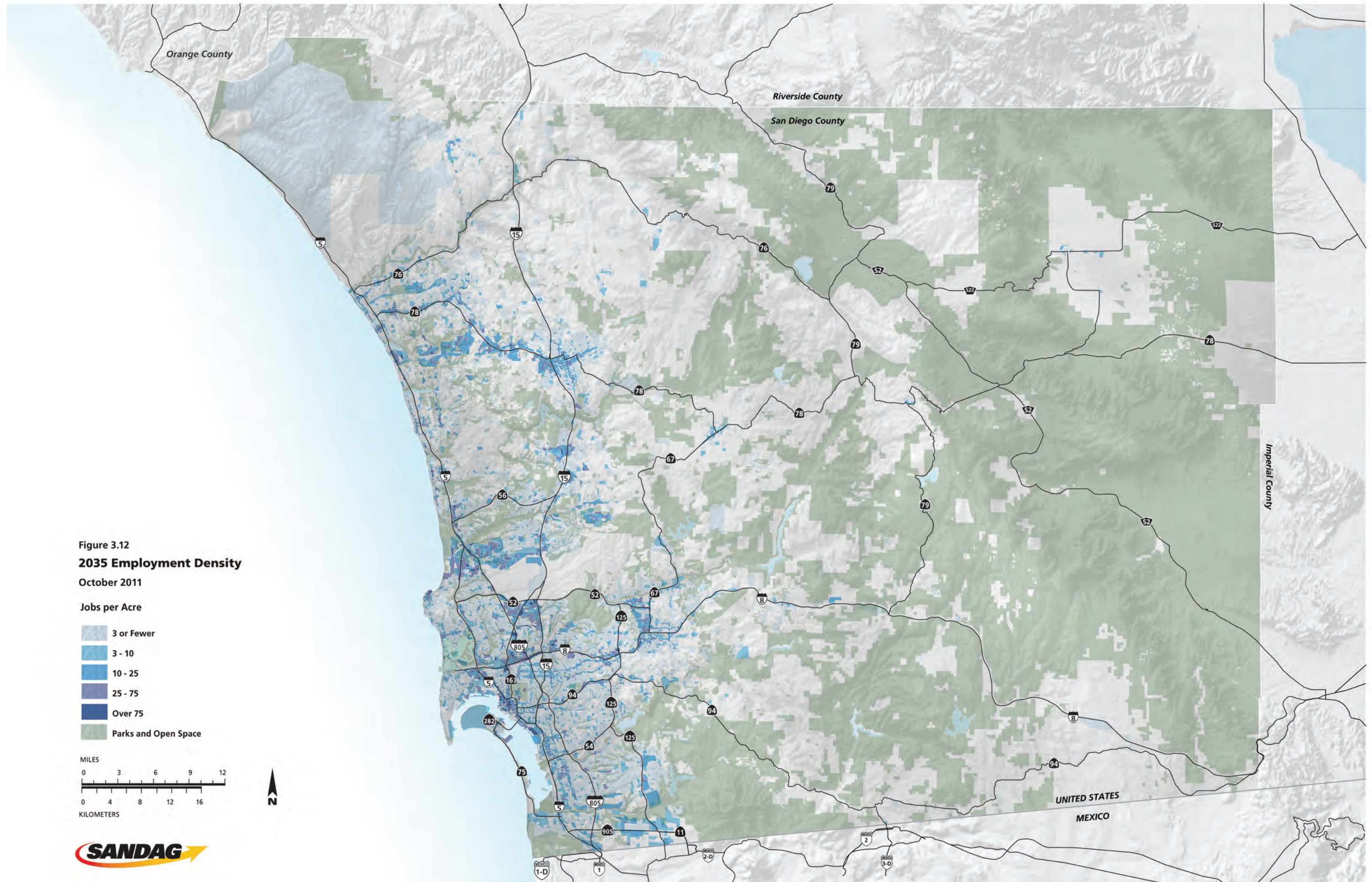


Figure 3.12
2035 Employment Density
 October 2011

Jobs per Acre

- 3 or Fewer
- 3 - 10
- 10 - 25
- 25 - 75
- Over 75
- Parks and Open Space

MILES
 0 3 6 9 12
 KILOMETERS
 0 4 8 12 16



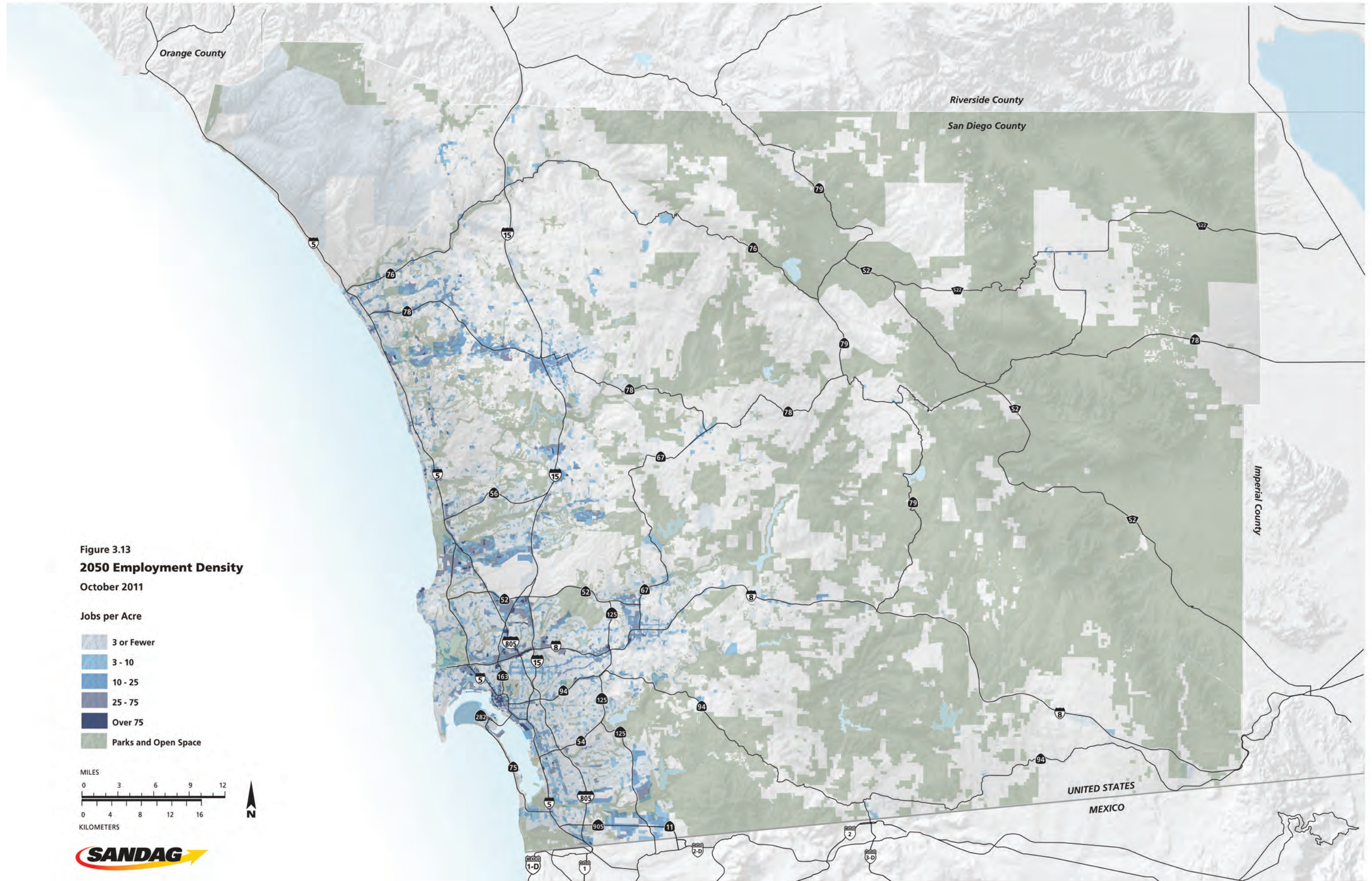


Figure 3.13
2050 Employment Density
 October 2011

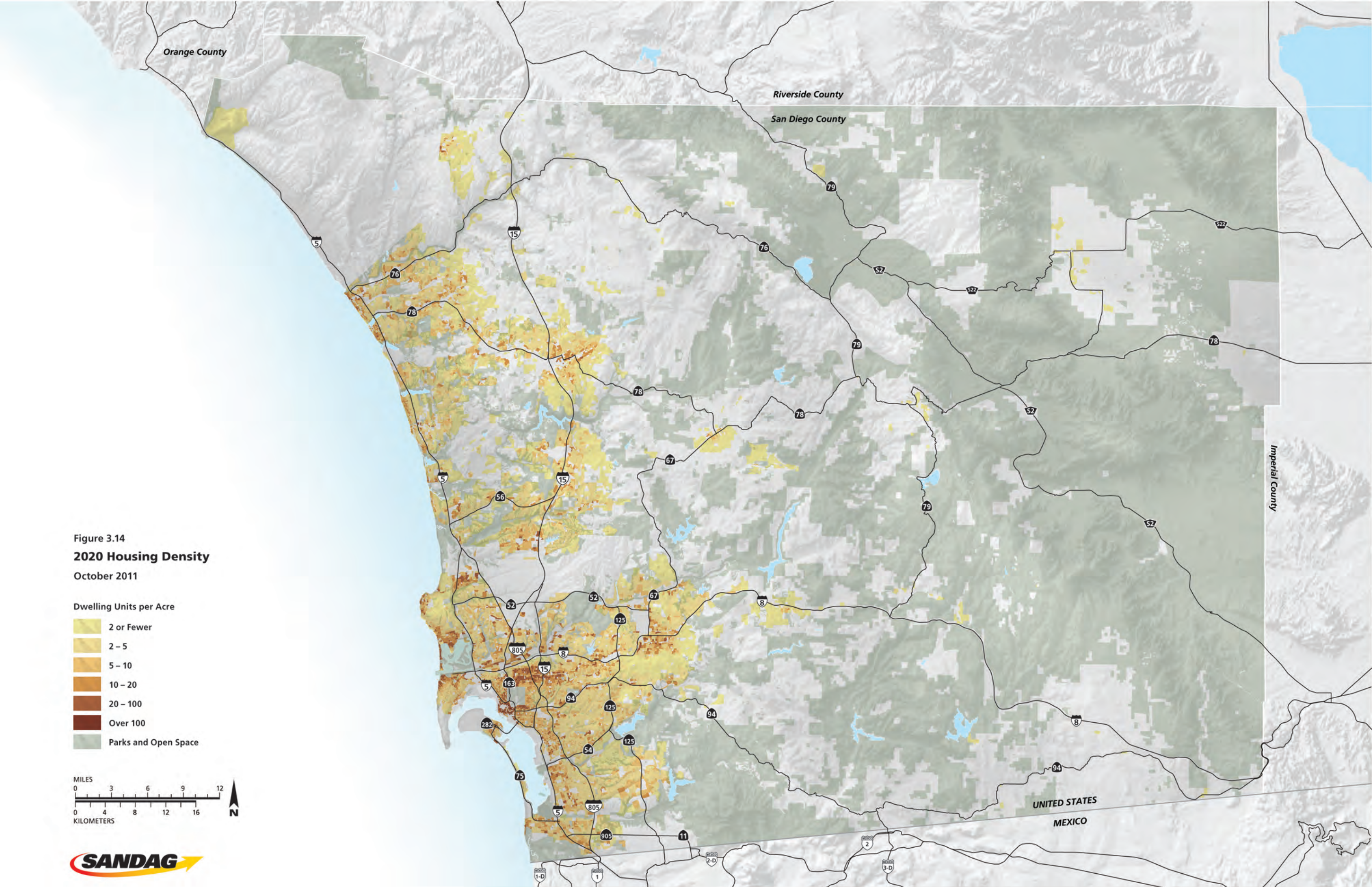
Jobs per Acre

- 3 or Fewer
- 3 - 10
- 10 - 25
- 25 - 75
- Over 75
- Parks and Open Space

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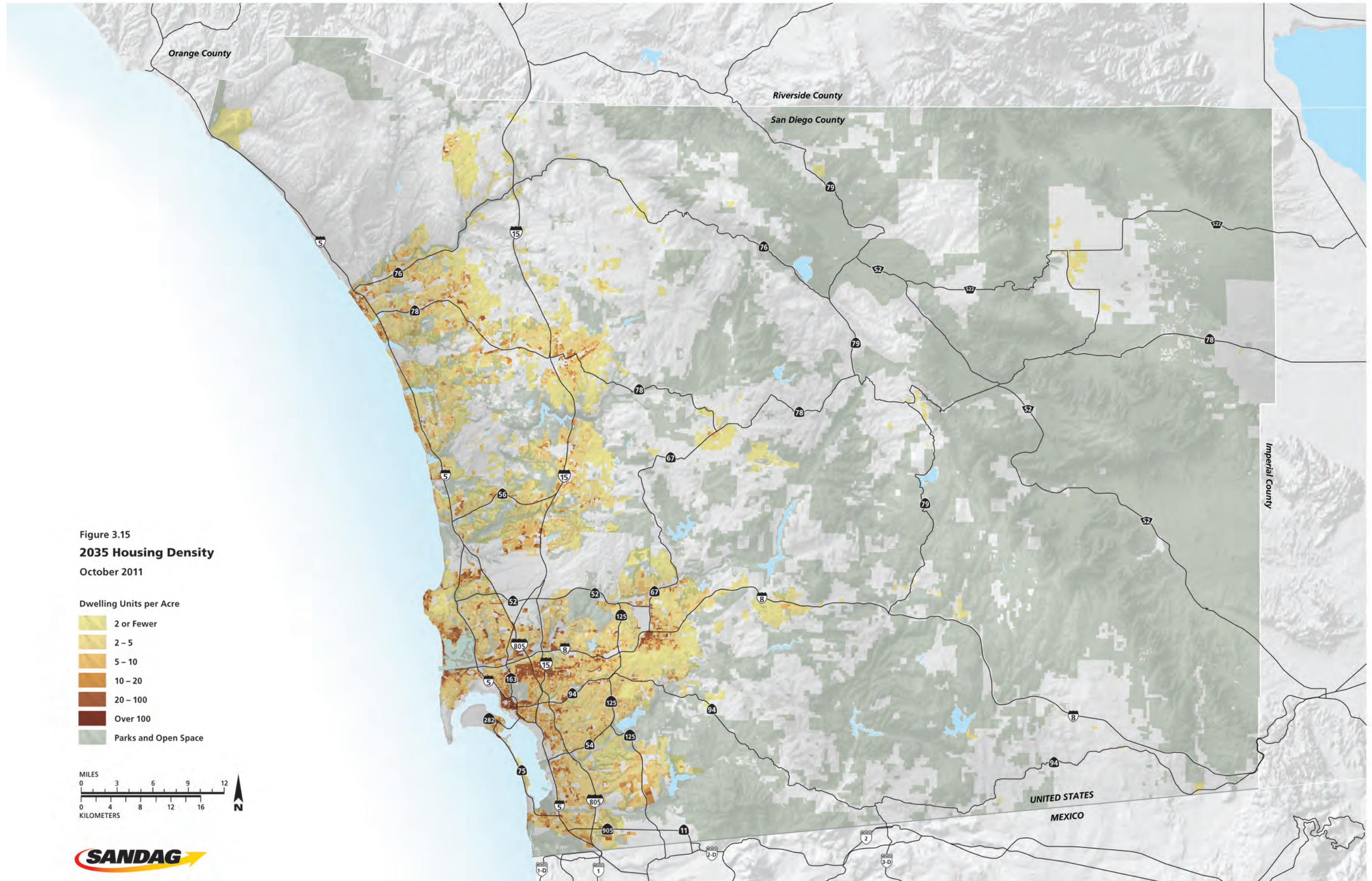
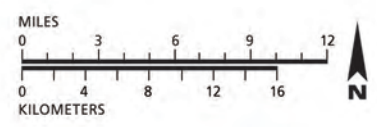


Figure 3.15
2035 Housing Density
 October 2011

Dwelling Units per Acre

- 2 or Fewer
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 100
- Over 100
- Parks and Open Space



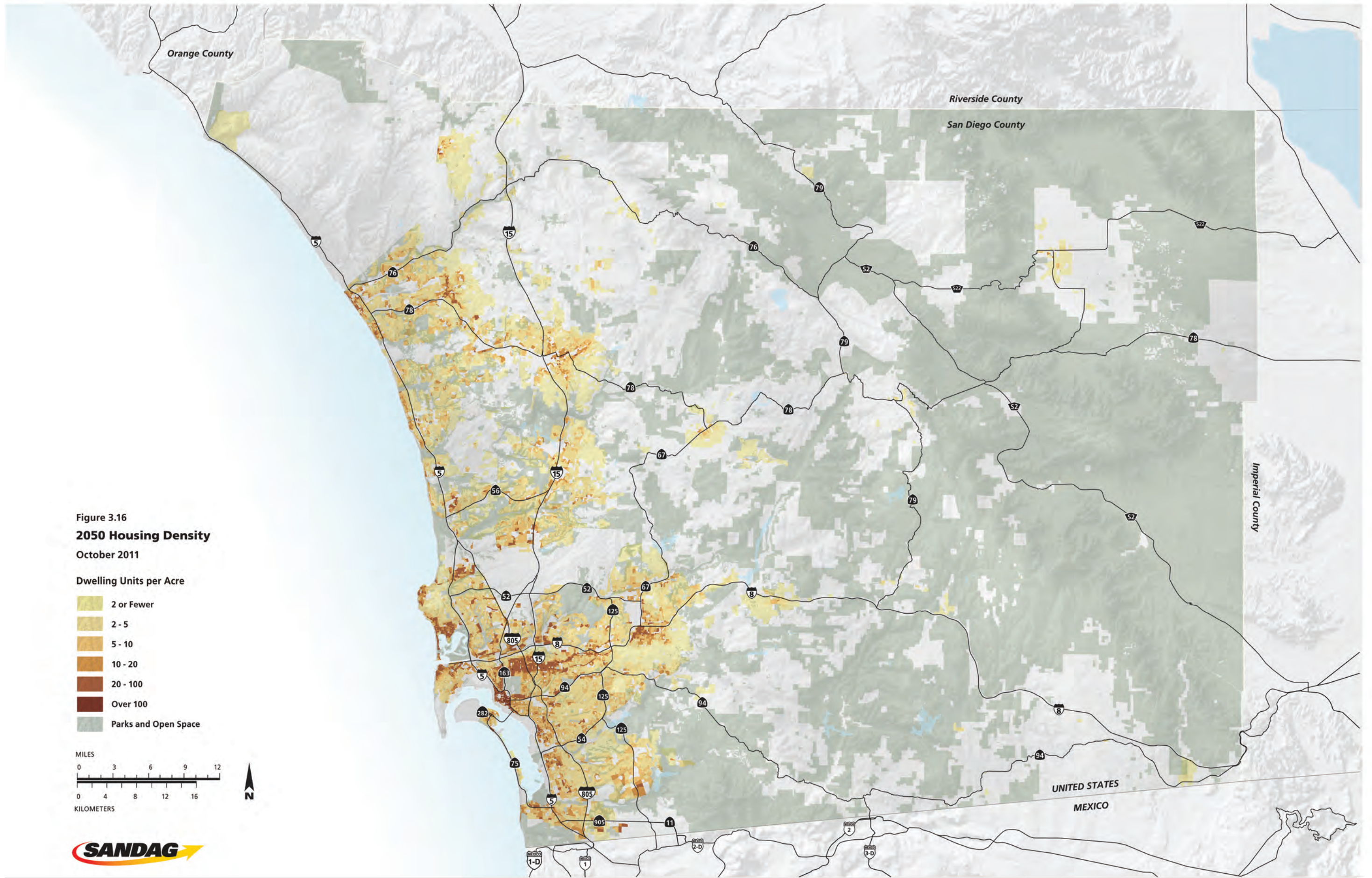


Figure 3.16
2050 Housing Density
 October 2011

Dwelling Units per Acre

- 2 or Fewer
- 2 - 5
- 5 - 10
- 10 - 20
- 20 - 100
- Over 100
- Parks and Open Space

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Welcoming Everyone Who Chooses to Live Here: Housing the Region’s Projected Growth in Population

“Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth.” (Government Code Section 65080(b)(2)(B)(ii))

The SCS land use pattern accommodates the estimated 388,000 new homes that will be needed regionwide over the next 40 years to serve a projected growth in population of 1.25 million people.

After the 2030 RTP and 2030 Regional Growth Forecast were adopted, changes to local general plans resulted in a significant increase in residential capacity regionwide. The 2030 Regional Growth Forecast projected a shortfall of nearly 100,000 homes by the year 2030 (which was addressed by projecting significant interregional commuting between San Diego County and Riverside, Orange, and Imperial Counties, as well as Baja California, Mexico). But the 2050 Regional Growth Forecast and SCS land use pattern contain sufficient residential capacity (more than 435,000 housing units) to accommodate the region’s projected growth in population of 1.25 million people. The 2050 Regional Growth Forecast and SCS estimate that interregional commuting will be minimal, driven only by the proximity of neighboring regions to some job centers, and personal choices. It is estimated that an additional 15,000 households will include residents who commute into the region for work. Nearly half of these households will be located in Baja

California, Mexico and much of the remainder will be in Riverside County.

The SCS land use pattern addresses the needs of all economic segments of the population. About 84 percent of the projected 388,000 new homes to be built by 2050 will be attached, multifamily units – with a planned capacity of more than 225,000 units at 30 or greater dwelling units per acre, and almost 75,000 units with a housing density of 20 to 29 dwelling units per acre. This capacity for planned housing development, particularly for multifamily development, will help the region accommodate the projected housing needs for residents of all income levels.

Accommodating the Eight-year Regional Housing Needs Assessment

“Identify areas within the region sufficient to house an 8-year projection of the regional housing need for the region.” (Government Code Section 65080(b)(2)(B)(iii))

“Consider the state housing goals.” (Government Code Section 65080(b)(2)(B)(vi))

The SCS land use pattern accommodates the estimated 388,000 new homes that will be needed regionwide over the next 40 years to serve a projected growth in population of 1.25 million people.



SANDAG is required by state law to complete a Regional Housing Needs Assessment (RHNA) in consultation with the California Department of Housing and Community Development (HCD), in order to determine the region’s housing needs in four income categories – very low, low, moderate, and above moderate. This process occurs before each housing element cycle, which SB 375 changed from a five-year to an eight-year cycle.

In the past, the RHNA was completed separately from the RTP. SB 375 now links the RHNA and RTP processes to better integrate housing, land use, and transportation planning. Integrating both processes helps ensure that the state’s housing goals are met.

The San Diego region received its RHNA Determination from the California Department of Housing and Community Development for the fifth housing element cycle (2013-2020), as shown in Table 3.3, following consultation with SANDAG.

SANDAG worked with the local jurisdictions to identify RHNA allocation options that meet the four goals of housing element law as described below. The reports including background information regarding the RHNA are included in Appendix D.

1. Increasing the housing supply and the mix of housing types, tenure, and affordability

in all cities and counties within the region in an equitable manner, which shall result in all jurisdictions receiving an allocation of units for low- and very low-income households.

It allocates RHNA numbers in all four income categories to each of the region’s 19 jurisdictions, thus addressing the objective of promoting socioeconomic equity throughout the region. Table 3.4 demonstrates the mix of housing types planned for in the region by jurisdiction and subregion in four density categories.

2. Promoting infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns.

It utilizes the forecasted pattern of development from the 2050 Regional Growth Forecast, which incorporates policies in local plans that call for higher density housing to be concentrated in urbanized areas adjacent to transit and that protect environmental and agricultural resources. It also demonstrates that the region’s local land use plans have significantly increased the region’s multifamily housing capacity and ability to accommodate the housing needs of all income levels during the next housing element cycle and out to the horizon year of the 2050 RTP. Table 3.4

Table 3.3 – RHNA Determination by Income Category January 1, 2010 – December 31, 2011 (RHNA Projection Period)

Income Categories	%	Units
Very Low	22.5%	36,450
Low	17.1%	27,700
Moderate	18.9%	30,610
Above Moderate	41.5%	67,220
Total	100 %	161,980

Source: California Department of Housing and Community Development (HCD)

demonstrates the significant housing capacity, particularly in the 20 dwelling units per acre or greater density range, for which local jurisdictions have planned in the future.

3. Promoting an improved intraregional relationship between jobs and housing.

It promotes an intraregional relationship between jobs and housing because the 2050 Regional Growth Forecast distributes housing and employment growth at a jurisdiction level using a model that considers proximity to job centers, travel times, and commuting choices, as well as land use plans. Figure 3.23: 2050 Transit Network and Higher Density Land Uses, shows the relationship of higher density land uses (residential, employment, and mixed use) to planned high quality transit corridors in the 2050 RTP/SCS. This map also is included in Chapter 3 of the 2050 RTP/SCS.

4. Allocating a lower proportion of housing need to an income category when a jurisdiction already has a disproportionately high share of households in that income category, as compared with the most recent decennial United States census.

It also moves toward improving the current distribution of lower-income households in the region to reduce over-concentration. Appendix D includes a comparison of the RHNA very low and low income allocations considered during the RHNA process and the regional (40 percent) and jurisdiction percentages of existing lower income households based on U.S. Census data (Column (a)). Column (c) is the RHNA allocation of lower income housing by jurisdiction as a percentage of their total RHNA. It shows that the RHNA moves most jurisdictions closer to the regional percentage of lower income households with the exception of the city of Del Mar and the

Unincorporated area of the County. The small size of Del Mar (population just over 4,000) and the rural nature and lack of infrastructure in the Unincorporated area of the County resulted in RHNA allocations with a lower percentage of lower income housing than the regional percentage of lower income households.

The RHNA also moves toward improving the current distribution of lower income households in the region. This is shown in Appendix D, (RHNA Report Table 4).

The RHNA Plan allocates the RHNA Determination by jurisdiction. Based on the RHNA Plan each jurisdiction will need to identify adequate sites to address its RHNA allocations in the four income categories when updating its housing element. Housing elements are due no later than 18 months after the SANDAG Board adopts the 2050 RTP, or April 27, 2013.

Table 3.4 shows that the region has more than enough housing capacity in a variety of density ranges to accommodate the RHNA allocations as well as the population projections to 2050. This table provides housing capacity information based on the 2050 Regional Growth Forecast for the City of San Diego, the Unincorporated County, and each city grouped by subregion. In addition to housing capacity based on local general plans, the housing capacity in the 2050 growth forecast includes projected changes to adopted general plans in some jurisdictions. This “stretch” or “visionary” capacity was based on input from the local jurisdictions and partner agencies for the period of 2035 to 2050 (beyond the time period for the RHNA). Local land use inputs for the 2035 to 2050 period include draft plan updates, rezoning, future redevelopment (based on existing plans), mixed-use development at transit stations, and redevelopment within Smart

The region has more than enough housing capacity in a variety of density ranges to accommodate the RHNA allocations as well as the population projections to 2050.

Growth Opportunity Areas shown on the Smart Growth Concept Map (See Technical Appendix 9).

SB 375 requires consistency between the RHNA and SCS – that is, that the SCS land use pattern can accommodate the RHNA Determination for the fifth housing element cycle.

Any changes to land use plans or zoning that occur during the updates of housing elements by local jurisdictions as a result of the RHNA will be reflected in the next regional growth forecast and RTP. This will ensure that land use changes resulting from the RHNA and the

housing element process will be considered in future updates of these two key planning documents. The goal is to ensure consistency between future land use and transportation plans through an iterative process.



Table 3.4 – 2050 Growth Forecast Estimated Housing Capacity By Jurisdiction and Subregion

	Dwelling Units Per Acre				Total
	<10	10-19	20-29	30+	
City of San Diego	10,671	22,084	51,266	149,784	233,805
Unincorporated	53,938	5,314	1,179	5,223	65,654
North County Coastal	8,655	3,961	3,654	4,415	20,685
Carlsbad	3,968	1,528	885	720	7,101
Del Mar	31	28	10	2	71
Encinitas	1,578	838	899	394	3,709
Oceanside	2,992	1,528	1,452	3,299	9,271
Solana Beach	86	39	408	0	533
North County Inland	7,230	2,672	3,146	15,773	28,821
Escondido	2,543	783	493	3,550	7,369
Poway	1,563	13	0	353	1,929
San Marcos	2,292	944	2,049	882	6,167
Vista	832	932	604	10,988	13,356
East County	2,181	2,476	1,337	22,940	28,934
El Cajon	-772	1,352	504	12,721	13,805
La Mesa	231	220	159	7,862	8,472
Lemon Grove	135	176	190	1,220	1,721
Santee	2,587	728	484	1,137	4,936
South Bay	4,373	8,586	14,155	30,158	57,272
Chula Vista	4,189	7,347	9,354	13,738	34,628
Coronado	12	6	148	122	288
Imperial Beach	5	745	378	1,406	2,534
National City	167	488	4,275	14,892	19,822
Total	87,048	45,093	74,737	228,293	435,171

Source: SANDAG 2050 Regional Growth Forecast

Protecting Resource Areas and Farmland: A key element of the Sustainable Communities Strategy

“Gather and consider the best practically available scientific information regarding resource areas and farmland in the region.” (Government Code Section 65080(b)(2)(B)(v))

San Diegans share a strong attachment to the region’s open spaces. When asked what they like most about the San Diego region, natives and newcomers alike consistently cite the enviable climate, beaches, bays, urban canyons, local mountains, and deserts.

In addition to identifying areas where development is projected to occur, the SCS land use pattern identifies protected parklands and open space, natural resource areas, and farmland in the region. These parklands and open space, natural resource areas, and farmland were identified using the best practically available scientific information. This includes the SANDAG Land Information System database, SANDAG Conserved Lands database, San Diego Geographic Information Source (SanGIS) database, Multiple Species

Conservation Program (MSCP), and the North County Multiple Habitat Conservation Program (MHCP).

Of the 2.7 million acres within the San Diego region, about half (50.6 percent) have been conserved as parks or open space (see Table 3.5). These acres are included in the SCS land use pattern. These lands range from public use parks, such as Mission Bay and Anza Borrego State Park, to rural open space such as the Otay Mountain Wilderness Area and U.S. Forest Service Lands. These areas do not include military areas such as Camp Pendleton and Marine Corps Air Station Miramar, which contain undeveloped land that is not accessible to the public and not considered conserved as open space. Figures 3.14 through 3.16 (housing density) show the location of these parks and open space lands.

The natural environment in the San Diego region includes three general geographic areas: the coast, the mountains, and the desert. Most people live and work in the western portion of the region. Although nearly 24 percent of the western portion of the region is not in its original natural state (about 19 percent is developed, 4 percent is in

The SCS land use pattern identifies protected parklands and open space, natural resource areas, and farmland in the region.



Table 3.5 – Park Land and Open Space in the San Diego Region

Ownership	Type	Acreage
Public	Designated Park	996,170
	Public Open Space	278,673
Private	Conserved Lands	92,013
Total:		1,366,828

Source: SANDAG 2050 Regional Growth Forecast and SANDAG Conserved Lands Database

agricultural production and 1 percent is disturbed habitat), the remaining 76 percent is made up of natural habitats. Of these, 30 percent are covered by chaparral, 8 percent by coastal sage scrub, 5 percent by grasslands, and 33 percent by other types of vegetation (including those found in dunes, marshes, oak and eucalyptus woodlands, riparian scrub, and coniferous forests), as shown in Figure 3.17 (San Diego Regional Generalized Vegetation).

Protecting the Region’s Natural Habitats

The San Diego region has conserved natural habitats for the last two decades. Regional planners have focused considerable effort on four habitat conservation plans (HCP): the Multiple Species Conservation Program (MSCP) South, finalized in 1998; the Multiple Habitat Conservation Program (MHCP), finalized in 2003; the North County MSCP, anticipated for completion in 2012; and the East County MSCP, which is expected to begin after the North County MSCP is adopted. The SCS land use pattern incorporates finalized habitat plans as well as the conservation of other sensitive resource lands such as steep slopes, wetlands, and floodplains as reflected in plans by local jurisdictions. These local and regional plans shown on Figure 3.18 ensure the conservation of plant and animal species, and natural habitats through low density zoning, conservation easements, and land purchases.

Six jurisdictions (the cities of Carlsbad, Chula Vista, La Mesa, Poway, San Diego, and the southern portion of the County of San Diego), have approved habitat conservation plans and signed implementing agreements that collectively cover 20 percent of our region. Seven jurisdictions (the cities of Encinitas, Escondido, Oceanside, San Marcos, Santee, Vista, and the northern portion of the County of San Diego) are working on agreements that cover another 73 percent of our region.

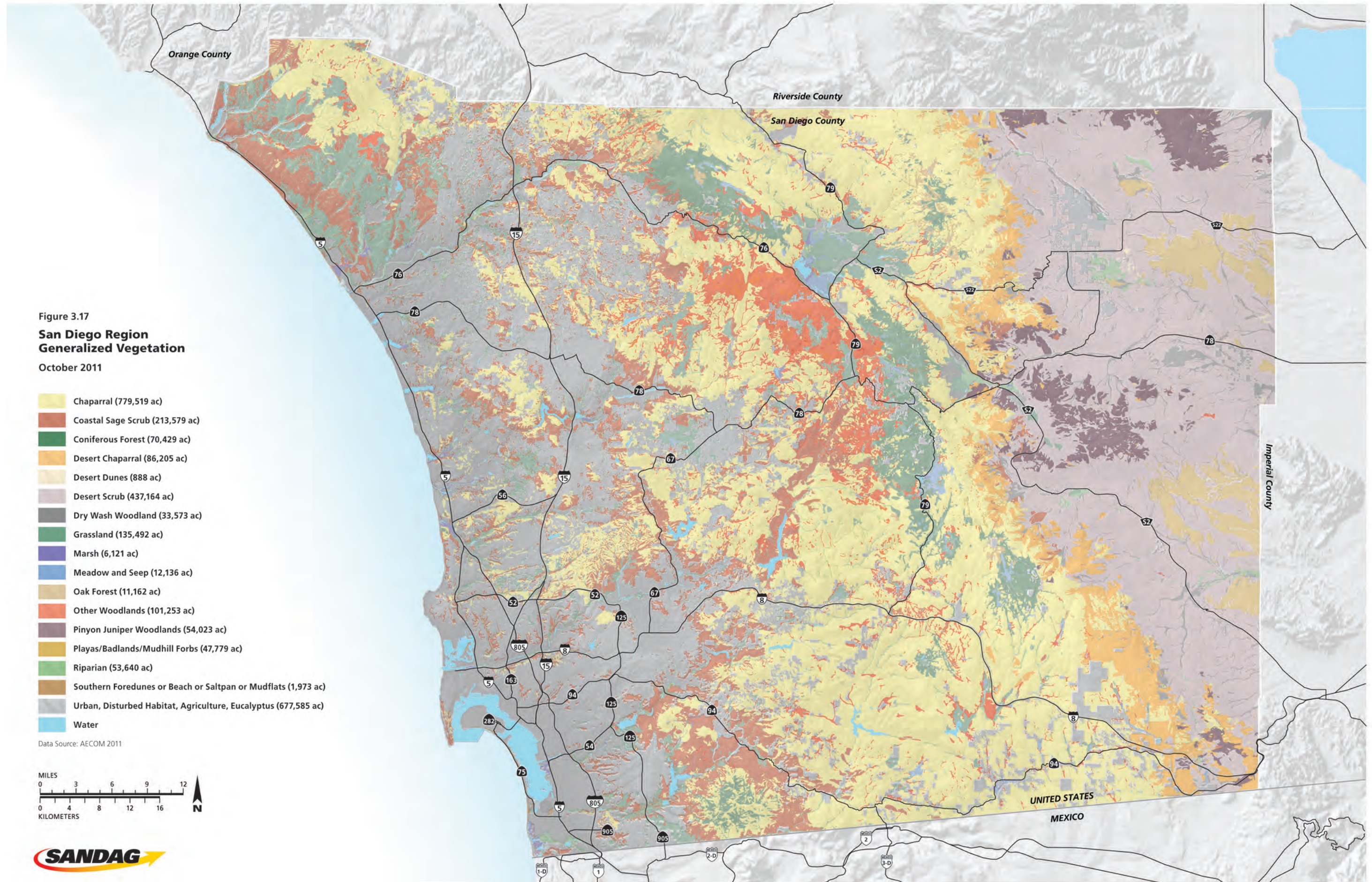
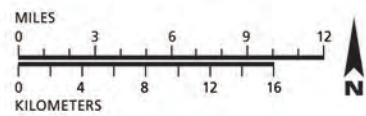
Seven jurisdictions (the cities of Coronado, Del Mar, El Cajon, Imperial Beach, Lemon Grove, National City, and Solana Beach), which collectively cover slightly more than 1 percent of our region, are not pursuing agreements because they have limited natural habitats within their boundaries. The remaining 6 percent of our region is military land conserved by Integrated Natural Resource Management Plans, which are developed under voluntary, cooperative agreements among a Department of Defense installation, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game.

As part of the SANDAG participation in planning for the conservation of regional habitats, SANDAG developed a database of conserved lands in 2010 (SANDAG Conserved Lands database, 2010). This database, which is regularly updated and available to the public, serves as the basis for monitoring habitat conservation (<http://www.sandag.org/resourcemaps>).

Figure 3.17
**San Diego Region
 Generalized Vegetation**
 October 2011

- Chaparral (779,519 ac)
- Coastal Sage Scrub (213,579 ac)
- Coniferous Forest (70,429 ac)
- Desert Chaparral (86,205 ac)
- Desert Dunes (888 ac)
- Desert Scrub (437,164 ac)
- Dry Wash Woodland (33,573 ac)
- Grassland (135,492 ac)
- Marsh (6,121 ac)
- Meadow and Seep (12,136 ac)
- Oak Forest (11,162 ac)
- Other Woodlands (101,253 ac)
- Pinyon Juniper Woodlands (54,023 ac)
- Playas/Badlands/Mudhill Forbs (47,779 ac)
- Riparian (53,640 ac)
- Southern Foredunes or Beach or Saltpan or Mudflats (1,973 ac)
- Urban, Disturbed Habitat, Agriculture, Eucalyptus (677,585 ac)
- Water

Data Source: AECOM 2011



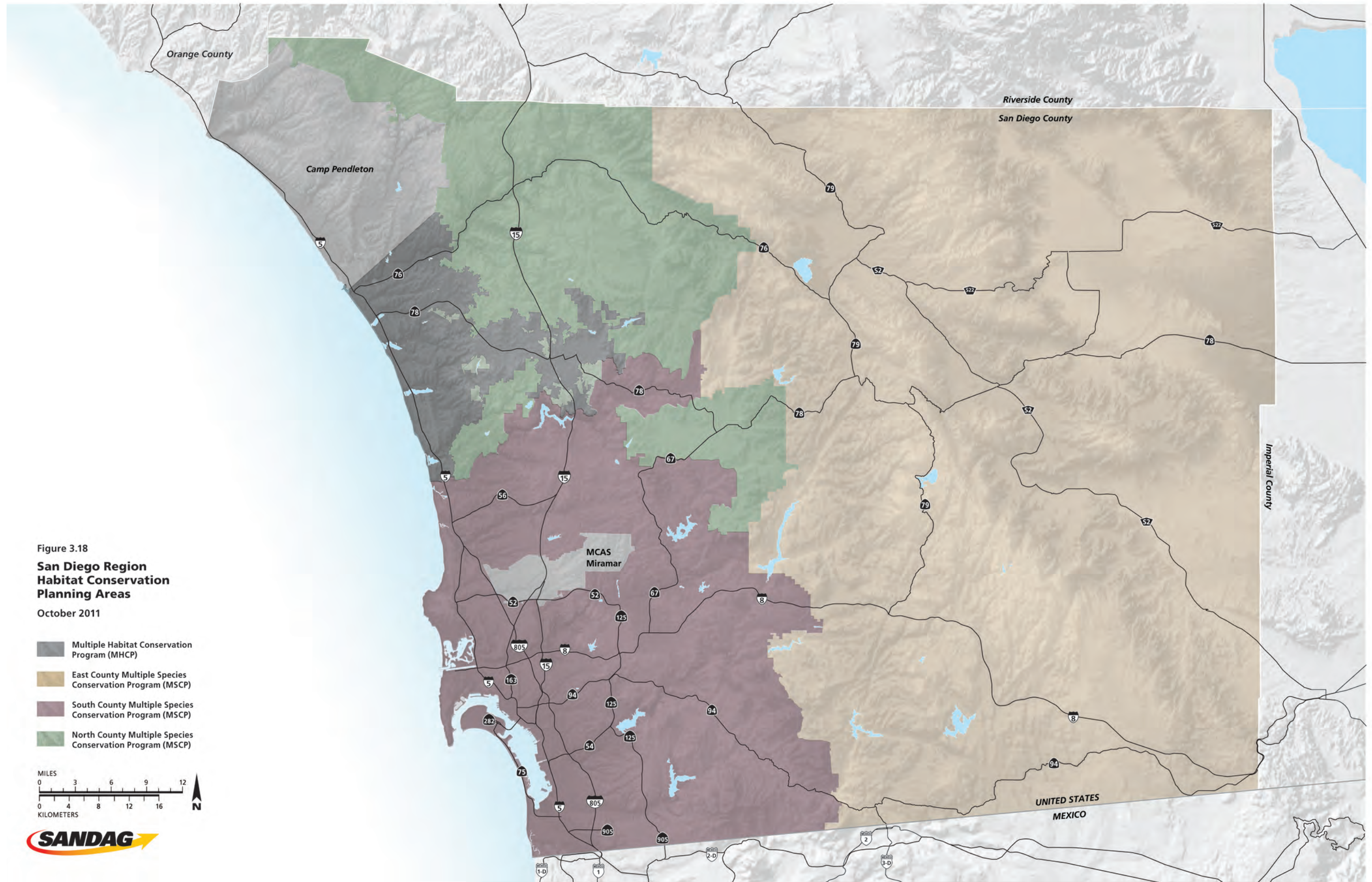
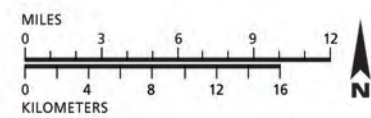


Figure 3.18
**San Diego Region
 Habitat Conservation
 Planning Areas**
 October 2011

- Multiple Habitat Conservation Program (MHCP)
- East County Multiple Species Conservation Program (MSCP)
- South County Multiple Species Conservation Program (MSCP)
- North County Multiple Species Conservation Program (MSCP)



Conserved habitat lands and land proposed for habitat conservation totals 61 percent of the region, as shown in Figures 3.19 and 3.20. This includes lands in each of the habitat conservation areas (Figure 3.18). It is anticipated that all conserved lands would be protected by the year 2030 in accordance with the approved conservation plans and signed implementing agreements. Figure 3.21 illustrates wetlands in our San Diego region.

The regional habitat conservation plans in the San Diego region are designed to provide an umbrella of protection for multiple species by conserving their habitats and the linkages that allow them to travel between habitats. The HCPs were designed under the State’s Natural Communities Conservation Planning program. Even though the umbrella protection was afforded to most species and habitats, additional protections are required to cover species not included in the regional habitat plans (e.g., Tidewater goby (*Eucyclogobius newberryi*)). These additional protections also are needed while experts continue to study whether the habitat plans adequately protect species (e.g., Hermes copper butterfly (*Lycaena thornei*)). In most cases, the distribution and abundance of these species are unknown. While conservation, management, and monitoring efforts provided under the regional HCPs are expected to help these species, additional regulatory protections exist for them. An analysis of project impacts to all biological resources is still required under the California Environmental Quality Act (CEQA) for sensitive species, sensitive habitat (including wetlands), and wildlife movement.

Federal or state permits also may be required under the Clean Water Act, the California Fish and Game Code, and/or the Porter-Cologne Water Quality Act based upon the project-specific impact analysis. In addition, local jurisdictions may have their own mitigation

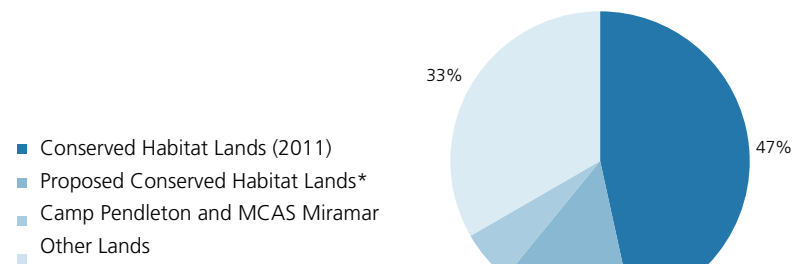
requirement for species (also known as species-specific mitigation) that are not included in the HCPs. Regional HCPs, therefore, provide an umbrella of protection through regional habitat conservation without taking away existing protection by other local, state, or federal regulations.

TransNet Environmental Mitigation Program

“The metropolitan planning organization shall consider financial incentives for cities and counties that have resource areas or farmland.” (Government Code Section 65080(b)(4)(C))

In 1987, San Diego County voters approved *TransNet*, a half-cent sales tax to fund a variety of transportation improvements throughout the region. The initial 20-year, \$3.3 billion program expired in 2008. However, in November 2004, 67 percent of the region’s voters supported the extension of *TransNet* for another 40 years to 2048. The extension is expected to generate an additional \$14 billion for highway, transit, and local road projects, as well as other transportation improvements.

Figure 3.19 – Land Conserved



* Lands in North and East County Multiple Species Conservation Plan (MSCP) are in the planning process and not adopted.

The Environmental Mitigation Program (EMP) was created as part of the *TransNet* Extension Ordinance, and it goes beyond traditional mitigation programs. (“Mitigation” is the effort to compensate for the loss of native habitat – which is disturbed by new development – through the preservation and/or restoration of another native habitat. Mitigation occurs after all methods to avoid and/or minimize impacts have been exhausted.)

SANDAG employs the EMP to help fill the mitigation needs resulting from major transportation infrastructure improvement projects and programs identified in the RTP.

SANDAG intends to satisfy the mitigation requirements for these projects comprehensively, rather than on a project by project basis, to maximize opportunities for acquiring land early and restoring habitats. In turn, this funding enables SANDAG to help implement regional habitat conservation plans by targeting key acquisition areas for conservation, management and monitoring. As of September 2011, about 1,393 acres have been acquired using EMP funds.

Additional Protection for Rare, Threatened, Endangered, and CEQA-Sensitive Species

CEQA Guidelines Appendix G requires an evaluation of the potential impacts to sensitive species, sensitive habitats, wetlands including riparian habitats, wildlife movement and migration, and the impacts to adopted regional habitat conservation plans. This includes the Natural Communities Conservation Plan and other local policies and plans for biological conservation. Prior to the development of any native habitat in the San Diego region, a biological impact assessment is required by all local jurisdictions subject to the CEQA. The purpose of the assessment is to determine consistency with the regional

HCPs and assess any impacts to species and habitats not covered by these plans. This includes wetland resources such as U.S. waters.

Protecting the Region’s Farmlands

The Farmland Mapping and Monitoring Program (FMMP), administered by the Division of Land Resource Protection at the California Department of Conservation, produces maps and statistical data to analyze impacts to California’s agricultural resources. To characterize existing and potential farmland, agricultural lands are rated according to soil quality and irrigation status. FMMP maps are updated every two years using aerial photographs, a geographic information system, public review, and field reconnaissance. Lands important for agriculture are placed in one of four categories of productivity established by the United States Department of Agriculture (USDA). These lands are evaluated according to the specific qualities of the soil, slope of the land, degree of wetness, flooding hazards and other factors. The FMMP identifies about 223,000 acres of land as “Important Agricultural Lands,” as shown in Figure 3.22 and described in Table 3.6.

These lands also are reflected in the SCS land use pattern, and they are not threatened because of low-density zoning, or the purchase of land for conservation easements. In the SCS land use pattern, 95 percent of the region’s existing agricultural land is expected to remain available for agriculture. Thirty-three percent of the region’s agricultural land is planned for agricultural use only, and 62 percent is planned as low-density, rural residential land that allows and often encourages agricultural use. Figure 3.22 includes agricultural preserves such as the San Pasqual Valley in the City of San Diego and areas under Williamson Act contracts. The California Land Conservation Act

commonly referred to as the Williamson Act enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use.

Considering Mineral Resource Areas

The California State Mining and Geology Board has designated some lands to be areas of statewide or regional significance for construction aggregate resources. Aggregate materials include sand, gravel, and crushed stone. They are key ingredients in concrete and asphalt, as well as for constructing and maintaining the physical framework of buildings and infrastructure. According to the California Geologic Survey, aggregate supply sources in the San Diego region have dropped from 48 mines in 1980 to 27 mines in 1995. The number of significant and active mines has since declined to only 16. The California Geologic Survey projects a 40 percent shortfall in the statewide supply of aggregate material needed to meet demand over the next 50 years and an 83 percent shortfall in the region's supply of aggregate material. As supplies decrease, importing aggregate from other regions or countries will increase.

SANDAG, in cooperation with Caltrans District 11, completed the San Diego Region Aggregate Supply Study in January 2011 to examine the supply issues related to aggregate. (The study is available at www.sandag.org/aggregate.) The purpose of the study was to provide background information, as well as the tools necessary to begin developing a framework to address future projected shortfalls of this important resource. The California Department of Conservation classifies lands into four Mineral Resource Zones (MRZs). MRZ-1 includes areas where no significant mineral deposits are present, or where there is little likelihood they are present. MRZ-2 includes areas where

geologic information indicates that significant mineral deposits are present, or where there is a high likelihood they are present. MRZ-3 includes areas that contain mineral deposits, but where their significance to the region or state cannot be evaluated because detailed data is lacking. MRZ-4 includes areas where geologic information does not rule out the presence or absence of mineral resources. Areas with the greatest potential for aggregate sources (MRZ-2 classified) are largely designated in local general plans as Military, Open Space and Industrial, and have been considered as such in the SCS land use pattern. Information contained in the San Diego Region Aggregate Study will be used by planners to help manage the region's aggregate resources.

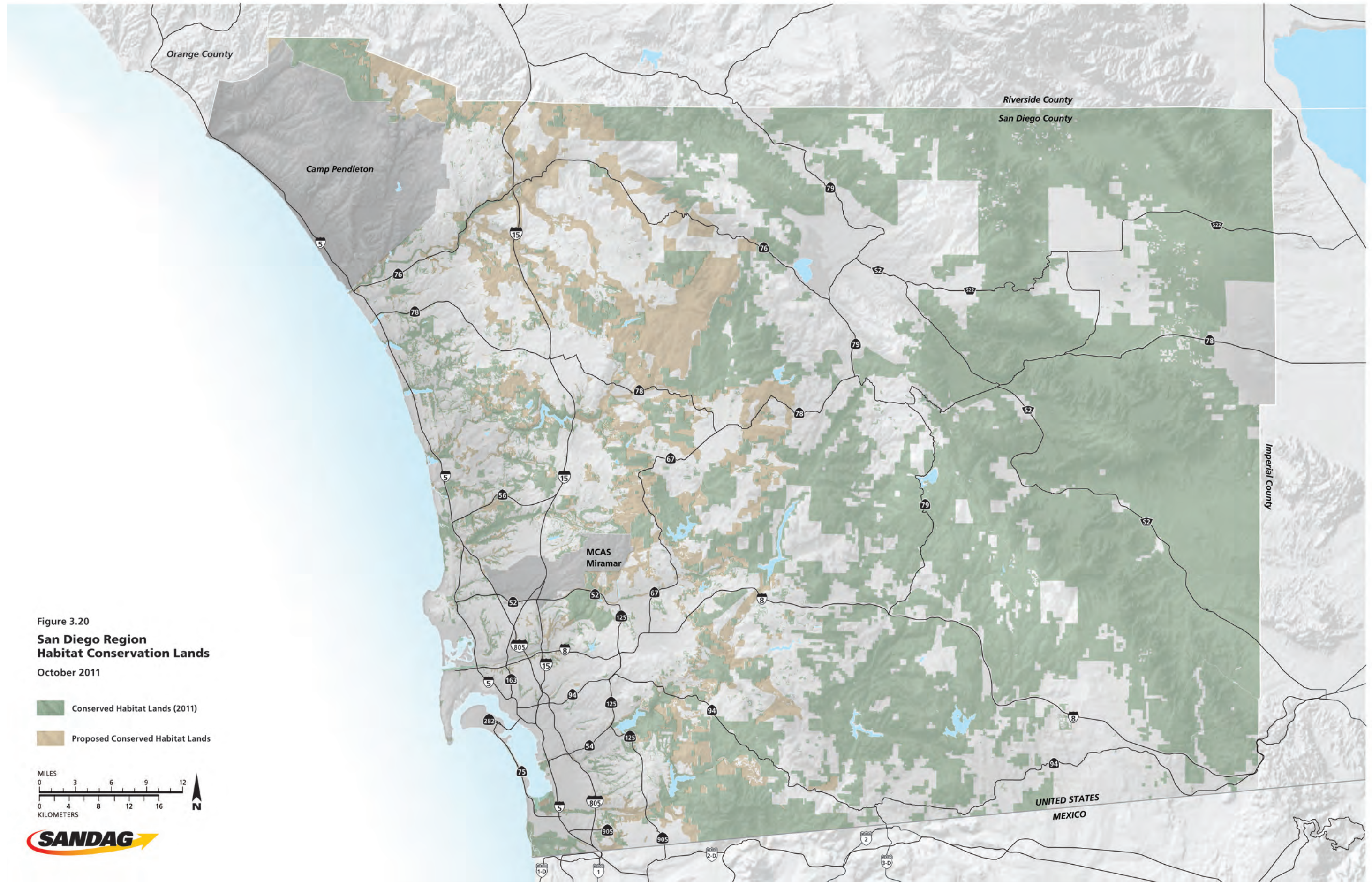


Figure 3.20
**San Diego Region
 Habitat Conservation Lands**
 October 2011

- Conserved Habitat Lands (2011)
- Proposed Conserved Habitat Lands

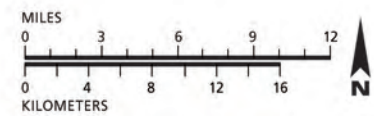


Table 3.6 – USDA Important Farmland Acreage

USDA Important Farmland Category	2008 Acreage
<p>Prime Farmland</p> <p>Land with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.</p>	7,754
<p>Farmland of Statewide Importance</p> <p>Land similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the last FMMP mapping date.</p>	10,411
<p>Unique Farmland</p> <p>Land of lesser quality soils used for the production of the State’s leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.</p>	51,975
<p>Farmland of Local Importance</p> <p>Land of importance to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee. In San Diego County, this category is defined as land that meets all the characteristics of Prime and Statewide, with the exception of irrigation. They are farmlands not covered by the above categories but are of significant economic importance to the county. They have a history of good production for locally adapted crops. The soils are grouped in types that are suited for truck crops (such as tomatoes, strawberries, cucumbers, potatoes, celery, squash, romaine lettuce, and cauliflower) and soils suited for orchard crops (avocados and citrus).</p>	153,186
<p>Important Farmland Total:</p>	223,326

Source: U.S. Department of Agriculture

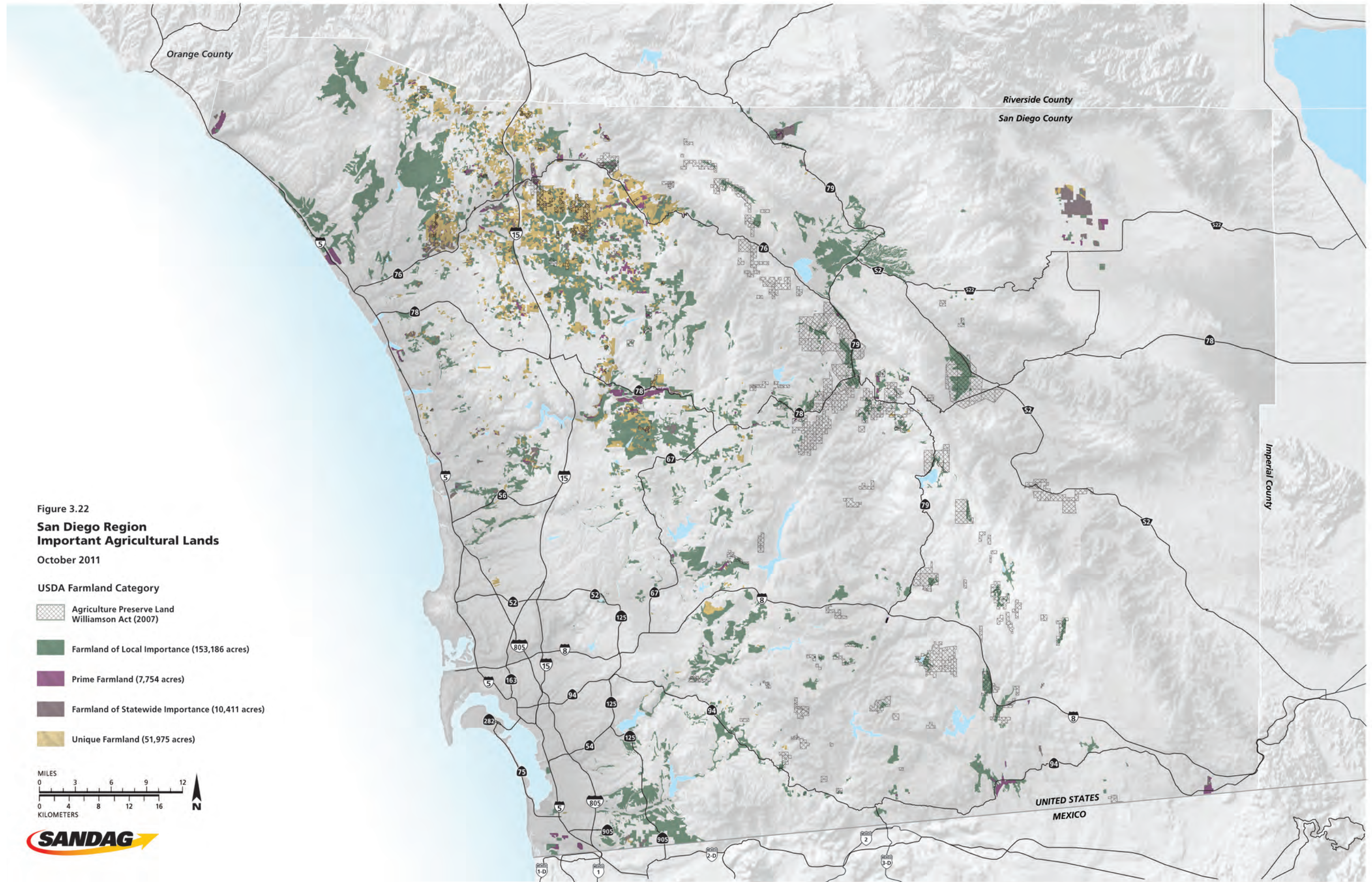




Figure 3.21
San Diego Region Wetlands
 October 2011

- Vegetated Wetland (60,767 acres)
- Water Bodies (59,956 acres)





Investing in a Transportation Network that Provides Residents and Workers with Transportation Options that Reduce Greenhouse Gas Emissions: The 2050 RTP Transportation Network

“Identify a transportation network to service the transportation needs of the region.”
(Government Code Section 65080(b)(2)(B)(iv))

The 2050 RTP and its SCS are based upon four pillars of transportation planning to serve the transportation needs of our region.

They are a Revenue Constrained Transportation Network (that is, a network funded by financial resources expected between now and 2050); Transportation Demand Management (TDM) measures; Transportation System Management (TSM) measures; and pricing measures. Taken together, these four pillars will provide residents and workers with alternatives to driving alone, and they will help the region meet or exceed its state-mandated targets for reducing GHG emissions. Each of these four components is explained in detail in the following chapters: transportation network (Chapter 6), TDM (Chapter 8), TSM (Chapter 7), and pricing (Chapters 6 and 7).

The GHG emissions reductions per capita shown in Tables 3.1 and 3.7 do not include the use of alternative fuels. Also, they do not consider the benefits of California’s low carbon fuel standard program, which calls for a reduction of at least 10 percent in the carbon intensity of California’s transportation fuels by 2020. They also do not consider the benefits due to increases in vehicle efficiency (“Pavley” regulations that reduce GHG emissions in new passenger vehicles). Although SANDAG is not able to take credit for these transportation measures toward

meeting the state-mandated GHG emissions targets for the region pursuant to SB 375, SANDAG recognizes the role that regional and local governments can play in accelerating the deployment of alternative fuel vehicles and fueling and recharging stations. Therefore, SANDAG has been active in this area, which in turn helps the state meet its overall reduction target for greenhouse gases.

An important part of the Revenue Constrained Transportation Network, which is described more fully in Chapter 6, Table 6.3, is a significant investment in public transit (rail and bus), as well as facilities that encourage walking and bicycling as forms of active transportation. The aim of these investments is to significantly increase the attractiveness of public transit, walking, and bicycling – particularly in areas that are planned for more compact and mixed-use development. Investments in our local streets and roads, including access to regional airports; goods movement projects; and TDM and TSM projects and programs also are integral to the overall transportation network.

The overarching goal of the public transit investments detailed in the 2050 RTP (Chapter 6) is to create a world-class transit

An important part of the Revenue Constrained Transportation Network is a significant investment in public transit (rail and bus), as well as facilities that encourage walking and bicycling as forms of active transportation.



system for the San Diego region by 2050 that connects our homes to the region's major employment centers and other destinations. Achieving this vision means making public transit a more appealing option for many trips and reducing the impact of vehicle travel on the environment and on public health. Specific goals include:

- Making public transit more time-competitive with automobile travel
- Maximizing the role of public transit within the broader transportation system
- Reducing vehicle miles traveled and lowering greenhouse gas emissions throughout our region

Investments that promote bicycling and walking also are an important part of the Revenue Constrained Transportation Network. A regional bicycle network, estimated to cost about \$419 million (in 2010 dollars) is part of the San Diego Regional Bicycle Plan, approved by the SANDAG Board on May 28, 2010. It is included in the 2050 RTP. The Plan can be found in Technical Appendix 13 and at www.sandag.org/bicycle. This Plan provides a vision for a diverse regional bicycle system of interconnected bicycle corridors, support facilities, and programs to make bicycling more practical and desirable to a wider cross-section of people in our region. This vision is intended to guide the development of the regional bicycle system through the year 2050. In addition, funding estimated at \$1.789 billion is included in the 2050 RTP for local bicycle and local and regional pedestrian projects. An additional \$700 million is included for a Safe Routes to Transit program to ensure safe pedestrian and bicycle access to transit stations. The Active Transportation Program and the nearly \$600-million Smart Growth Incentive Program, total nearly \$3.1 billion (in 2010 dollars) in the 2050 RTP.

Investments that promote bicycling and walking also are an important part of the Revenue Constrained Transportation Network.

Providing for a range of transportation options in the region's transportation network will be greatly facilitated by adopting a "Complete Streets" approach to the project development. The complete streets approach affords policy makers, planners and engineers with the opportunity to carefully evaluate and accommodate the needs motorists, pedestrians, cyclists, transit vehicles and transit users, the young and old, and the able-bodied and physically challenged through the entire project development process. This ensures that the needs of all users of the public right of way are properly accommodated based on informed decisions about existing and future demand, and that proper accommodations are designed into the project from the outset.

The Complete Streets Act of 2008 requires local jurisdictions in California to plan for the needs of all transportation system users with every major revision to general plan local circulation elements, and the region's *TransNet* Extension Ordinance requires accommodation of bicyclists and pedestrians in most *TransNet* funded projects. Changes to local policies and project development procedures will be necessary to comply with these requirements, and SANDAG can support this process through incentives and technical assistance. In combination with the smart growth development and urban design practices supported by the RTP and RCP, this will make it easier for the public to choose a means of travel that reduces vehicle miles traveled and greenhouse gas emissions.

Considering *TransNet* Projects in the SCS

"Nothing in this section requires projects programmed for funding on or before December 31, 2011, to be subject to the provisions of this paragraph if they (iii) were specifically listed in a ballot measure prior to December 31, 2008, approving a sales tax

increase for transportation projects.”
(Government Code Section 65080(b)(2)(L))

The *TransNet* Extension Ordinance as it was approved by the voters in November 2004 includes specific transportation projects. Based upon this provision of SB 375, the projects identified in *TransNet* need not be variables in reaching the GHG targets established by CARB. These *TransNet* projects have been identified in the Revenue Constrained Transportation Network detailed in Chapter 6, Table 6.3.

Transportation Demand Management Measures

TDM measures are important in helping the region reduce GHG emissions by improving the efficiency of our transportation system. These measures help reduce or eliminate vehicle trips during peak periods of demand. They typically offer programs and incentives to encourage the use of modes of transportation other than driving alone, or to encourage people to shift their trips to times when demand on the transportation system is low. Examples of current TDM measures are employer-sponsored transportation benefits, regional transit and vanpool subsidies, and carpool and biking incentives.

The TDM measures that complement the 2050 RTP transportation network (see Chapter 8) include:

- Expanded marketing of the SANDAG iCommute program
- Expanded vanpool and carpool incentive programs
- New resources for teleworking
- Expanded bike locker program and new bike stations
- New bike sharing and carsharing programs



- Expanded SchoolPool programs
- New buspool program in coordination with regional military bases

Transportation System Management Measures

TSM measures also help reduce GHG emissions by helping to maximize the efficiency of existing and future transportation facilities. A combination of programs – including signal and ramp metering coordination and optimization; improved performance monitoring; and advanced vehicle and roadside communication platforms – will increase the ability of operators to monitor the performance of the transportation system, manage our system better, and improve efficiency. TSM measures that complement the 2050 RTP transportation network (see Chapter 7) include expanded:

- Traveler information services
- Improvements to the timing of traffic signals
- Ramp metering

- Management of arterials, freeways, and transit/Trolley corridors
- Bottleneck/auxiliary lane projects
- Incident management (e.g., Freeway Service Patrol)

Pricing Measures

Pricing strategies also are used to reduce the demand on our transportation system. The long-established strategy of varying prices within corridors with Managed Lanes, such as the managed or express lanes in the I-15 Corridor, is included in the 2050 RTP. These High Occupancy Toll (HOT) lanes are operated in ways that incentivize the use of public transit and sharing rides, both of which contribute to reducing greenhouse gas emissions.

Meeting Targets for Reducing Greenhouse Gas Emissions

“Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state board.” (Government Code Section 65080(b)(2)(B)(vi))

On September 23, 2010, CARB set targets for lowering greenhouse gas emissions in the San Diego region. They call for a 7 percent reduction, per capita, in greenhouse gas emissions from passenger vehicles by 2020 (compared with 2005); and a 13 percent reduction by 2035 through land use and transportation planning.

The San Diego region will meet these targets, shown in Table 3.1, by focusing housing and employment growth in urbanized areas;

protecting sensitive habitat and open space; and investing in a transportation system that provides residents and workers with transportation options. The determination that SANDAG will meet the CARB GHG reduction target is based upon modeling methodology which is described further below.

The process to develop the plan was based upon modeling and the use of smart growth and sustainable development principles that have been standard planning practice in the region for some time along with an extensive public outreach process.

Figure 3.23, shows the 2050 RTP transit network and the areas of the region with the highest residential, employment and mixed-use densities as well as the planned open space areas. The land use data illustrated on this map were used to identify the most appropriate locations for public transit investments to support the higher density development assumed in the SCS land use pattern. This figure also illustrates that more than half the region’s land area remains in open space.

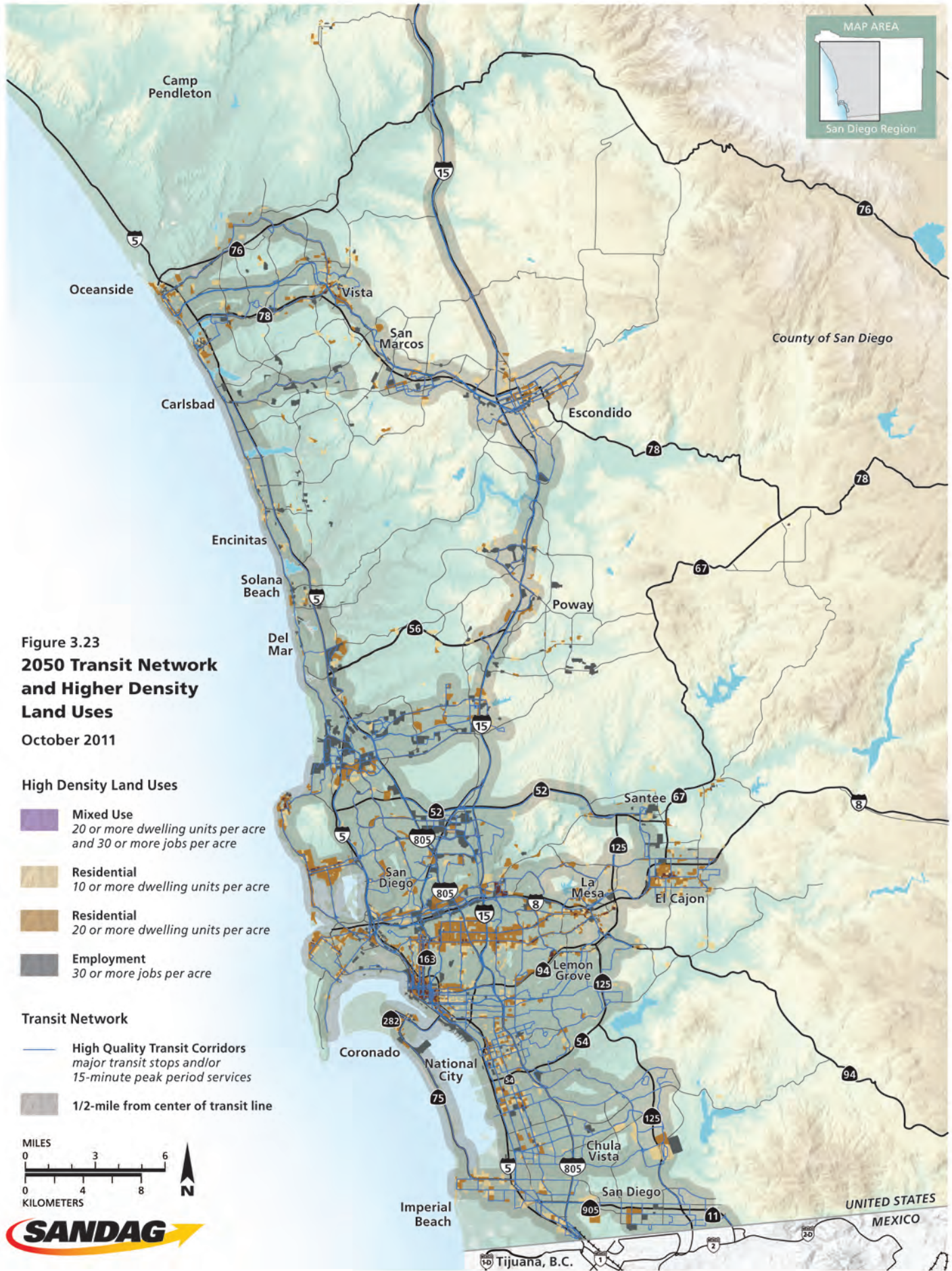


Figure 3.23
**2050 Transit Network
 and Higher Density
 Land Uses**
 October 2011

High Density Land Uses

- Mixed Use**
 20 or more dwelling units per acre
 and 30 or more jobs per acre
- Residential**
 10 or more dwelling units per acre
- Residential**
 20 or more dwelling units per acre
- Employment**
 30 or more jobs per acre

Transit Network

- High Quality Transit Corridors**
 major transit stops and/or
 15-minute peak period services
- 1/2-mile from center of transit line



In evaluating the performance of the RTP/SCS, SANDAG used an enhanced four-step transportation model. Four-step models have been the standard in transportation modeling since the late 1950s, and they are used by nearly every Metropolitan Planning Organization (MPO) in the United States for the development of transportation plans, corridor studies, Federal Transit Administration New Starts proposals, and air quality analyses. The traditional four steps of this model are:

1. Trip generation
2. Trip distribution
3. Mode choice
4. Traffic (route) assignment

Output from the four-step model includes total vehicle miles traveled in the region and other GHG factors such as vehicle speed and congestion. The model outputs take into account the forecasted land use pattern, the revenue constrained multimodal transportation network, and the implementation of telework programs. These outputs are converted into total GHG emissions in the region using the CARB Emission Factors (EMFAC 2007) model.

The regional transportation model inputs include the land use, motorized network, TSM, and TDM assumptions in the SCS. All of the SCS inputs interact and fuse with one another in the transportation model, which makes it difficult to identify the individual contribution of each component to the overall GHG reductions. For example, modeling each component individually and summing results will yield a different result than modeling the components collectively due to the mutual benefits of the components working together.

SANDAG includes reductions in GHG emissions using off-model factors to account for the following programs: Safe Routes to School; regional vanpool, carpool, and buspool programs; and pedestrian and bicycle network improvements. Unlike the transportation model that combines various factors into one summarized output, the off-model measures are calculated separately.

Each off-model strategy was developed with its own unique calculation methodology based on a review of best practices across the country. Documentation of this methodology is included in Technical Appendix 15. SANDAG also contracted with a consultant to validate the methodology of the off-model calculations.

The off-model GHG reduction benefits are then subtracted from the model GHG outputs to determine the projected GHG emissions for the region. Per capita emissions are calculated using total projected GHG emissions divided by the regional population. For this analysis, and to determine if the SCS achieves the GHG targets pursuant to SB 375, only emissions from four CARB vehicle classifications are included in this calculation. They are: Light Duty Auto, Light Duty Truck 1, Light Duty Truck 2, and Medium Duty Truck.

The SANDAG transportation model also evaluates VMT and CO₂ emissions for all vehicles, which include passenger vehicles covered under SB 375 as well as heavy duty trucks, public buses, and motorcycles. Table 3.7 below provides additional model output information to further explain the emission reductions (tons per capita) for SB 375 vehicle classes and all vehicle classes and for the horizon years of 2020, 2035 and 2050. SB 375 requires that SANDAG demonstrate how emission reduction targets will be met for 2020 and 2035, not 2050.

Table 3.7 – Results of GHG Emissions and VMT Reductions – 2050 SANDAG Regional Transportation Plan

Vehicle Miles Traveled Per Capita						
			Change from 2005		Change from 2008	
	SB 375¹	All²	SB 375¹	All²	SB 375¹	All²
2005	25.4	27.6	-	-	-	-
2008	24.4	25.6	-4%	-7%	-	-
2020	22.3	23.6	-12%	-14%	-9%	-8%
2035	22.8	24.3	-10%	-12%	-7%	-5%
2050	23.6	25.2	-7%	-8%	-3%	-2%

Carbon Dioxide (CO₂) - Tons Per Capita						
			Change from 2005		Change from 2008	
	SB 375¹	All²	SB 375¹	All²	SB 375¹	All²
2005	26.0	31.3	-	-	-	-
2008	24.9	28.0	-4%	-10%	-	-
2020	22.4	25.8	-14%	-18%	-10%	-8%
2035	22.6	26.7	-13%	-15%	-9%	-5%
2050	23.5	27.8	-10%	-11%	-6%	-1%

¹ Cars and light duty trucks only

² All vehicles

Source: SANDAG Travel Demand Model

So why do GHG reductions decrease over time? There are several factors that cause this decrease. First, in the early years of the RTP, the region makes significant investments in the transportation network, including major transit investments, during a recessionary economic cycle when fewer people are driving to jobs and more people choose to use other transportation options. As a result, there are higher initial reductions from the 2005 base year. By 2020 and 2035 it is assumed that the economy improves and more residents are driving to jobs. Additionally, in the later years of the plan, after the urbanized areas have been developed according to local general plans, development will gradually move toward more remote areas where fewer

transportation options are available. This growth is likely to result in an increased demand for driving.

The results shown for 2050 are best estimates based on historical and current empirical observations in the region and do not reflect attitude changes about transportation. Such changes may occur as a result of significant investments in other transportation options and changes to local land use plans that could result in greater densification of our urban areas.

In addition, the GHG modeling for 2050 uses emission factors for the year 2040 (EMFAC 2007 includes emissions factors through 2040 only) and assumes no technological

The opportunities for affordable housing and access to public transit are intended to reduce housing and transportation cost burdens on lower income individuals and families.

improvements to vehicles or fuels in the final ten years of the plan.

As part of each RTP update (every four years) SANDAG prepares a new regional growth forecast and continues to update modeling tools and assumptions to reflect the latest information available. Should the likely future development pattern change, this would be reflected in the next regional growth forecast and SCS land use pattern. SANDAG also will continue to improve modeling capabilities and update modeling assumptions to reflect the most recent published and accepted data regarding changes in travel behavior and technological advances.

Considering Social Equity in the SCS

Equity is essential to our region’s economic sustainability. How our region uses land and organizes its transportation system significantly influences the quality of life for its

residents. It is vitally important to plan housing and invest in a transportation network that provides all residents with equal opportunities to live, work, shop, study, be healthy, and play in our region – regardless of their age, race, color, national origin, income, or physical capabilities.

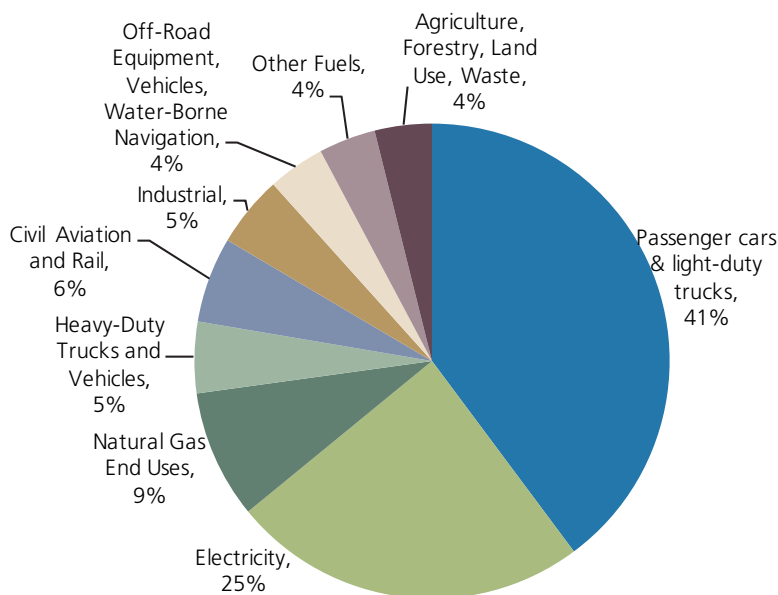
The SCS land use pattern accommodates the estimated 388,000 new homes needed to serve projected growth (1.25 million more people) within our region, including all economic segments of the population, during the RTP planning period. Most of these new housing units are proposed at the higher densities that provide the greatest opportunity for affordable housing to be built. Additionally, a majority of the planned higher density homes are located within one half-mile of existing or planned public transit. Taken together, the opportunities for affordable housing and access to public transit are intended to reduce housing and transportation cost burdens on lower income individuals and families.

More detailed information and analysis of social equity considerations is included in Chapter 4.

Considering Energy Consumption and Cutting Greenhouse Gas Emissions in the SCS

The transportation of people and goods in cars, trucks, buses, and on motorcycles is the single largest source of greenhouse gas emissions in our region. It accounts for 46 percent of total emissions, with passenger cars and light-duty trucks alone responsible for 41 percent. Heavy-duty trucks and vehicles represent about five percent of greenhouse gas emissions. Civil aviation and rail (passenger and freight) account for 6 percent, and additional emissions result from electricity

Figure 3.24 – San Diego County Greenhouse Gas Emissions by Category (2006)



Source: Energy Policy Initiatives Center (EPIC)

that powers the Trolley. Figure 3.24 shows greenhouse gas emissions in the San Diego region by category.

The levels of fuel consumption and greenhouse gas emissions result from our region's reliance on petroleum-based gasoline and diesel fuels, as well as the average fuel efficiency of vehicles. The region's need for gasoline and diesel is projected to decline from about 4.5 million gallons per day in 2008 to about 4.2 million gallons per day by 2050. The projected reduction in fuel consumption is due in large part to state fuel efficiency standards for vehicles and state mandated increases in the supply and use of alternative transportation fuels.

California adopted a low carbon fuel standard that will require a reduction in the carbon intensity of California's transportation fuels by at least ten percent by 2020. This will be achieved by offering a variety of fuel options for personal vehicles that include electricity, natural gas, propane, and biofuels. SANDAG has taken strides to assess what regional infrastructure is needed to accommodate

more alternative fuel choices across the region. It also has supported the development of publicly accessible electric charging stations.

In 2009, SANDAG and other regional entities began contributing to the Electric Vehicle (EV) Project for the San Diego region. The EV Project is a nationally-sponsored program to install electric vehicle chargers throughout a handful of major metropolitan areas in the United States. The San Diego region was selected as one of those first markets, so several local governments, universities, SANDAG, the California Center for Sustainable Energy and SDG&E have collaborated with Ecotality on local infrastructure planning and installation considerations. Through the EV Project, more than 1,400 plug-in electric vehicle chargers will have been installed around San Diego by early 2012, as well as about 1,000 home chargers at residences and fleet locations in San Diego County. Supporting alternative fuel efforts are addressed in greater detail in the following SANDAG reports: Regional Energy Strategy; Climate Action Strategy; and

The transportation of people and goods in cars, trucks, buses, and on motorcycles is the single largest source of greenhouse gas emissions in our region.



Regional Alternative Fuels, Vehicles, and Infrastructure Report for the San Diego Region.

Meeting Federal Air Quality Requirements

“Allow the regional transportation plan to comply with the federal Clean Air Act.” (Government Code Section 65080(b)(2)(B)(viii))

SANDAG and the U.S. Department of Transportation (DOT) must make a determination that the RTP and the Regional Transportation Improvement Program (RTIP) conform to the state implementation plan (SIP) for air quality. Conformity to the SIP means that transportation activities will not create new air quality violations, worsen existing violations, or delay the attainment of the national ambient air quality standards. Analyses for Carbon Monoxide, and for Reactive Organic Gases and Nitrogen Oxides as precursors to Ozone, were conducted for the 2050 RTP. These analyses demonstrate that the 2050 RTP conforms to the SIP. This process is documented in Appendix B.

Climate Change Impacts and Adaptation

The transportation sector has been identified as a key contributor of greenhouse gases, but also is threatened by the impacts of continued climate change. The climate of the San Diego region is expected to change, even under the most optimistic scenarios for reducing greenhouse gas emissions. Potential impacts include more frequent and intense heat waves, more frequent and intense wildfires, degraded air quality, fresh water shortages, rising sea levels and higher storm surges, the loss of native plant and animal species, and a higher demand for electricity during peak

periods. Developing and implementing measures to help the region adapt to these potential changes will be critical in protecting the regional transportation network.

More frequent hot days and prolonged periods of extreme heat would increase the risk of buckling highways and railroad tracks. This could lead to increased and more frequent maintenance costs, premature deterioration, or even the failure of transportation infrastructure. More frequent and severe wildfires that are followed by rainfall would increase the risk of mudslides. This could disrupt major infrastructure such as roadways and rail lines. Rising sea levels and stronger storm surges would likely impact high-density urban areas, ports, airports, and other vital lines of coastal transportation. Existing fortifications may need to be enhanced as sea levels rise and storm surges intensify, and areas not previously considered at risk may need to be protected. Preparing transportation infrastructure for climate change impacts is a new priority as future projects are designed and our current system is maintained.

The tools and methodologies for evaluating and adapting to such impacts are still in the early stages of development and will require ongoing monitoring.

Considering Public Health in the SCS

According to the U.S. Centers for Disease Control and Prevention (CDC), the percentage of Californians that is obese increased from less than 10 percent in 1985 to nearly 25 percent in 2008. The San Diego County Health and Human Services Agency (HHS) reports that in 2007, 33 percent of county residents were overweight and nearly 22 percent were obese.

Evidence suggests that land use and transportation planning policies affect public health. Epidemiological studies have shown that people who live in compact, mixed-use communities have more opportunities to walk and they are less likely to be obese and hypertensive, compared with people who live in communities in which automobiles are primarily used to get around. Land use patterns in many communities today make driving a necessity, and they discourage walking and bicycling. A decrease in walking and bicycling results in a decrease in daily physically activity. This contributes significantly to the epidemic in obesity, especially among children. Childhood obesity in the U.S. more than tripled during the last 30 years. In our San Diego region, more than one in four children are obese. As with the adults, poor nutrition and a lack of physical activity are cited as the primary causes.

In light of growing evidence that links land use patterns and transportation infrastructure with public health outcomes, community planners and public health practitioners in San Diego and around the country have begun to collaborate to develop strategies that improve health and wellness through smarter development. The SCS land use pattern is moving our San Diego region toward a healthier future by focusing on improving the connection between land use and transportation. The result is more walkable communities, more people bicycling, and more people using public transit.

Strategies related to public health are described in more detail in Social Equity and Environmental Justice (Chapter 4), in Systems Development (Chapter 6), and Demand Management (Chapter 8).



Promoting Sustainability through Incentives and Collaboration: SANDAG Policies and Programs that Support the SCS

“Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (J), shall either one be subject to any state approval. Nothing in a sustainable community’s strategy shall be interpreted as superseding the exercise of land use authority of cities and counties within the region.”
(Government Code Section 65080(b)(2)(K))

This SCS does not regulate or supersede the exercise of land use authority of the region’s cities or the County of San Diego. SANDAG has adopted a number of policies and programs that support the SCS and provide information and funding to assist local jurisdictions in planning for and monitoring sustainability in their communities.

Policies, programs, and guidelines that SANDAG has adopted over the past few years that support the SCS include:

- Regional Comprehensive Plan: Sets forth a regional strategy for smart growth and sustainable development in the San Diego region
- Smart Growth Concept Map: Identifies existing, planned, and potential smart growth opportunity areas in our region
- *TransNet* Smart Growth Incentive Program: Provides funds to local jurisdictions that are engaged in smart growth planning and smart growth capital investments
- *TransNet* Environmental Mitigation Program: Provides funding for mitigating local and regional transportation projects, as well as additional funding for acquiring, managing, and monitoring natural habitats in ways that support our region's habitat conservation programs
- *TransNet*/Transportation Development Act Active Transportation Program: Provides funding for bicycle, pedestrian, and traffic calming planning and capital improvement projects
- Healthy Works: Provides grant funding from the American Recovery and Reinvestment Act (ARRA) through the Centers for Disease Control (CDC) and County of San Diego to help local jurisdictions and non-profit organizations plan healthy communities by integrating public health considerations into planning efforts and promoting Safe Routes to School programs and strategies
- Supplemental Funding Potential: A collaborative effort led by a Quality of Life Steering Committee and Working Group to identify the needs and possible funding mechanisms for four infrastructure areas: habitat conservation, shoreline preservation, water quality enhancement, and public transit
- Climate Action Strategy: A guide to help policymakers consider climate change as they make decisions to meet the varied needs of our region's growing population, maintain and enhance the region's quality of life, and promote economic stability
- Regional Energy Strategy: An energy policy guide for policymakers and staff of member agencies as the region strives to meet the energy needs of a growing population and expanding housing stock while also enhancing our region's quality of life and economic stability
- Regional Alternative Fuels, Vehicles, and Infrastructure Report for the San Diego Region: A guide to help local governments and other regional stakeholders make informed decisions regarding alternative fuel and vehicle technologies for a variety of fleet applications, and to identify regional and local government actions that can support alternative fuel vehicles
- Smart Growth Design Guidelines: These guidelines address the importance of design in maintaining and enhancing community character and in creating great public places
- Trip Generation for Smart Growth and Parking Strategies for Smart Growth: These studies identify trip generation rates and parking demands associated with smart growth developments
- RCP Performance Monitoring: A mechanism used to track progress in the implementation of the RCP

Consultation with the Local Agency Formation Commission

“In preparing a sustainable communities strategy, the metropolitan planning organization shall consider spheres of influence that have been adopted by the local agency formation commissions within its region.” (Government Code Section 65080(b)(2)(G))

SANDAG considered spheres of influence that have been adopted by the Local Agency Formation Commission (LAFCO) within our region during the development of the SCS. A sphere of influence is defined as a plan for the probable physical boundaries and service area of a local government agency, as determined by LAFCO. All territory proposed for annexation to an incorporated city is required to be included in the city’s sphere of influence and be located within the city’s general plan.

LAFCO is responsible in our region for assisting the state legislature with promoting orderly development and growth while fulfilling many regional priorities. These include: accommodating growth within or through the expansion of local agency boundaries, extending necessary government services, preserving open space and prime agricultural lands, and promoting the provision of housing for residents of all incomes.

LAFCO also is a member of the Regional Planning Technical Working Group, which provides coordination on regional planning issues among member agencies. Members of the working group include the planning or community development director from each of the 18 cities and the County of San Diego, as well as representatives from other single-purpose regional agencies.

In the development of the 2050 Regional Growth Forecast, LAFCO and SANDAG

consulted regularly and exchanged written correspondence regarding sphere of influence determinations, impacts of proposed jurisdictional changes, and factors considered in the review of proposals. The 18 incorporated cities and the County of San Diego were asked about sphere of influence issues during the 2050 Regional Growth Forecast land use input process. Adjustments were made to sphere-area land use inputs requested by the local jurisdictions and confirmed by the County of San Diego.

Reducing Government Regulations: Streamlining the Process for the California Environmental Quality Act (CEQA)

Provisions in SB 375 include opportunities for streamlining the CEQA process, when certain conditions are met, as an incentive for implementing projects that are consistent with this SCS. Generally, there are two types of projects for which CEQA requirements can be streamlined, once the MPO adopts an RTP and SCS that meet the greenhouse gas targets established by the California Air Resources Board:

- Residential/mixed use projects streamlining (Public Resources Code Section 21159.28)
- Transit priority projects streamlining (Public Resources Code Sections 21155-21155.3)

SB 375 includes specific requirements for the CEQA streamlining. The discussion below provides a general outline of the requirements.

Residential/Mixed-Use Projects Consistent with the SCS

If a residential or mixed use project is consistent with the land use designation, density, building intensity, and other

applicable policies assumed for the SCS, the lead agency for the project would still be required to conduct an environmental review pursuant to CEQA. But reviews for those projects would not be required to repeat growth inducing impacts analyses or the discussion of how cars and light trucks could increase greenhouse gas emissions, because that discussion was already included in the environmental impact report (EIR) for the 2050 RTP and SCS. Similarly, if an EIR were being prepared for a residential/mixed use project, the alternatives section of that EIR would not be required to include a reduced density alternative to reduce greenhouse gas emissions. For purposes of this provision, a residential/mixed use project is defined as a project in which at least 75 percent of the square footage is devoted to residential uses.

Transit Priority Projects

The second type of CEQA streamlining is for Transit Priority Projects. A Transit Priority Project (TPP) is eligible for CEQA streamlining provisions if it meets certain criteria. It would be up to the local agency to determine if a project qualifies as a TPP. For a local jurisdiction to determine that a project is a TPP, the project must be consistent with the general use designation, density, building intensity, and applicable policies identified in an approved SCS. In addition, a TPP that is eligible for CEQA streamlining also must be: 1) 50 percent residential, 2) with a minimum density of 20 dwelling units per acre, and 3) within a half-mile of a major transit stop or high-quality transit corridor (defined as having 15-minute frequencies during peak periods) that is included in the 2050 RTP. Figure 3.25 indicates the areas where CEQA streamlining may be available for Transit Priority Projects if the other two criteria listed above also can be demonstrated for a proposed project.

If a project meets these criteria, it may be analyzed under a new environmental document created by SB 375, called the Sustainable Communities Environmental Assessment (SCEA), or through an EIR for which the content requirements have been reduced as described below:

- The SCEA, which is similar to a Mitigated Negative Declaration (MND), would need to include an analysis of all significant environmental effects, as well as mitigation measures to reduce those impacts to an insignificant level
- If an EIR were prepared for a TPP, the document would not need to include an analysis of cumulative impacts, or of greenhouse gas emissions from cars and light duty trucks. In addition, project alternatives – as required in EIRs – need not address reduced density or off-site location alternatives

If additional criteria can be met, a TPP may be eligible for a new CEQA exemption created with the adoption of SB 375. Projects that meet all the required criteria are known as sustainable communities projects. This new exemption is intended to provide CEQA relief for TPP projects that are consistent with the SCS. A sustainable communities project (as defined in SB 375), must meet the criteria outlined above for TPP projects, and it also must generally comply with an extensive list of conditions in the law. These are detailed in Appendix D.

It is not known how many projects in the San Diego region would meet the criteria to qualify for the CEQA exemption. It would be up to the local agency to determine if a project qualifies for the exemption at the time it is proposed.

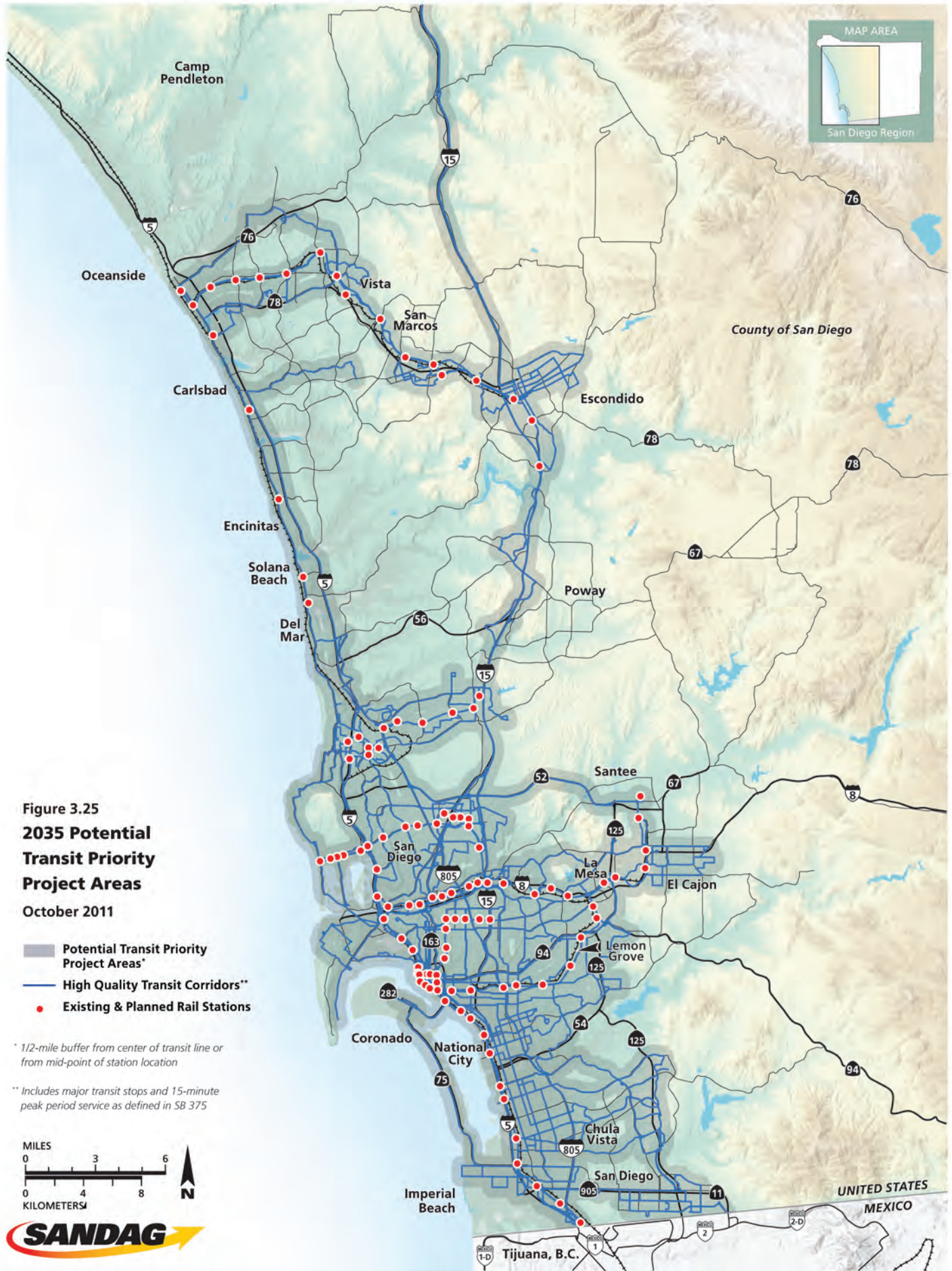


Figure 3.25
2035 Potential
Transit Priority
Project Areas
 October 2011

- Potential Transit Priority Project Areas*
- High Quality Transit Corridors**
- Existing & Planned Rail Stations

* 1/2-mile buffer from center of transit line or from mid-point of station location

** Includes major transit stops and 15-minute peak period service as defined in SB 375

MILES
 0 3 6
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 0 4 8

N

It should also be noted that proponents of these types of projects are still required to pay development fees or in-lieu fees, as specified in SB 375. However, another new provision of SB 375/SB 575 enables a local jurisdiction to adopt a uniform set of traffic mitigation measures for transit priority projects (Public Resources Code Section 21155.3). These are detailed in Appendix D.

Conclusion

Achieving sustainability will require living and working in ways that protect and sustain the region's vital social, environmental, and economic resources. The 2050 RTP and its SCS will guide the San Diego region toward a more sustainable future by focusing housing and job growth in urbanized areas, protecting sensitive habitat and open space, and investing in a transportation network that provides residents and workers with transportation options that will help reduce greenhouse gas emissions. Implementing this plan will require close collaboration among and between SANDAG, local jurisdictions, member agencies and regional stakeholders. It is anticipated that with each RTP (every four years) there will be new opportunities to help reduce GHG emissions.

Key achievements of the 2050 RTP/SCS are summarized below:

- Meets state greenhouse gas reduction targets
- \$214 billion in transportation investments planned
- \$4.4 billion annually in projected regional output
- Creates 35,600 jobs per year in the San Diego region
- Accommodates projected population growth in San Diego County

- Preserves more than half of our land as open space, parkland and habitat
- Provides 156 new miles of trolley service
- New trolley tunnel in downtown San Diego
- Expands and speeds up COASTER service in the North Coast Corridor
- More than double transit service miles, increased transit frequency in key corridors
- 130 miles of managed lanes to facilitate carpools, vanpools, and premium bus service
- \$2.7 billion for regional and local bicycle and pedestrian projects and programs
- Creates new carpool and telework incentive programs to reduce solo driving
- Provides housing to meet projected population growth in San Diego County
- 84 percent of new housing units built in San Diego County will be multifamily
- Nearly three-quarters of multifamily housing will be built on redevelopment or infill sites
- Homes and jobs within one-half of a mile of transit nearly doubles
- Calls for equitable distribution of investment throughout the region

The following actions support the Plan’s Forging a Path for More Sustainable Living Chapter recommendations:

The actions included in this chapter as well as those throughout the 2050 RTP will implement the SCS.

Actions	Responsible Parties
RCP Update	
1. Incorporate the concepts and recommended actions of the 2050 RTP into the next update of the RCP, including alternative land use scenarios.	SANDAG
2. Prepare a regional Transit Oriented Development strategy as part of the RCP update.	SANDAG
3. Refine indicators that are used to monitor progress toward the implementation of the RCP so they include additional measures that address sustainability, greenhouse gas reductions and public health considerations.	SANDAG
4. Continue to engage lower income and minority communities in regional planning and programming efforts.	SANDAG
5. Update the Smart Growth Concept Map to reflect the changes to local land use plans contained in the 2050 Regional Growth Forecast and to the regional transportation network.	SANDAG and local jurisdictions
6. Expand the smart growth strategy in the RCP to include climate change principles that emphasize petroleum reduction, energy efficiency, water efficiency, and renewable energy.	SANDAG and local jurisdictions
Smart Growth Tools and Model Enhancements	
7. Provide additional guidance on SB 375 CEQA streamlining provisions.	SANDAG and local jurisdictions
8. Use the updated Smart Growth Concept Map as a basis for allocating smart growth incentives, prioritizing transit service enhancements, and seeking additional smart growth funds.	SANDAG, MTS, NCTD and local jurisdictions
9. Refine the selection criteria for the <i>TransNet</i> Smart Growth Incentive Program so it reflects the 2050 RTP and its SCS.	SANDAG and local jurisdictions
10. Consider health principles in the evaluation criteria for existing grant programs, such as the Smart Growth Incentive Program and the Bicycle, Pedestrian, and Neighborhood Safety Program.	SANDAG and local jurisdictions
11. Consider greenhouse gas reductions/climate change principles in the evaluation criteria for existing grant programs, such as the Smart Growth Incentive Program.	SANDAG and local jurisdictions
12. Continue to make enhancements to travel demand models to improve GHG and VMT estimates.	SANDAG

Actions	Responsible Parties
Habitat	
13. Coordinate and cooperate throughout the region on the planning and implementation of future transportation infrastructure and habitat preserves.	SANDAG, MTS, NCTD, Caltrans, and local jurisdictions
14. Design future infrastructure projects in a way that protects wildlife corridors and habitat linkages in designated habitat conservation plans. In urban areas, design project to meet the needs of all potential users by following complete street development principles.	SANDAG, MTS, NCTD, Caltrans, and local jurisdictions
15. Continue to secure and distribute regional funding for acquiring habitats, and for ongoing land management and monitoring in accordance with the approved habitat plans.	SANDAG
16. Manage and monitor the <i>TransNet</i> Environmental Mitigation Program.	SANDAG and wildlife agencies
Transit Oriented Development	
17. Pursue joint development opportunities to promote the construction of sustainable housing and mixed-use projects at existing and planned transit stations.	SANDAG and local jurisdictions
Active Transportation/Public Health	
18. Continue to collaborate with the region’s public health professionals to enhance how SANDAG addresses public health issues in its regional planning, programming, and project development activities.	SANDAG and County Health and Human Services Agency
Energy/Climate Adaptation	
19. Implement the Regional Energy Strategy and the Climate Action Strategy, in coordination with state and local jurisdiction efforts.	SANDAG and local jurisdictions
20. Support the increased use of clean, alternative fuels in SANDAG and local jurisdiction-owned vehicle fleets, and the vehicle and equipment fleets of contractors and funding recipients, such as the vehicle fleet for the SANDAG Vanpool Program or for local jurisdiction waste haulers.	SANDAG and local jurisdictions
21. Support planning and infrastructure development for alternative fueling stations and plug-in electric vehicle (EV) chargers.	SANDAG and local jurisdictions
22. Develop or facilitate a regional approach to long-term planning for alternative fuel infrastructure that includes the continued development of public-private strategic alliances.	SANDAG and local jurisdictions
23. Monitor research and independent assessments of the impact that increasing the use of clean, alternative fuels would have on gas tax revenues.	SANDAG
24. Integrate alternative fuel considerations into the development of the regional transportation network by, for example, integrating infrastructure for electric vehicle charging into regional park-and-ride lots and transit stations.	SANDAG, MTS, and NCTD
25. Work with San Diego Gas & Electric and other stakeholders to mitigate the potential impacts of electric vehicles on the electric grid.	SANDAG and local jurisdictions
26. To the extent possible, address climate adaptation issues in the design of new projects, and when improvements are made to existing infrastructure.	SANDAG, Caltrans, and local jurisdictions
27. Seek funding to develop healthy community or active design guidelines that integrate smart growth, sustainability, walking and bicycling, parking, and street design.	SANDAG

Actions	Responsible Parties
Infrastructure Funding	
28. Continue to refine the Quality of Life Funding Strategy and determine the appropriate time to seek voter approval.	SANDAG
Public Involvement	
29. Evaluate the feasibility of developing preliminary maps that identify transportation infrastructure that could be vulnerable to environmental changes to climate change, including precipitation, heat, and sea level rise.	SANDAG, Caltrans, Port of San Diego, and local jurisdictions
Legislation	
30. Support legislation that provides financial incentives for smart growth projects that provide more affordable housing near transit, and that addresses fiscal reform issues consistent with the SCS and smart growth principles in the RCP.	SANDAG, MTS, and NCTD
31. Through the development review process, continue to provide comments to local jurisdictions that encourage development patterns that promote walking, bicycling, and access to public transit in existing and potential smart growth areas and in or near major public facilities such as colleges and hospitals, and that encourage reconfiguration of the public right of way to create complete streets.	SANDAG, MTS, and NCTD

