San Diego County Housing Study & Economic Impact Analysis

Prepared for:

San Diego Regional Chamber of Commerce

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Introduction

London Moeder Advisors has completed this comprehensive analysis which addresses housing issues in the San Diego region and its integrated impact on the overall regional economy in the coming years. This study is an update to our previous study entitled Regional Housing and Economic Impact Analysis (July 2016).

The purpose of this report is to update the statistical information over the past two years, as well as to check the status of housing development and employment growth throughout San Diego County. Thus, it serves as a regional "report card" on how our housing market has performed.

Research for this project was completed in June 2018. BW Research has also participated by updating its survey of employers. Conclusions and recommendations are strictly those of London Moeder Advisors. Users of this information should recognize that assumptions and projections contained in this report will vary from the actual experience in the marketplace. Therefore, London Moeder Advisors is not responsible for the actions taken or any limitations, financial or otherwise of property owners, investors, developers, lenders, public agencies, operators or tenants.

Executive Summary

Our previous paper, Regional Housing and Economic Impact Analysis (July 2016), concluded that if the housing crisis is not addressed, it could lead to significant, broader economic consequences throughout the San Diego region. This is a multi-dimensional crisis. Its multiple fronts include an overall shortage of housing units, a geographical maldistribution characterized by the specter of homes being added far from employment centers, and a regional housing tilt toward multifamily housing over single family homes.

We are now at the halfway point of SANDAG's housing aggregation for 2012 to 2020. Based on the 2016 data, San Diego County should have built 42,852 units. However, there have been only 20,103 units built (23.5% of total expected growth). This translates to only 46.9%[1] of the total growth expected by 2016, which demonstrates our region's dramatic inability to deliver the number of housing units required. (See Progress Update)

We have concluded that there will be a continuation of higher housing prices and rent increases fostered by an inability to bring to market sufficient new housing units. Without appropriate public policy action, demand will perpetually outpace supply.

What few units can be developed are mainly built far from where the jobs are, or will be, in our region. This contributes to longer commutes, greater congestion and increasing employee and employer dissatisfaction.

Regional housing needs encompass all types and all income levels. The needs are both urban and suburban, and in all geographical corridors of our region. The need includes apartment and condo units, attached product of varying densities (including stacked units, townhome units) as well as single-family homes for multiple income levels which can be built in the form of fully detached, cluster detached, semidetached (side-by-side), row houses, and townhouses.

The confluence of the geographic disconnect between where the jobs and the housing are, coupled with the literal shortage of all types of new housing, creates scarcity, which bids up the price and rent of all housing. Ultimately, we have concluded that there will be an economic price to pay, as housing growth is not aligned with job growth.

The situation tugs at the heart of our region's economic sustenance. Unemployment levels countywide are below four percent, commute times have increased, and job growth has slowed as employers face an increasingly tight labor market with less available qualified job applicants.

The inability to supply to the demand for housing is a shared problem throughout California. The situation has prompted Governor Brown last year to sign into law SB 35, which requires California cities to build more housing or become subject to the law's streamlining process for proposed development. The results of this most recent reporting period reveal that 97.6% of California cities and counties (including nearly all of San Diego County) fall under at least one provision of SB 35. Just 13 jurisdictions throughout the state have met the Regional Housing Needs Assessment for

[1] 20,103 units built divided by 42,852 units aggregated

the most recent reporting period. The only jurisdiction in San Diego county that is not subject to streamlining under the law is the city of Lemon Grove.

We also conducted a survey of regional employers as part of this and our previous analysis. That survey demonstrates that employer perception of housing affordability has actually gotten worse (see Economic Impact Analysis).

As time passes, the consequences will be irreversible. There are compelling reasons, detailed in this report, that suggest this supposition regarding housing preferences and willingness to live in multifamily housing is incorrect. The inability to reconcile housing supply and demand is likely to fuel an unprecedented economic challenge for the region, as employers are weighed down by the plight of their employees unable to find or afford their preferred housing type.

We seem to be now well entrenched in a regional housing crisis, which could evolve into an economic crisis. The issues and problems identified in this paper are everyone's problem, whether one currently owns a home, wants to, or is satisfied renting. It is a problem that cannot just be brushed aside. It is a problem screaming for a constituency that can be recognized by policymakers as they weigh their decisions on new development proposals, general plans and zoning rules.

Here are the bullet points highlighting the conclusions of our research:

- There is a direct link between the housing crisis and our economic well-being. In blunt terms, rising housing costs caused by limited supply, are genuinely of concern to our region's employers, such that they are now reaching decision points as to how and whether they can exist in San Diego County.

- The housing shortage is a regional problem. The on-the-ground reality is that substantially fewer units than anticipated by planning documents will ever be built due to neighborhood resistance, coupled with the financial economics involved in these projects, which mostly will require far more density than is likely to be permitted.

- There is a disconnect between where the jobs are expected to be and where the housing can be built. The problem is most pronounced along the region's north coast and inland north county. That is where the jobs-to-housing imbalance is greatest, yet where the resistance to new housing is most persistent. We are especially concerned about the North City and North County East sub-regions which are projected to add a significant number of jobs without a proportionate increase in the housing stock.

- Anticipated additional demand for single-family homes, including small lot, clustered, rowhomes and townhomes, will be considerably higher than the potential for new single-family homes (of all types) identified in local plans. To meet demand, substantially more single-family homes of all types must be built than have been planned for and certainly far more must be built each year than the pace at which they have been built over the past decade.

- We have determined that there will be a shortage of 39,015 to 77,936 single-family homes in the Region which could be met with several different types of units including fully detached and townhomes. The most impacted areas in the County are in Supervisorial Districts 4 and 3:

- District 4, which currently contains 19% of the county's single-family homes, is expected to decrease its single-family home inventory, which leads to an overall shortage of 35,301 units by 2050. SANDAG's aggregation of plans assumes that older single-family detached homes will be demolished and replaced by multifamily product.

- Housing demand in District 3 is expected to reach 31,444 single-family homes. However, only 11,892 are expected to be delivered, creating a shortage of 18,565 single-family homes.

- We expect that smaller single-family homes will be introduced in the more central parts of the County. However, the single-family home shortage must be accommodated in Districts 2 and 5 with various single-family product types. It is these Districts which contain most of the remaining developable land in the San Diego region. Even if there is some shift in housing preferences to multifamily, this is not likely to be a full shift, and it would occur over time. Therefore, it is imperative that the County flexibly accommodate the development of single-family products, including rowhomes and townhomes throughout Districts 2 and 5 even if households must potentially adjust to higher density living options.

- Each day workers commute from other regions or from relatively distant locales. This means that businesses are required to search farther to find the workers they need. Workers travel farther and/or spend more time commuting to work. There is no environmental nor carbon footprint upside to this phenomenon and works against efforts to promote housing solutions within our own region.

- We have now moved past the point of "peak urban Millennial" as many persons born in the last decades of the 20th century, who previously valued urban apartment or condominium living, are now raising families. For most in this cohort, which represents 1/3 of the region's population, a search for single-family housing including semi-detached and cluster detached homes appropriate for their young families is becoming increasingly difficult.

- Upward mobility in the housing market is frozen. We reported this phenomenon in our previous study, but it is even more pronounced today. Baby Boomers (older generations) are increasingly aging in place rather than selling their home and "moving down" into smaller, more suitable dwellings. This is because there are fewer alternative housing choices, and the tax consequences are significant. As a result, families that need to "move up" to a larger home are thwarted because would-be sellers do not have attractive housing options in which to relocate. This has diminished available resale inventory, bid-up pricing and eroded neighborhood reinvestment.

- There has been a demographic shift in the growth of our region. While the San Diego region has added population in the range of 21,000 to 40,000 persons each year over the past ten years, that growth is largely the result of natural increase (79%) over net migration (21%).

- In fact, over the past ten years approximately 79,300 more people have left our region than have entered (net domestic migration). Over that same period, 144,700 people (net) have migrated to our region from another country. While this results in an overall net positive in-migration of 65,400 persons, domestic in-migration is negative. People move out of a region because they no longer see economic opportunity within the region.

This report supports these conclusions with exhaustive research and analysis. The following section entitled Fact Sheet bullets the highlights of the data points discovered in our analysis, which are then address in detail in the remainder of the report, our Analysis of San Diego Regional Growth.

Fact Sheet

Job Growth

The following summarizes countywide[2] job growth. For more information, see Job Growth: County.

- Since 1996, the County has added 427,300 jobs (average of 20,348 jobs per year), which is a total increase in the job base of 41.6%. Between 2007 and 2010, total job losses amounted to 82,100 jobs. However, employment levels have recently reached a new high, totaling 1,453,900 jobs in 2017.

- In 2012 there were 1.35 million jobs in the County. This number is expected to grow to 1.8 million by 2050, an increase of 34.2%. There is a significant increase projected from 2012 to 2020 with a total of 173,211 jobs added (an annual average of 21,651 new jobs). From 2020 forward, job growth is projected to increase approximately 9,600 jobs per year.

- The County has been shifting toward a stronger professional, high-tech and health services-based economy with higher-paying salaries. The largest growth is expected to be in Professional and Business Services with the addition of approximately 80,000 new jobs (increasing by 30%). Manufacturing, Agriculture, and Mining are projected to continue to decline or experience limited growth.

The following summarizes the job growth in the various Metropolitan Statistical Areas (MSA). For more information, see Job Growth: By MSA (Major Statistical Area).

- Between 2000 and 2010 the North County West and North City MSAs experienced significant job growth adding approximately 14,500 new jobs each (62% of total growth). Overall, most of the job growth occurred in the more suburban MSAs throughout the region.

- To analyze the pace of growth in a normalized market, we focused on the period of 2000 to 2005, which excludes the 2008-2010 recessionary period. During these five-years the County added a total of 83,338 jobs (excluding self-employed). In terms of geographical distribution, a higher percentage of the jobs at the single-family home income ranges were created in the North County West and North City MSA, combining for a total of approximately 20,000 jobs. The Central MSA achieved a significant growth by adding 8,108 jobs at the single-family home income ranges. The remainder of the County experienced limited growth in jobs at the single-family home income ranges.

- The SANDAG Series 13 aggregation results in 460,492 new jobs being added between 2012 and 2050. The largest capture of jobs will be in the North City MSA, which is anticipated to capture 30.3%, of total growth followed by Central (18.6%) and South Suburban (18.5%).

[2] Throughout this report, the term "County" and "Countywide" are synonymous with "region" or "regional," as San Diego County is a single county region, and statistically treated as such by the San Diego Association of Governments (SANDAG) in its series estimates for growth.

- Of the 460,492 total job growth potential, 149,485 new jobs (32.5% of growth) are anticipated to be added in single-family home income ranges[3]. The balance, 311,007 jobs (67.5% of growth), are anticipated to be added in other income ranges[4].

- The North County and North Cities are projected to add 75,488 jobs at the single-family home income ranges while the South and East Suburban MSAs are expected to add 47,576 by 2050. This demonstrates that there is growing geographical imbalance in the region with a greater amount of jobs at the single-family home income ranges projected to be added to the northern part of the County (north of I-8) relative to Central and South County.

Housing Growth

The following summarizes the housing growth in the County. For more information, see Housing Growth: County.

- In 2000, approximately 63% of the existing housing units in the County were comprised of single-family homes. The balance of approximately 37% were multifamily units. Between 2000 and 2016, the County added 149,645 housing units[5], or an average of 9,353 units per year. The composition of this growth was still predominantly single-family (57%) compared to multifamily (43%).

- From 1996 to 2007 San Diego County's new building permits averaged 12,950 units per year. Since the economic downturn in 2008, building permit activity has averaged 7,673 units per year. Excluding the early economic recovery years (2008-2011), building permit activity has averaged 10,379 units per year since 2012. This is a decrease of 20% compared to the 1996-2007 period.

- Between 1996 and 2007, 61.3% of the building permits issued were for single-family homes (7,943 units per year). However, if we exclude the extreme down years in the economy (2008-2011), building permit activity has averaged 2,813 single-family units per year since 2012. This is a decrease of 64.6% compared to the last real estate cycle of 1996-2007.

- According to SANDAG's aggregation of local planning data, which is based on the general plans of each of the region's 18 cities as well as the unincorporated County, the region could add as many as 340,500 new housing units between 2010 and 2050 (40 years). Approximately 275,000 units (81%) would be multifamily units, and approximately 66,000 single-family homes (19%) would be added.

The following summarizes the housing growth in the various Metropolitan Statistical Areas (MSA). For more information, see Housing Growth: By MSA.

- Since 2000, most of the MSAs experienced higher single-family growth compared to multifamily. In all but two MSAs (Central and North City), single-family home growth

[3] Those sectors with an annual median income of more than $70,000.
[4] Those sectors with an annual median income of less than $70,000.
[5] Includes single-family and multifamily units. Our analysis excludes mobile home units.

outpaced multifamily units. In the far north county (North County West and North County East), single-family homes represented 74% and 76% of growth, respectively.

- The SANDAG aggregation of local planning data projected to 2050 finds that single-family home growth will decline significantly throughout the region. In particular, single-family growth would account for 38% of growth in the North County West MSA and 44% of growth in the North County East MSA.

- According to the SANDAG aggregation of local planning data, the East Suburban MSA (see map in the Residential Growth: By MSA section of this report) would be the major supplier of single-family homes with growth of as much as 23,425 homes - representing 35% of total County growth. This represents a geographic shift of single-family growth to the southeast portions of the County.

Progress Update

The following summarizes San Diego County's development progress since 2012. For more information, see Progress Update.

- According to SANDAG, San Diego County was expected to add a total of 85,703 housing units between 2012 and 2020. At the halfway point in 2016 42,852 units should have been built throughout the County. However, there have been only 20,103 units built to date (23.5% of total aggregated growth). This translates to only 46.9%[6] of the total growth expected by 2016, demonstrating the severe inability to deliver the housing units required.

- All seven of the County's MSA have fallen short of SANDAG's development aggregation with the greatest deficiencies occurring in the Central and North County East MSAs (only 40.6% and 37.6% of expected growth achieved).

Distribution Analysis

The following summarizes the geographical distribution of jobs and housing growth. For more information, see Distribution Analysis.

- The single-family home income ranges[7] include Information Systems ($98,280), Manufacturing ($78,208), Wholesale Trade ($77,636), Professional and Business Services ($77,012), Finance and Real Estate ($75,192), and Office Services ($70,356).

- Between 2012 and 2050, Professional and Business Services is anticipated to experience the largest growth (80,129 new jobs) while commanding one of the larger incomes ($77,012). The other sector expected to grow significantly, leisure and hospitality (69,013 new jobs), earns the lowest median income ($26,208).

- Based on SANDAG, a ratio of 1.41 jobs for every housing unit must be achieved to accommodate future growth, or 326,117 new homes for the 460,492 anticipated new jobs.

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[6] 20,103 units built divided by 42,852 units aggregated
[7] Those sectors with a median income over $70,000 annually.

However, in North City, the future jobs-to-housing ratio is 2.0, suggesting more new demand than new supply. The number of jobs at the single-family home income ranges to single-family homes is anticipated to be 8.0, an important metric to consider because jobs at the single-family home income ranges, and higher combined household income, typically generate household demand for single-family homes.

- The North County West and South Suburban market are each anticipated to generate more jobs than housing to accommodate workers and their families (2.14 and 1.76 respectively). A similar contrast is also anticipated in the ratio of jobs at the single-family home income ranges to single-family homes expected to be delivered in each of these markets (2.11 and 4.92, respectively).

Shift in Housing Preferences

The following summarizes the assumed shift in housing preferences. For more information, see Shift in Housing Preferences.

- There is an historical preference for single-family homes in San Diego County. This is highlighted by the 2010 snapshot of the County's housing stock which consisted of 63% single-family homes (697,470 units). However, according to the SANDAG Series 13 aggregation of local planning data, new single-family home construction would represent only 19% of total home delivery (65,756 units). The balance of housing delivery is anticipated to be multifamily (81% or 276,354 units).

- If we calculated single-family demand by using the existing housing stock as our best measure of historical preferences (63% single-family), an estimated 214,515 single-family homes would be demanded. However, the aggregation reveals that local planning efforts accommodate only 65,756 single-family homes, a ratio of 3 out of 10. Based on these assumptions, only 30% of all future residents who wish to purchase a new, single-family home will be able to do so. The other 70% would be accommodated in multifamily units.

- Extensive research has been conducted which has focused on the 78.6-million-person Millennial population, a cohort whose population is now aged 20 to 37 and is larger than the Baby Boom generation (now aged from 53 to 70). Gen Next (sometimes referred to as Gen Z), persons under 20 years of age, is expected to generate housing demand as strong as their predecessor groups. Therefore, strong housing demand is anticipated for at least two generations, and across the housing spectrum.

  Based on this anticipated demand from future generations, we anticipate a shortage of single-family homes ranging from 39,015 to 77,936 homes.

Housing Affordability Implications

The following details housing affordability trends in the San Diego Region. For more information, see Affordability Implications.

- The median home price[8] for housing in San Diego County has continued to increase. In 2017 the median of $533,600 indicates that pricing has surpassed the pre-recession peak set in 2005 ($506,000). However, the median multiple (price divided by income) is much lower (7.5 compared to 9.1). Median income in San Diego County has increased 29% since 2005 compared to a median home price that is just 5% higher than the 2005 peak.

- We anticipate the median multiple to continually increase due to the inability of supply (new building permits) to keep pace with housing demand, particularly for single-family homes near employment centers.

- The least affordable areas in the County are the north county beach cities of Solana Beach (10.2) and Del Mar (12.8), as well as the island of Coronado (15.3). Poway (6.6) and San Diego (6.7) are more affordable because median incomes match the beach cities, but median housing prices are lower.

- All North County cities now require a larger portion of income dedicated to housing cost. Approximately $12,000 additional annual income is now required to purchase the median priced home in North County than in 2000. Chula Vista and Encinitas experienced the smallest increases in this same housing cost ratio between 2000 and 2017.

- Between 2007 and 2016, San Diego County rental households progressively spent more of their income on rent. The median income for rental households was $42,341 in 2007 while the median rent was $1,116 per month (31.6% of income spent on rent). By 2016, median household income increased 12%, or 1.3% annually. However, the median rent increased more than double the rate of income at 25%, or 2.8% annually. This translates to 35.3% of household income spent on rent in 2016.

- The increase in San Diego rents in recent years has made the region one of the most expensive places to live along the California coast. Renting in San Diego requires 35% of income, which is higher than Mountain View, San Francisco and Santa Clara. While these markets experience higher rent levels, residents there enjoy much higher incomes. Ironically, these Northern California markets are more affordable than San Diego, Orange and Los Angeles counties.

[8] Includes new home sales and resales of attached and detached homes.

Economic Impact Analysis

Because North County is assumed to supply more multifamily units than single-family homes over the next thirty years, this large and desirable market cannot provide sufficient single-family homes to support its internal job growth. This will require many workers to seek affordable single-family homes elsewhere, particularly Temecula/Murrieta or in the southernmost part of the region (specifically eastern Chula Vista).

This imbalance of supply and demand for single-family homes will likely cause North County to experience accelerated appreciation of home values, even when compared to other parts of the San Diego region. Similarly, there is an imbalance of supply and demand for multifamily units as indicated by the high rental rate increase and low vacancy rates. This is because the housing ladder is blocked and more households are forced to remain in multifamily instead of moving up to home ownership opportunities.

As North County has built out, more households have sought more affordable homeownership opportunities in the North County eastern region. If the supply of new housing is diminished, the likely result will be higher prices, narrowing the region's ability to provide attainable housing for its employees.

Based on these findings, we expect that the housing "crisis" could escalate into an economic crisis. An employer survey that was conducted as part of this study confirms that employers are finding it increasingly difficult to attract qualified employees as affordable, high-quality and appropriate housing remains elusive. The following highlights the conclusions of the employer survey report conducted by BW Research, (see Economic Impact Analysis for full report):

- **Approximately one-half of North County renters continue to spend over 35 percent of their gross income on housing**, a higher portion than persons living in communities in the Bay Area, such as Santa Clara County[9]. The discrepancy between increased housing costs and minimal wage increases continues to exacerbate the challenge of housing affordability and is negatively impacting employer's ability to find qualified workers.

- Of the eight factors examined. **the "ability to find reasonably priced housing for employees that is close to work" remains the issue in which North County employers were most dissatisfied**, and dissatisfaction has risen considerably from 25 percent in 2016 to 47 percent in 2018.

- **The most predominately cited challenge** for most North County employers **in recruiting and retaining talent is finding housing within a reasonable commute to work.** First, almost one in three (30%) North County employers indicated that "recruiting employees who can find adequate housing within a reasonable distance from work" was a great difficulty and another 43 percent indicated that it is providing some difficulty. Second, almost three-quarters (74%) of North County businesses are having at least some difficulty "retaining valuable employees who want to purchase housing within a reasonable distance from work".

[9] Source: American Fact Finder, Santa Clara County: 2016

The 2018 North County study by BW Research demonstrates that the fundamental housing and employment challenges that were initially identified in 2016 have only worsened in North County over the last two years. This is due to a growing proportion of employers that indicate dissatisfaction and difficulty with finding and keeping qualified workers, particularly as it relates to their ability to find housing. The research findings from the 2018 housing study in North County not only reinforced the conclusions from the 2016 study, but introduced three new findings:

1. **Almost one-third (31%) of North County employers have provided some type of housing assistance for their employees to move into or near North County**. This housing assistance takes the form of relocation or mortgage assistance, housing allowances or company provided housing. Another 21 percent of North County employers are now considering some type of housing benefit or subsidy for their North County employees.

2. **Unemployment levels have dropped below three percent[10], commute times have increased[11] and job growth has started to slow in North County,** as employers face an increasingly tight labor market with less available qualified job applicants.

3. **North County employers have grown less positive about the region as a place to do business and have indicated more difficulty finding qualified job applicants.** In 2016, 47 percent of North County businesses indicated that San Diego County was an excellent place to do business, in 2018 that number dropped to 26 percent. Over the same period, the proportion of North County employers that indicated great difficulty finding qualified applicants increased from 4% to 17%.

These results indicate that North County employers are already feeling the costs associated with inadequate housing supply and the direct impact it has upon a qualified local workforce.

[10] In North County as compiled from California EDD Data, January 2018
[11] North County Prospects 2017 to 2018

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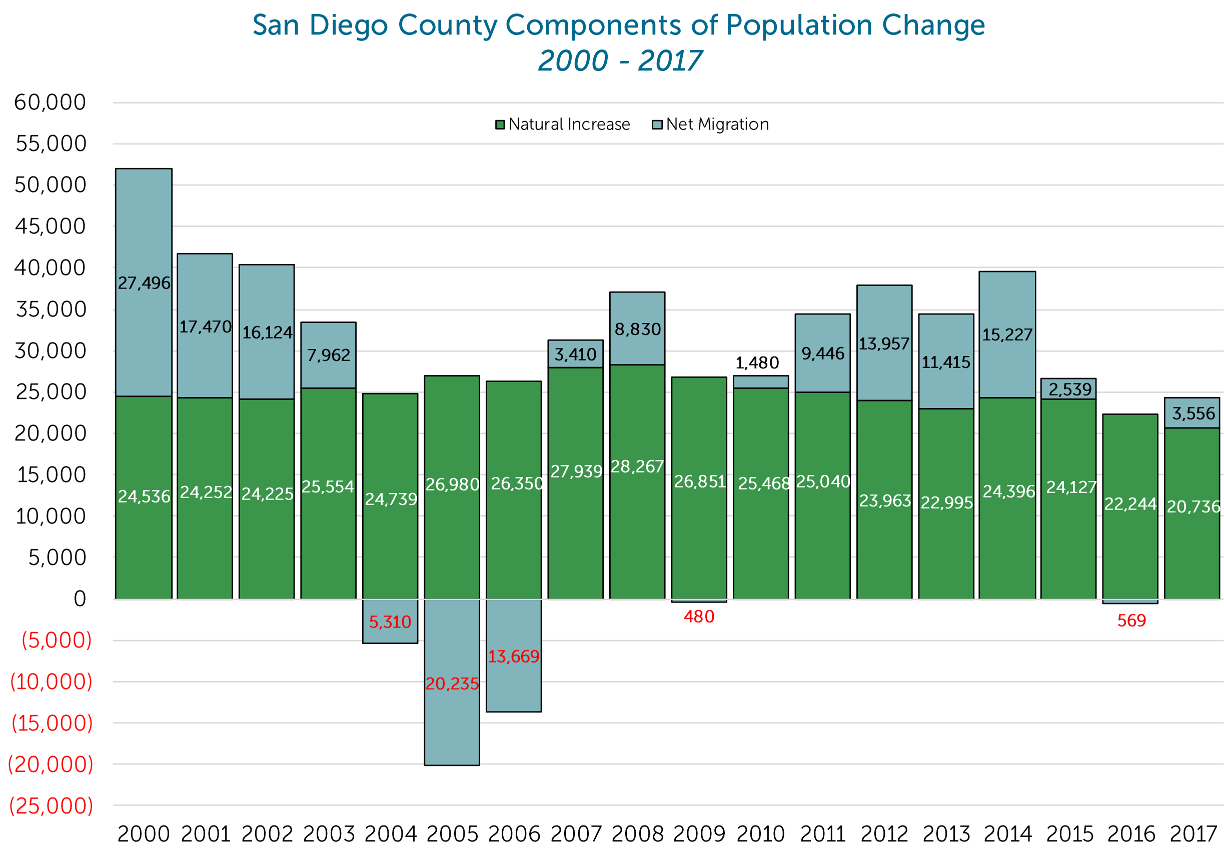
Analysis of San Diego Regional Growth

Population Growth: County

Total Growth and Natural Increase

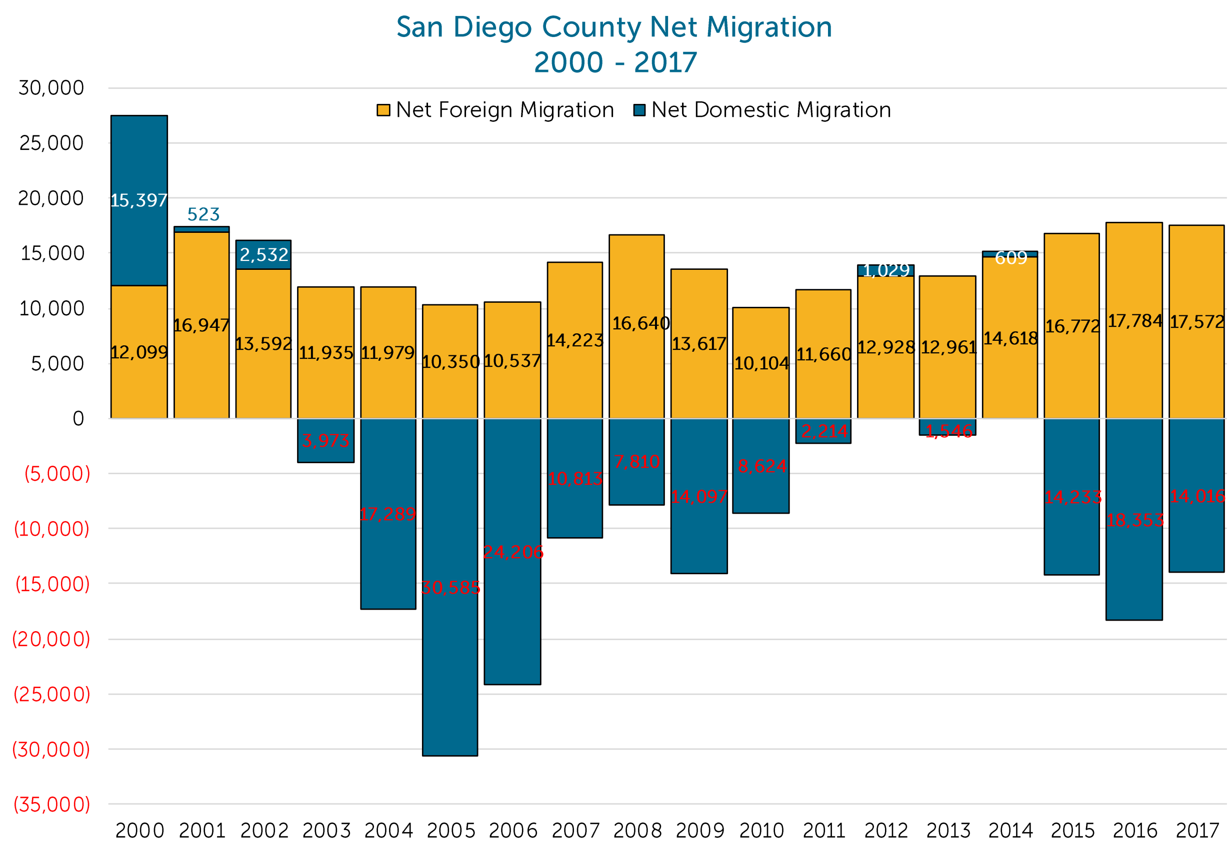
Since 2000, the total population in San Diego County has increased by nearly 550,000 persons, or about 30,400 persons annually. Of that growth, the overwhelming majority (82%) has been due to natural increase (births over deaths). If we look at just the last 10 years, the total population in San Diego County has increased by nearly 310,000 persons, or about 30,900 persons annually. Of that growth, the majority is still overwhelmingly (79%) from natural increase.



Source: London Moeder Advisors, CA Department of Finance

Foreign versus Domestic Migration

Since 2000, persons coming to San Diego County from outside of the U.S. have outpaced those leaving by more nearly 99,000, or about 5,500 persons annually. In the last 10 years, more than 6,500 more persons from outside of the U.S. have migrated to San Diego County on an annual basis. Overall, net migration has accounted for 21% of the overall increase in population in the past 10 years. As the previous section demonstrated, San Diego County is largely dependent on the natural increase in population to generate population growth. However, more San Diegans are leaving the region (13 of the last 15 years) than are entering from other portions of the U.S.

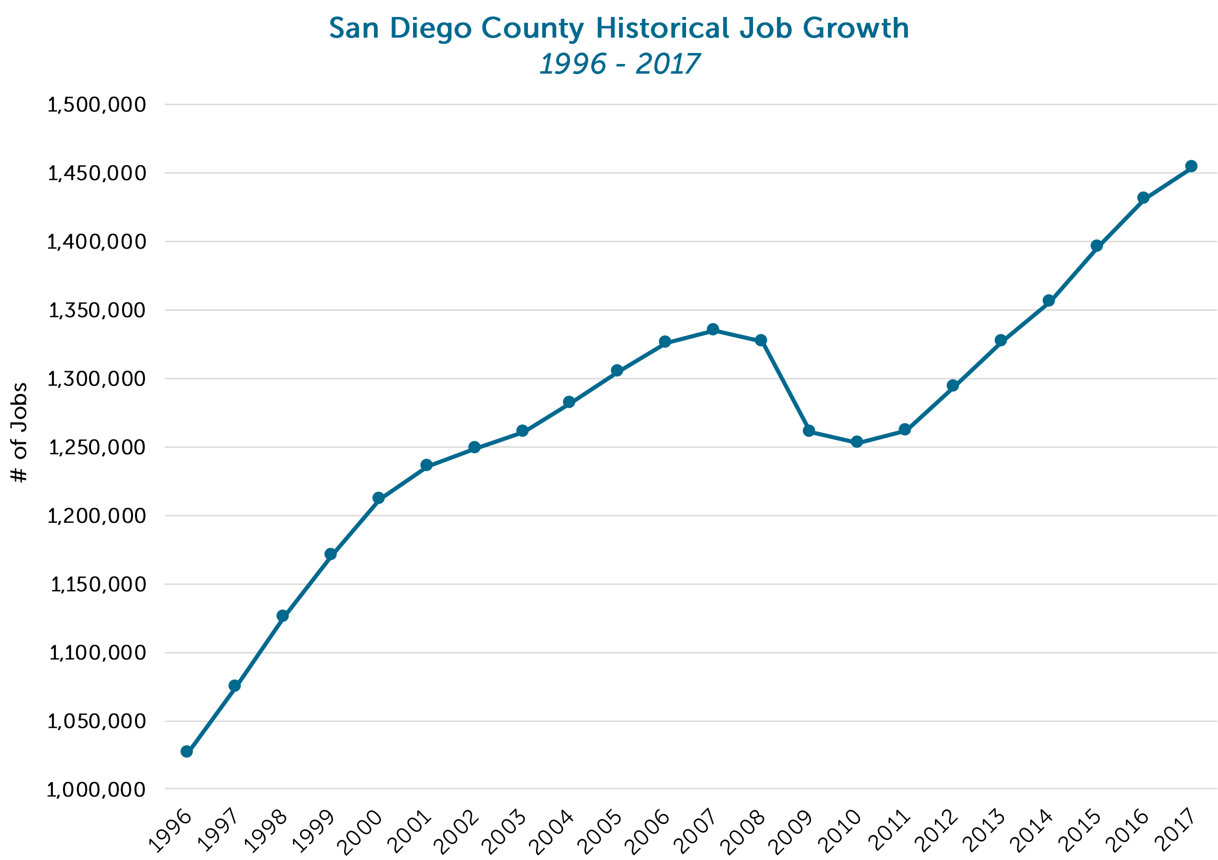


Source: London Moeder Advisors, CA Department of Finance

Job Growth: County

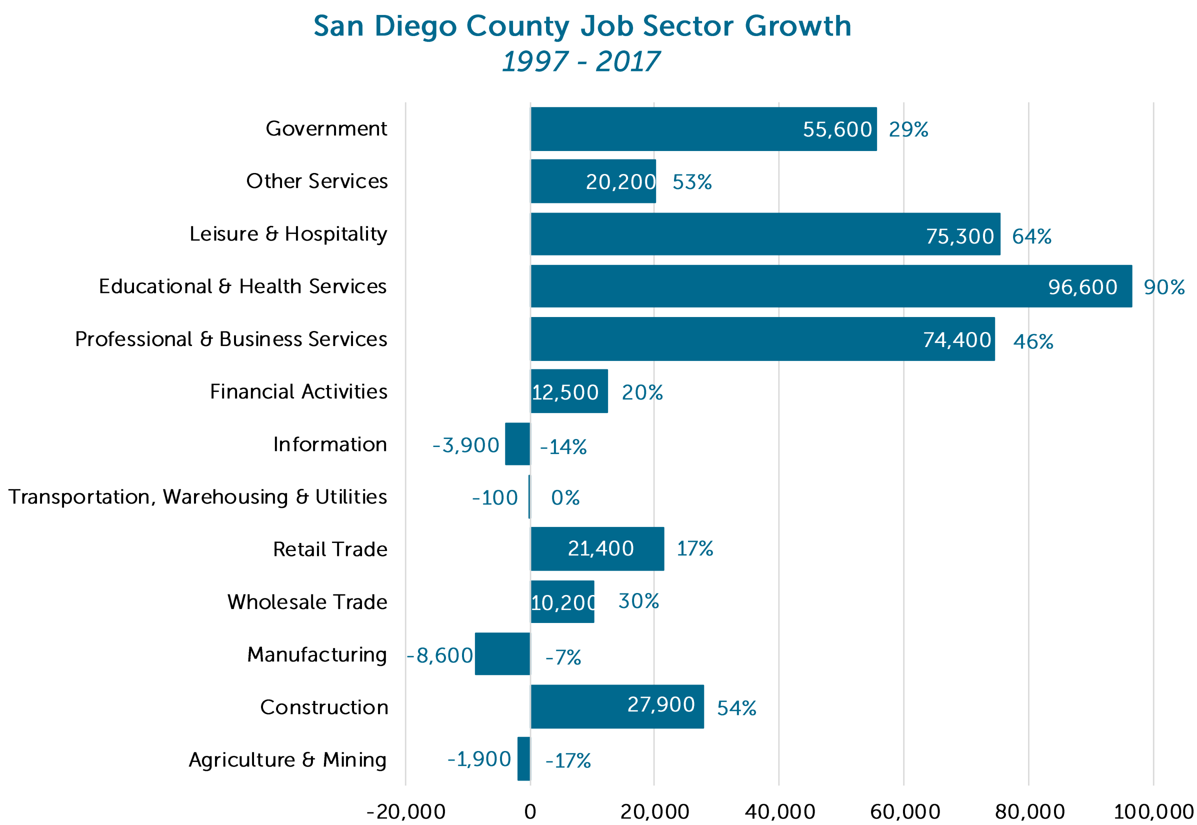
Historical Growth

San Diego County has experienced significant job growth over the past 20-plus years. Since 1996, the County has added 427,300 jobs (average of 20,348 jobs per year), which is a total increase in the job base of 41.6%. Between 2007 and 2010, total job losses amounted to 82,100 jobs. However, employment levels have recently reached a new high, totaling 1,453,900 jobs in 2017.



Source: London Moeder Advisors, State of California Employment Development Department

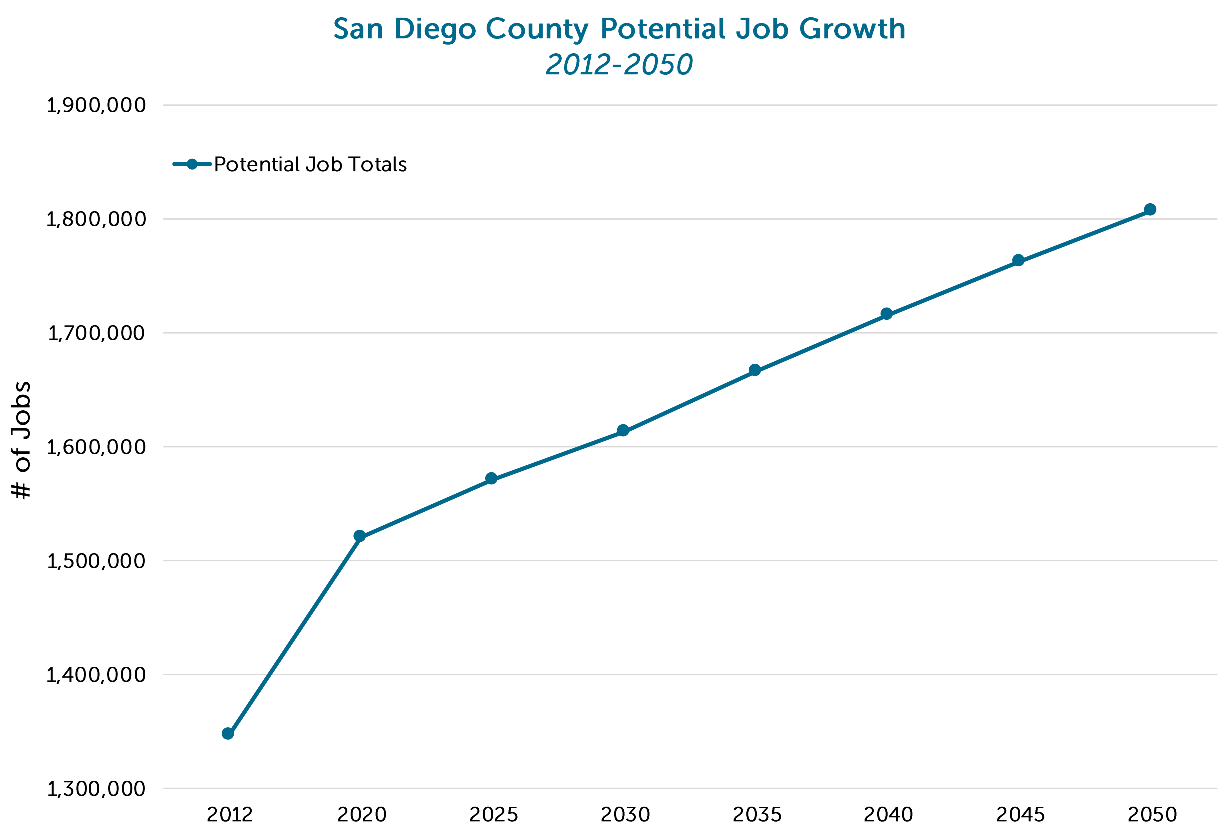
The following chart highlights job growth by sector over the past 20 years, since 1997. The largest job growth occurred in Education & Health Services (96,600 jobs), Leisure & Hospitality (75,300 jobs) and Professional & Business Services (74,400 jobs). The largest percentage gain was in Education and Health Services, which experienced a 90% increase over the 20-year period. The Information, Transportation, Warehousing & Utilities, Manufacturing sectors and Agriculture & Mining all experienced negative growth from 1997 to 2017. Overall, these growth trends reflect the County's shift to a professional based economy, with an employment base that commands higher salaries.



Source: London Moeder Advisors, State of California Employment Development Department

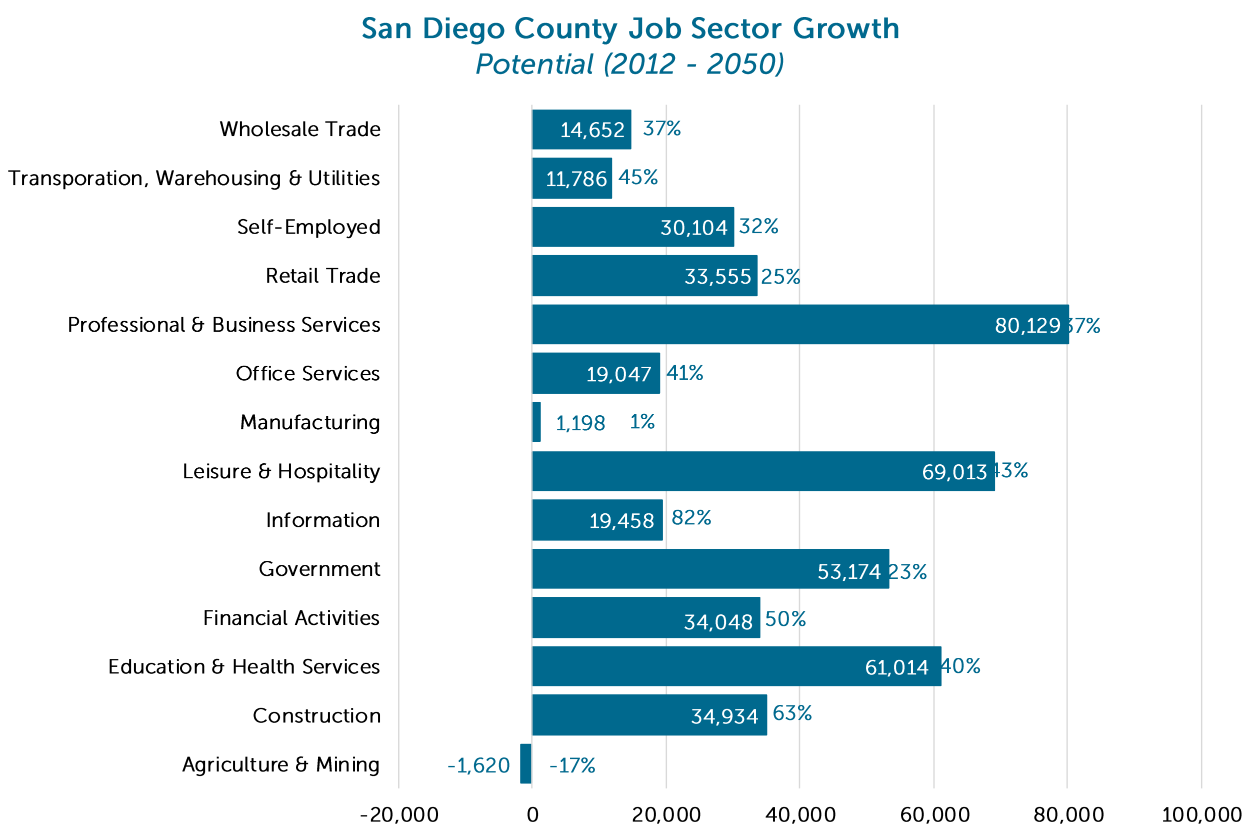
Potential Growth

The following chart depicts SANDAG's potential job growth for San Diego County through 2050. In 2012 there were approximately 1.35 million jobs in the County. This number is expected to grow to 1.8 million by 2050, an increase of 34.2%. There is a significant increase from 2012 to 2020 of with a total of 173,211 jobs added (an annual average of 21,651 new jobs). From 2020 forward, job growth is projected to increase at approximately 9,600 jobs per year.



Source: London Moeder Advisors, SANDAG

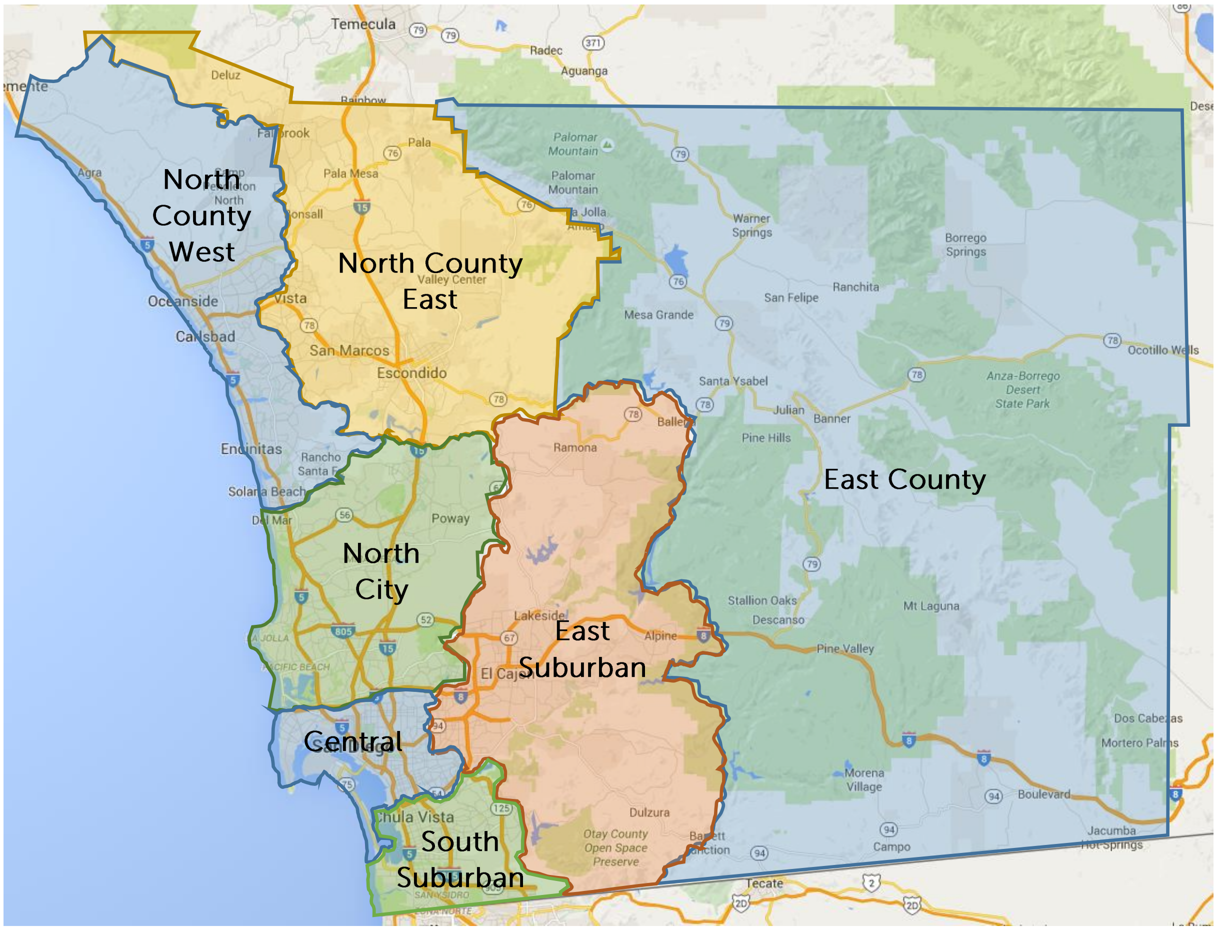
The following chart demonstrates SANDAG's potential job growth by sector in San Diego County. The largest growth is expected to be in Professional & Business Services with the addition of more than 80,000 new jobs (increasing by 37%). Education & Healthcare along with Leisure & Hospitality are also projected to experience significant growth, adding approximately 61,000 and 69,000 jobs, respectively. Manufacturing and Agriculture & Mining are expected to continue to decline or experience limited growth. These growth trends reflect the County's historical shift toward a stronger professional, high-tech and health services economic base with higher paying salaries.



Source: London Moeder Advisors, SANDAG

Job Growth: By MSA (Major Statistical Area)

This section analyzes the job sector in each Major Statistical Area ("MSA") as defined by SANDAG. There are seven MSAs that comprise the County, as depicted in the following map:



Historical Growth

Job Distribution

This section analyzes historical job growth in San Diego County by MSA from 2000 to 2010[12]. Overall, the County added 23,364 jobs (1.8% increase) during this period, a number that is understated because the time period ends at the bottom of the recession in 2010 after the region had lost approximately more than 80,000 jobs. Still, the North County West and North City MSAs experienced significant job growth adding approximately 14,500 new jobs each (62% of total growth). Overall, the majority of job growth occurred in the more suburban MSAs located in the North and South parts of the region.

Historical Job Growth by Region
2000-2010

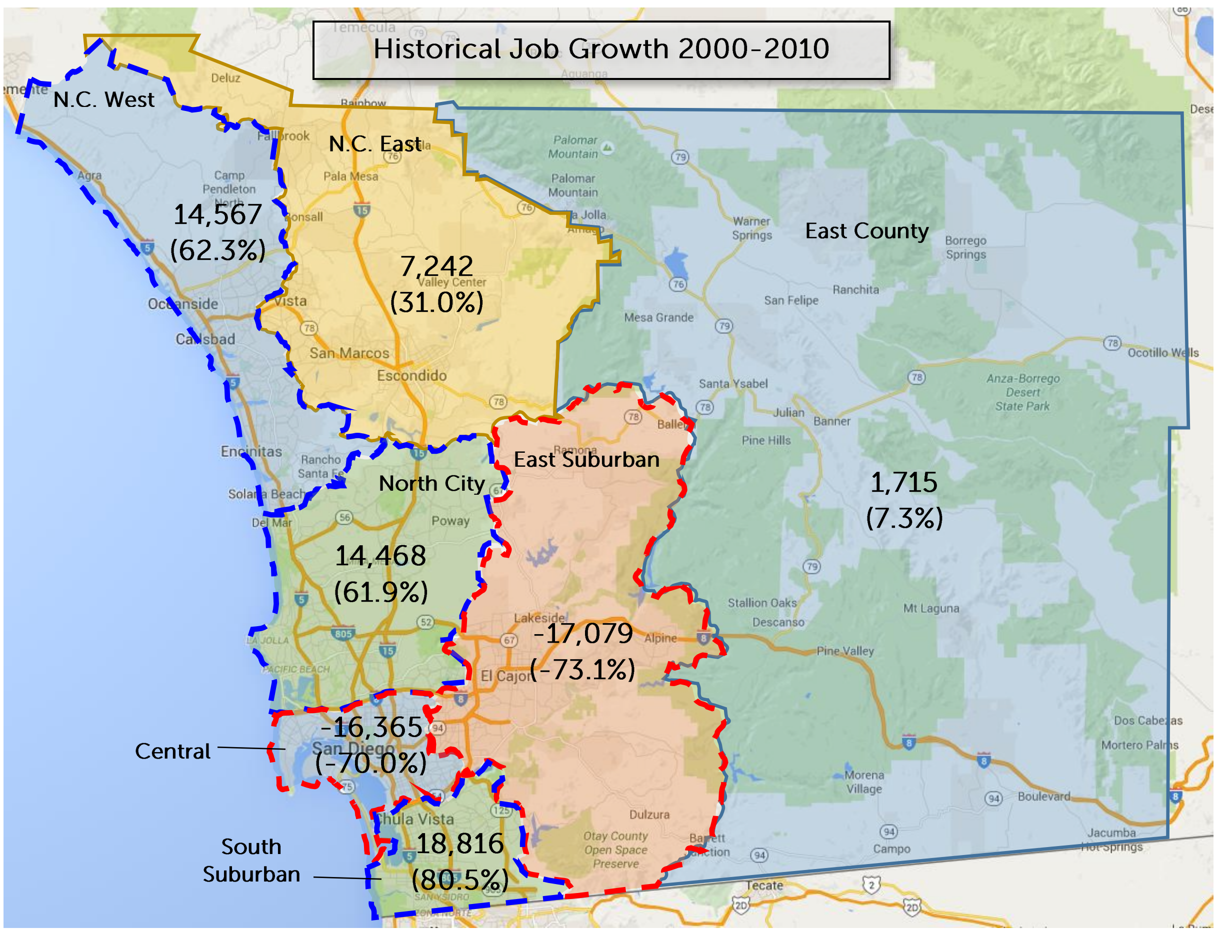
	2000	2010	Total Change	% Change	% of Total Growth
Central	265,489	249,124	-16,365	-6.2%	-70.0%
East County	3,900	5,615	1,715	44.0%	7.3%
East Suburban	142,937	125,858	-17,079	-11.9%	-73.1%
North City	514,160	528,628	14,468	2.8%	61.9%
North County East	137,816	145,058	7,242	5.3%	31.0%
North County West	137,859	152,426	14,567	10.6%	62.3%
South Suburban	85,483	104,299	18,816	22.0%	80.5%
Total	**1,287,644**	**1,311,008**	**23,364**	**1.8%**	**100.0%**

Source: London Moeder Advisors; SANDAG

[12] Job data is only available by MSA for Census years and the SANDAG forecast (2012-2050)

The following map is a visual representation of the previous table. The job growth in each MSA and the percentage capture of the unincorporated County are displayed on the map. The areas outlined in blue are MSAs that experienced significant job growth and capture the majority of the County's overall growth.

The MSAs outlined in red are the areas with a significant decrease in jobs between 2000 and 2010. The bulk of the job growth occurred in the southern portion of the County which added over 18,000 jobs. The northern coastal MSAs (North County West and North City) also grew significantly. Job growth took place largely outside of the Central MSA (city center) in the suburban areas of the County.



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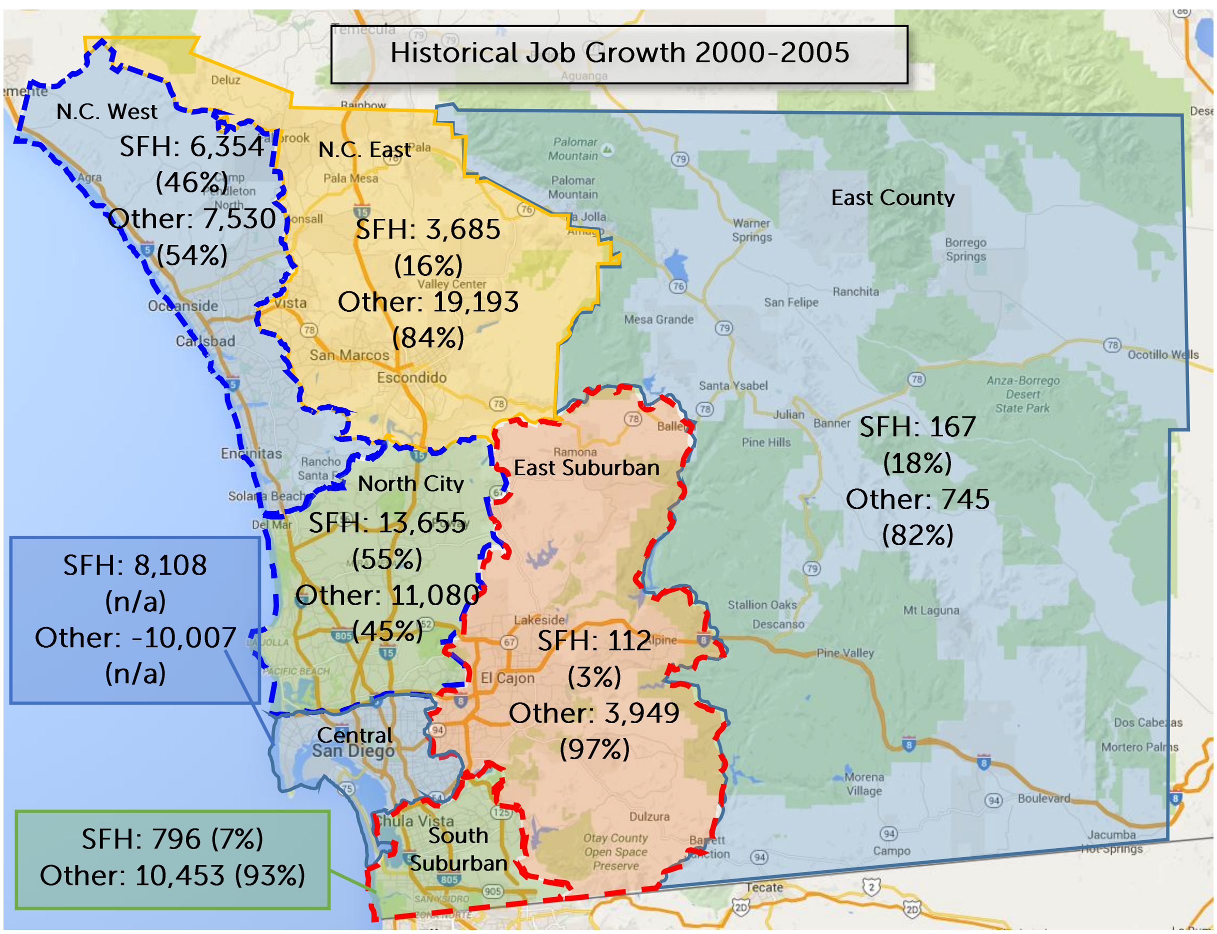
Classification of Jobs

This section addresses the classification of jobs being created in each MSA. We have delineated the job data to demonstrate jobs at single-family home income ranges versus other income ranges.[13] For details on these job categories see Job Classifications & Salaries in the Distribution Analysis section of this report.

To analyze the pace of growth in a normalized market, we analyzed the period of 2000 to 2005, which excludes the 2008-2010 recession. During this five-year period the County added a total of 83,338 jobs (excluding self-employed). The single-family income ranges experienced growth of 32,887 jobs (39%) while other income ranges added 50,451 jobs (61%).

Most of the jobs at the single-family home income range occurred in the North County West and North City MSA, which combined for a total of approximately 20,000 jobs. The Central MSA added 8,108 jobs at the single-family home income range. The balance of the County experienced limited growth in jobs at the single-family home income range.



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[13] We utilized the NAICS classification of jobs due to the correlation of data by MSA from SANDAG. Our demarcation point between jobs at the single-family income range and other income ranges is $70,000.

Potential Growth

Job Distribution

This section analyzes the potential job growth in San Diego County by MSA from 2012 to 2050. Overall, there are 460,492 jobs (34.2% increase) expected to be added countywide, with 30.3% of jobs coming to the North City MSA. The Central and South Suburban MSAs are also expected to experience significant job growth with just over 85,000 new jobs each.

Forecasted Job Growth by Region
2012-2050 SANDAG

	2012	2050	Total Change	% Change	% of Total Growth
Central	252,629	338,354	85,725	33.9%	18.6%
East County	6,065	10,021	3,956	65.2%	0.9%
East Suburban	133,901	179,968	46,067	34.4%	10.0%
North City	540,106	679,464	139,358	25.8%	30.3%
North County East	150,648	213,773	63,125	41.9%	13.7%
North County West	161,068	198,185	37,117	23.0%	8.1%
South Suburban	102,552	187,696	85,144	83.0%	18.5%
Total	**1,346,969**	**1,807,461**	**460,492**	**34.2%**	**100.0%**

Source: London Moeder Advisors; SANDAG

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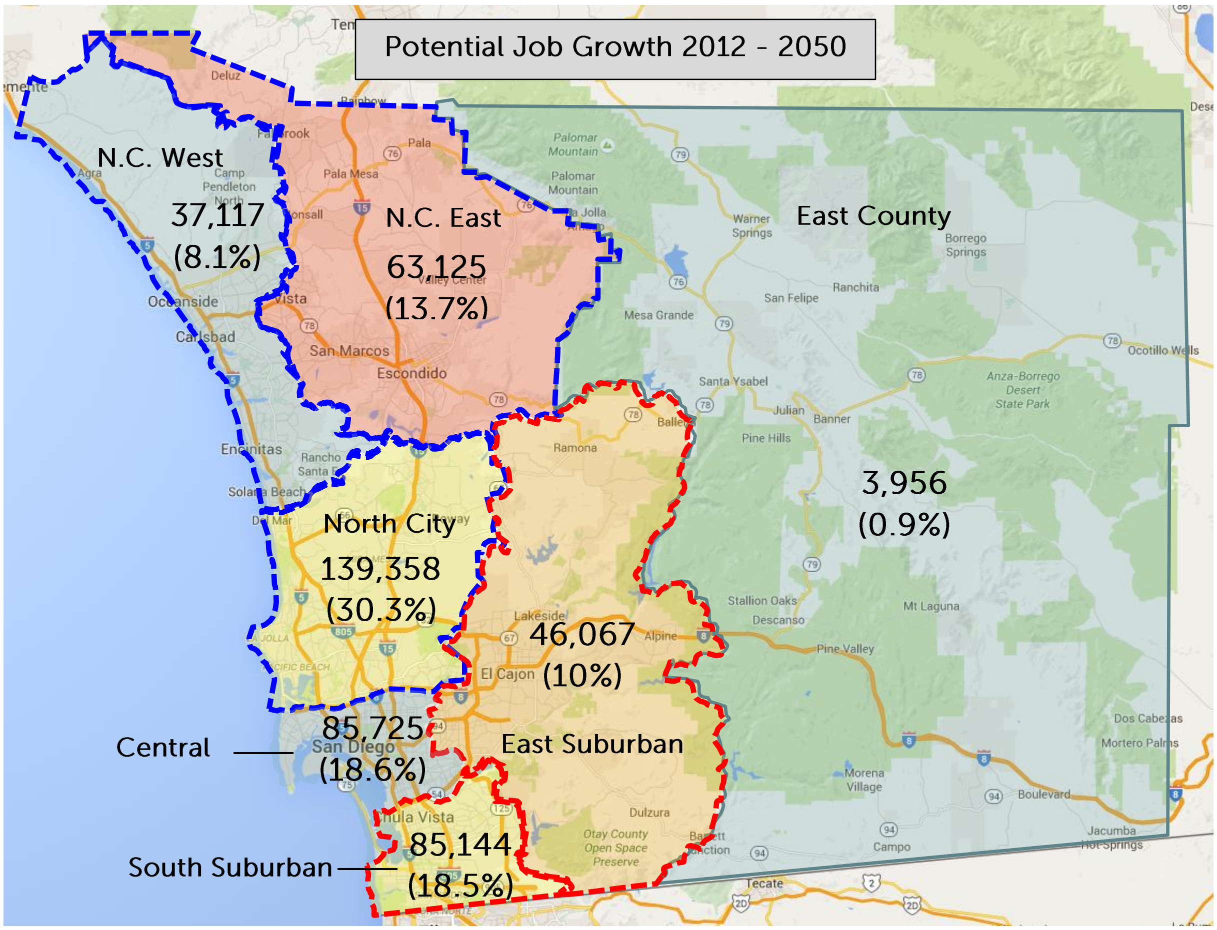
The following map depicts the potential job growth in each MSA as well as the percentage capture of the County. The South Suburban MSA is anticipated to experience the greatest percentage expansion, adding 83% more employment. The North City MSA is anticipated to add the most jobs in terms of absolute number at 139,358 jobs, representing 30.3% of total growth.

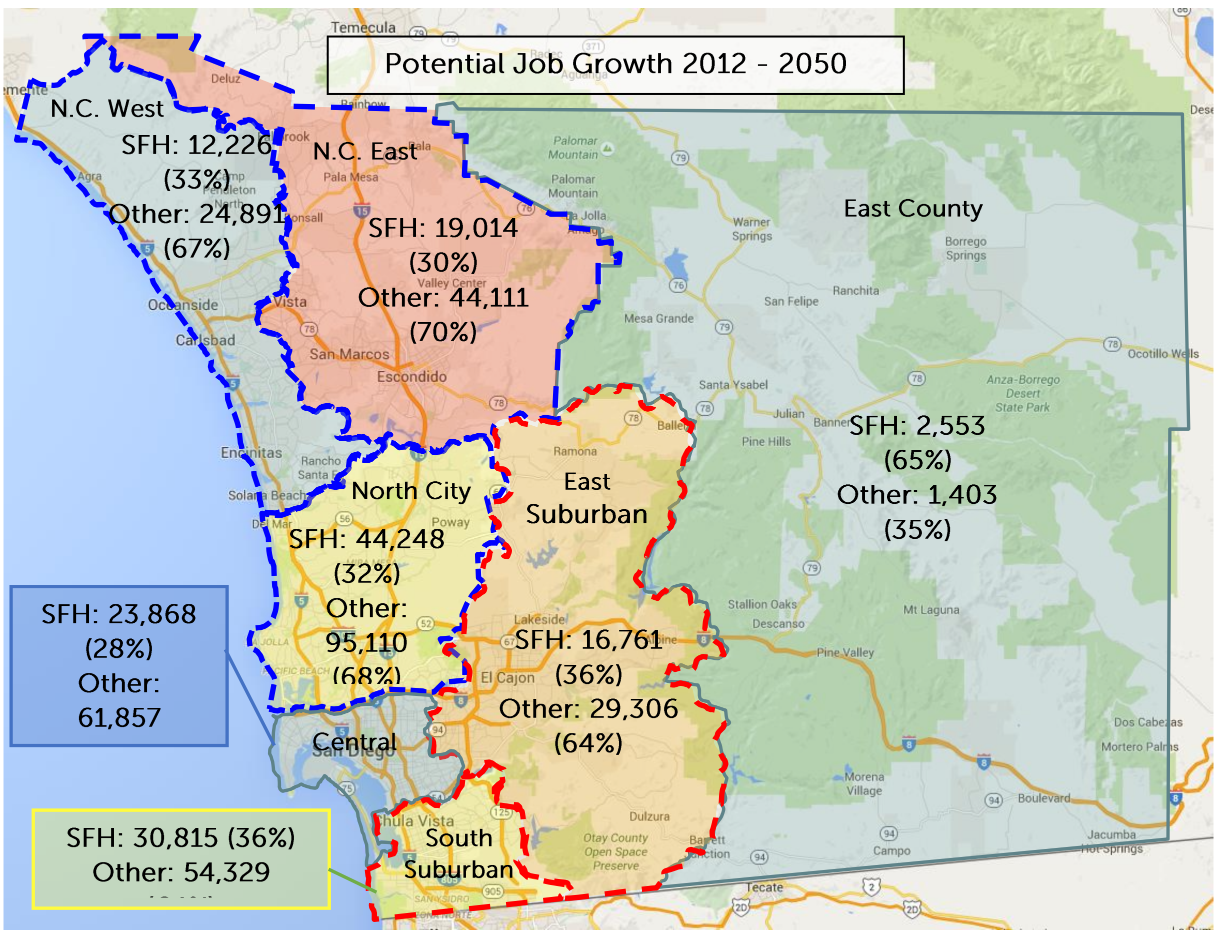


Classification of Jobs

This section addresses the classification of jobs being created in each MSA. We have delineated the job data to demonstrate single-family home income ranges versus other income ranges[14]. For details on these job categories see Job Classifications & Salaries in the Distribution Analysis section of this report.

Between 2012 and 2050, there are 460,492 jobs anticipated to be added countywide. Of these, a total of 149,485 jobs (32.5% of growth) are anticipated to be in single-family home income ranges. The balance of 311,007 jobs (67.5% of growth) are anticipated to be in other income ranges.

The North County West and East MSAs and the North City MSA (outlined in blue in the following map) are projected to add 75,488 jobs with single-family home income ranges while the South and East Suburban MSAs (outlined in red) are expected to add 47,576. This demonstrates that there is a geographical imbalance in the region with a greater amount of jobs at the single-family home income range in the northern part of the County (north of I-8) relative to Central and South County.



14 We utilized the NAICS classification of jobs due to the correlation of data by MSA from SANDAG

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Job Growth: By City

Historical Growth

While we have detailed the historical growth on a Countywide basis and for each MSA, historical job growth data at the city level is not available from the California Employment Development Department. The job figures at the city level tracks civilian employment and the unemployment rate, which is merely a survey and estimate of employment. We have utilized actual non-farm employment payroll counts in the following analysis, which ties directly into SANDAG's employment figures.

Potential Growth

The following table details the potential job growth for each city in the San Diego region. The City of San Diego is anticipated to add the greatest number of jobs (228,541 jobs), accounting for nearly 50% of regional job growth. The other cities experiencing significant job growth are Chula Vista (49,210 jobs) and the unincorporated areas of San Diego (47,665 jobs).

Future Job Growth by City
2012-2050 SANDAG

	2012	2050	Total Change	% Change	% of Total Growth
Carlsbad	66,279	85,757	19,478	29.4%	4.2%
Chula Vista	65,340	114,550	49,210	75.3%	10.7%
Coronado	12,377	12,536	159	1.3%	0.0%
Del Mar	4,521	4,726	205	4.5%	0.0%
El Cajon	38,393	49,825	11,432	29.8%	2.5%
Encinitas	26,165	29,551	3,386	12.9%	0.7%
Escondido	48,874	59,111	10,237	20.9%	2.2%
Imperial Beach	3,421	4,613	1,192	34.8%	0.3%
La Mesa	25,233	36,552	11,319	44.9%	2.5%
Lemon Grove	6,774	8,656	1,882	27.8%	0.4%
National City	22,270	34,736	12,466	56.0%	2.7%
Oceanside	41,974	53,992	12,018	28.6%	2.6%
Poway	30,851	37,173	6,322	20.5%	1.4%
San Diego	742,718	971,259	228,541	30.8%	49.6%
San Marcos	37,608	64,328	26,720	71.0%	5.8%
Santee	14,519	18,570	4,051	27.9%	0.9%
Solana Beach	7,568	8,803	1,235	16.3%	0.3%
Unincorporated	116,238	163,903	47,665	41.0%	10.4%
Vista	35,840	48,814	12,974	36.2%	2.8%
Total	**1,346,963**	**1,807,455**	**460,492**	**34.2%**	**100.0%**

Source: London Moeder Advisors; SANDAG

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Housing Growth: County

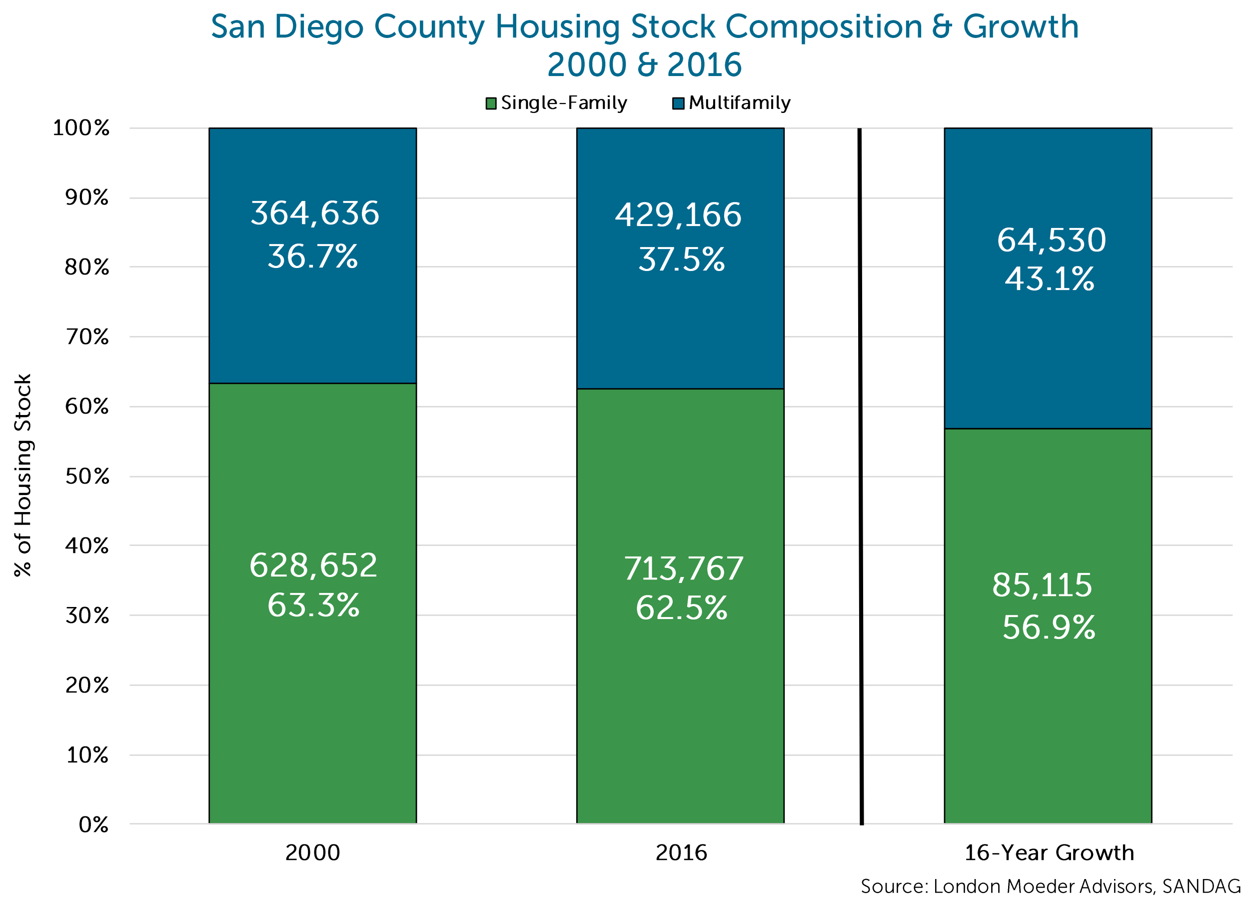
This section analyzes the historical and potential future housing growth as detailed in SANDAG's aggregation of local plans throughout San Diego County. In this section, we analyze the County's historical and projected growth patterns as well as the composition and type of housing.

Historical Growth

San Diego County's current housing stock is predominantly comprised of single-family homes. However, the rate of multifamily construction is shifting the County's overall housing composition. Although the number of multifamily homes constructed between 2000 and 2016 was outpaced by single-family home construction[15], multifamily homes comprise an increased share of the housing stock.

The following chart details the housing growth from 2000 to 2016. In 2000, approximately 63% of the existing housing units in the County were comprised of single-family homes. The balance of approximately 37% were multifamily units. During this 16-year period, the County added 149,645 housing units[16], or 9,353 units per year. The composition of this housing stock is still predominantly single-family (57%) compared to multifamily (43%).

[15] Utilizing SANDAG's estimates of housing stock.
[16] Includes single-family and multifamily units. Our analysis excludes mobile home units.


San Diego County Housing Stock Composition & Growth
2000 & 2016
Single-Family
Multifamily
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
% of Housing Stock
364,636
36.7%
628,652
63.3%
429,166
37.5%
713,767
62.5%
64,530
43.1%
85,115
56.9%
2000
2016
16-Year Growth
Source: London Moeder Advisors, SANDAG

Historical Growth (Building Permits)

Another data source for analyzing housing growth is building permit activity. This section analyzes annual building permits achieved throughout the County.

The following table examines housing growth in San Diego County over various timeframes over the last 22 years. During the 1996 to 2007 period, San Diego County's new building permits totaled 12,950 units per year. Since the economic downturn in 2008, building permit activity has averaged 7,673 units per year. However, if we exclude the extreme down years in the economy (2008-2011), building permit activity has averaged 10,379 units per year since 2012. This is a decrease of 19.9% compared to the 1996-2007 period.

There has also been a dramatic shift in the type of housing being constructed. Between 1996 and 2007, 61.3% of the building permits were single-family homes (7,943 units per year). However, between 2012 and 2017 only 27.1% (2,813 units per year) of the new building permits are single-family homes.

San Diego County Housing Stock Growth 1996-2017

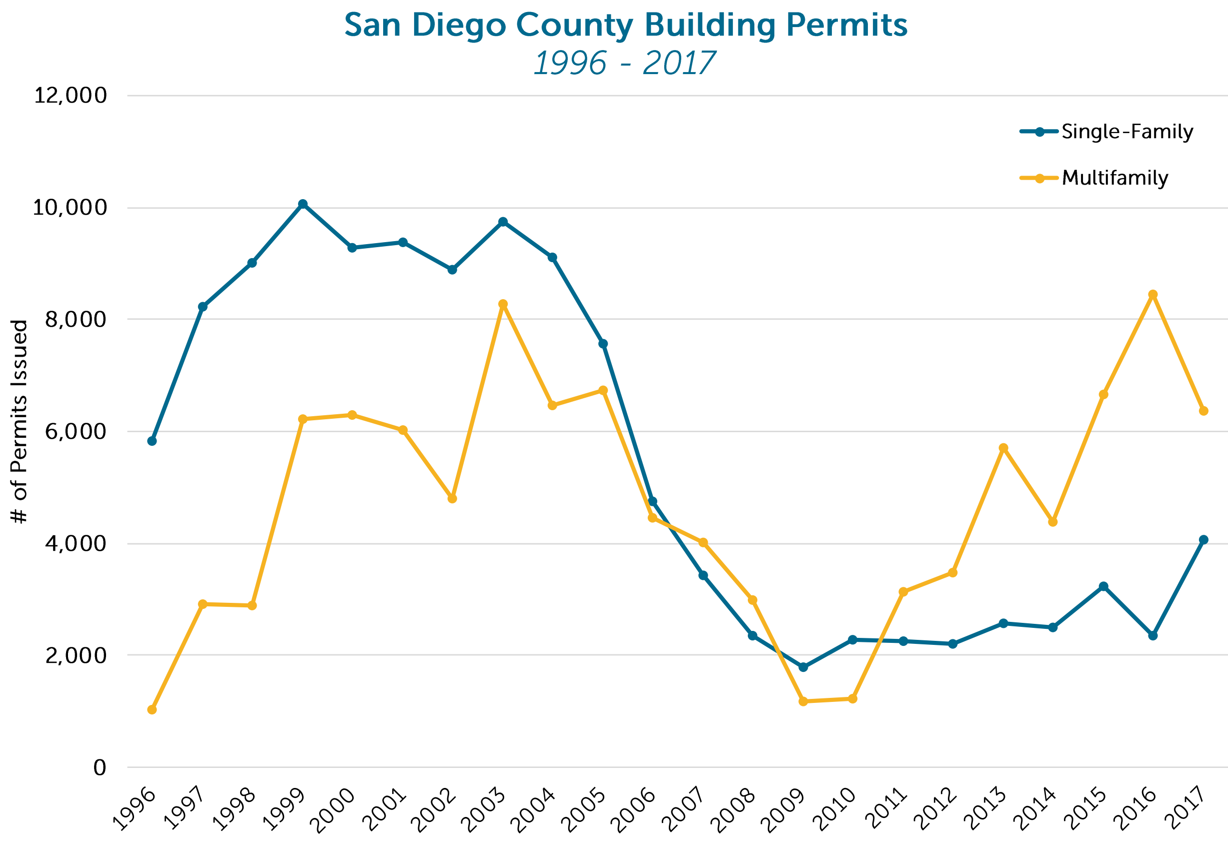
	1996-2007		2008-2017		2012-2017	
	# of Units	Annual Avg.	# of Units	Annual Avg.	# of Units	Annual Avg.
Single-Family	95,314	7,943	25,534	2,553	16,880	2,813
Multifamily	60,090	5,008	43,527	4,353	35,014	5,836
Total*	**155,404**	**12,950**	**69,061**	**7,673**	**51,894**	**10,379**

*Totals may not add up due to rounding

Source: London Moeder Advisors, U.S. Census

The following chart details the annual permits by year from 1996 through 2017. Through 2006, single-family permits continually outpaced multifamily permits. At the market peak of 2005-2006, housing permits began to fall due to the recession. However, as new housing development resumed steady growth beginning in 2011, multifamily has since outpaced single-family at nearly double the pace.

There has indeed been a shift in the composition of housing growth. The most recent 2017 permit distribution for single-family was 58.4% below the 2003 peak. This has put significant pressure on single-family home prices because the market is now delivering approximately 2,800 single-family homes per year during the recovery period between 2011 and 2017 compared to 9,000 per year from 2000 through 2005.

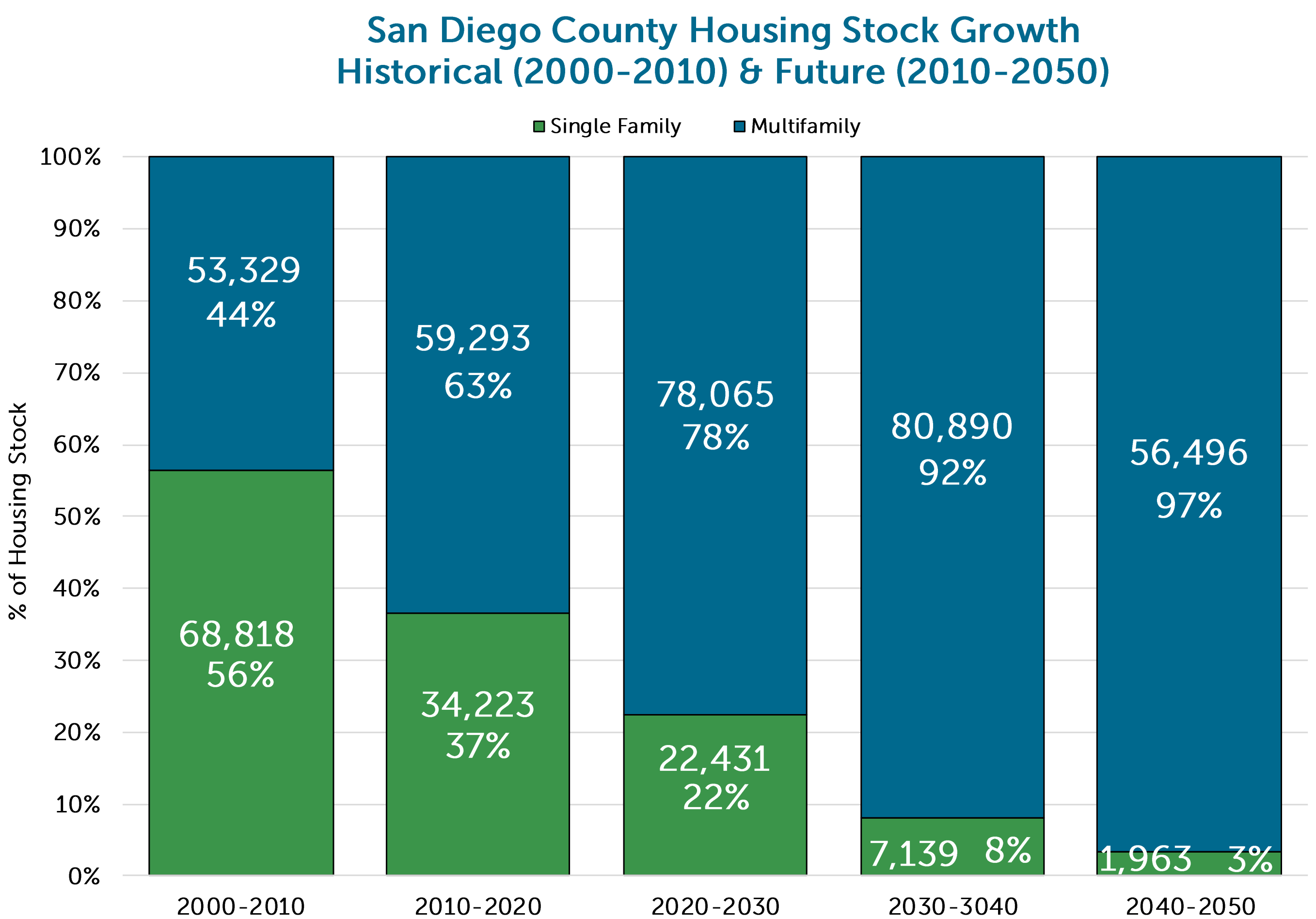


Source: London Moeder Advisors, U.S. Census

Potential Growth

According to SANDAG's aggregation of local plans from the cities and county, our region could add as many as 340,500 new housing units between 2010 and 2050 (40 years). Approximately 275,000 units (81%) would be multifamily units, but only 66,000 single-family homes (19%). This is a significant decline in single-family home production. The rate of growth assumes only 1,650 new single-family homes per year compared to the 6,900 single-family homes that were achieved annually during 2000 through 2010.

The assumed potential growth of multifamily units will dramatically shift the composition of the housing market in San Diego.



Source: London Moeder Advisors, SANDAG

Residential Growth: By MSA

This section analyzes residential housing growth in each of the MSA sub regions. The following maps depict the historical housing growth (2000-2010) and the potential housing growth (2012-2050). Our analysis addresses the composition of each housing type in each MSA.

Historically, the majority of MSAs experienced higher single-family growth compared to multifamily. In all but two MSAs (Central and North City), single-family home growth outpaced multifamily units. In the north county (North County West and North County East), single-family homes represented 74% and 76% of growth, respectively. A total of 29,214 single-family homes were added to this part of the County during 2000-2010, which represented 42% of total single-family growth in the region during the 10-year period. North County has been, and continues to be, a very desirable place for single-family living (see Historical Growth (Census)).

However, the growth potential for the region reflects a different approach to accommodating housing growth – it is mostly driven by multifamily production. According to SANDAG's aggregation of local plans, all but two MSAs will add housing mainly comprised of multifamily units. The only exceptions are East Suburban and East County, which could add a higher ratio of single-family homes.

The following bullet points further highlight the MSA maps and data that follow:

- The MSAs in the north part of the County were the largest contributors of single-family home growth between 2000 and 2010. During this time, approximately 75% of the 38,924 housing units added by the North County West and East MSAs were single-family homes (29,214 single-family homes). This concentration of 75% single-family homes is significantly higher than the countywide average of 56.3%.

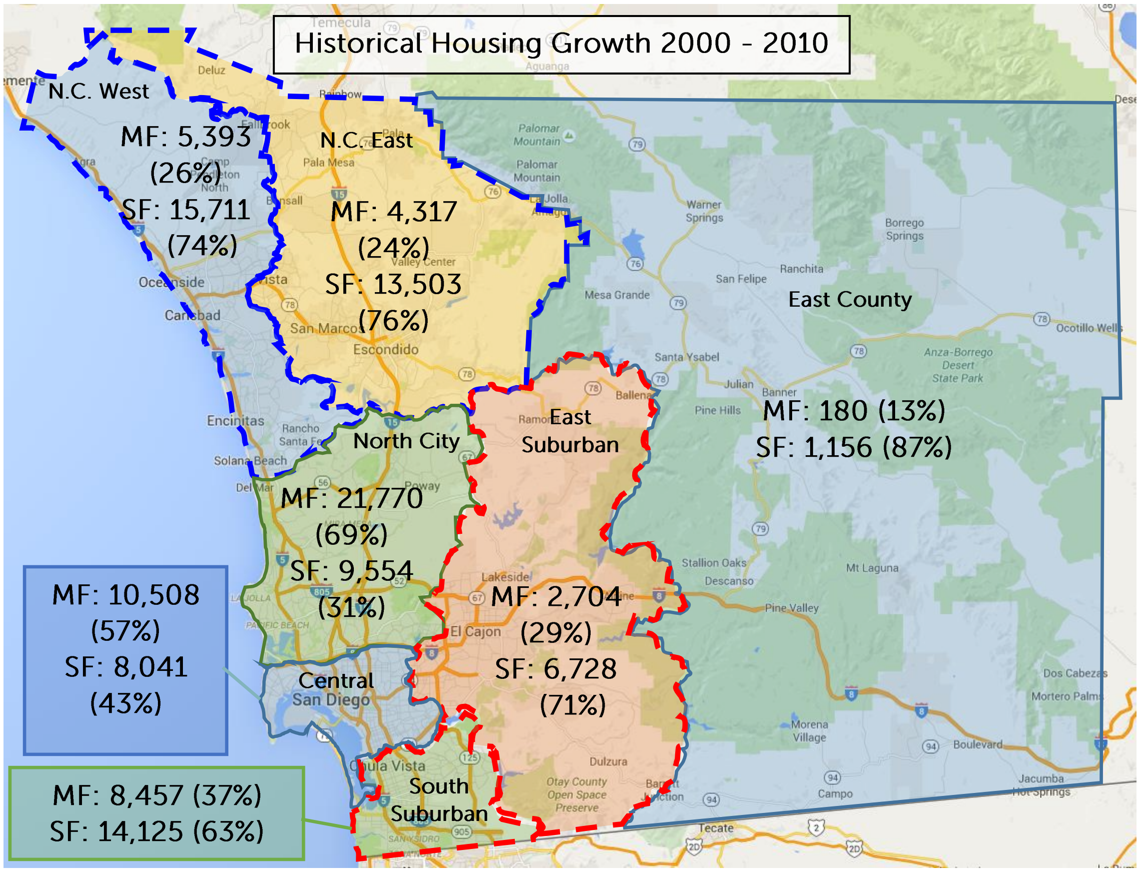
- However, the SANDAG aggregation of local plans suggests that single-family home growth will decline significantly from 2012 to 2050. Single-family growth would account for just 38% of growth in the North County West MSA and 44% of growth in the North County East MSA. This is a significant shift which will effectively reduce the supply and availability of single-family homes in the North County.

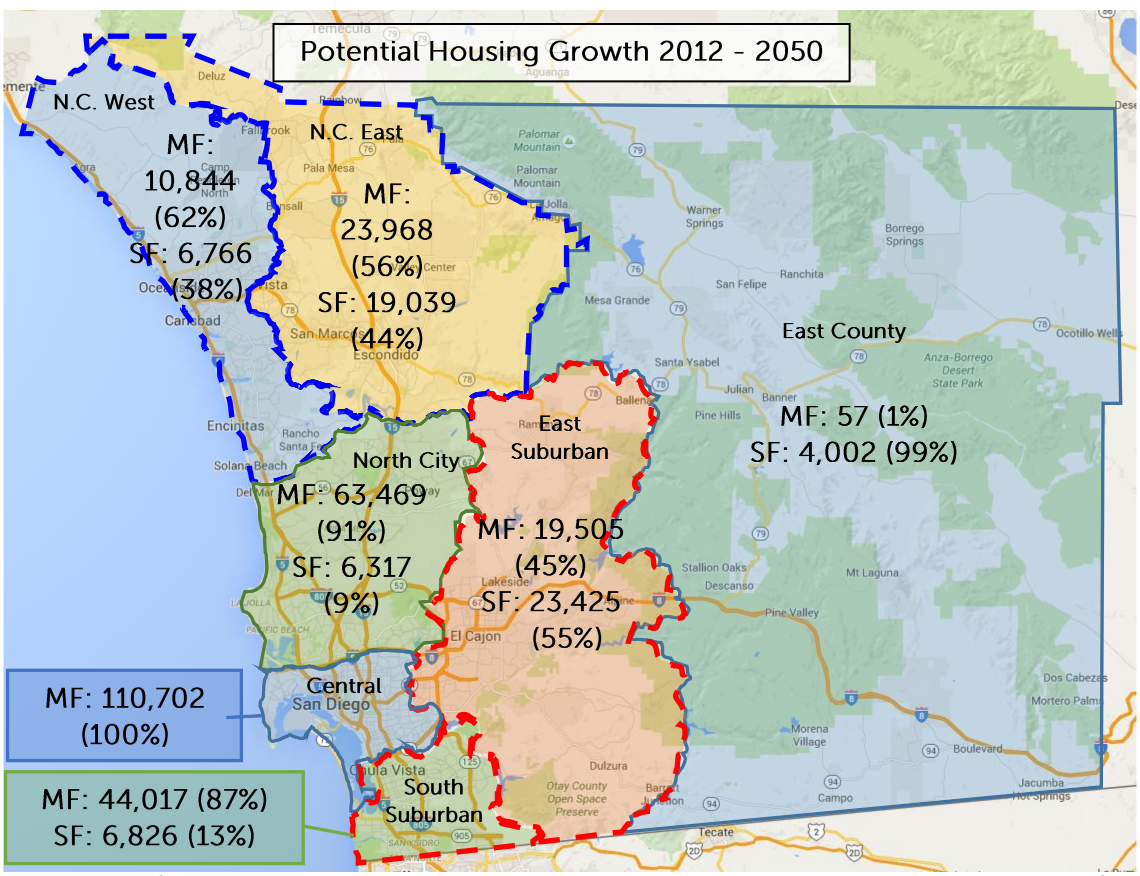
- The South Suburban MSA is anticipated to experience a similar shift to multifamily. Historically, 63% of this MSA's growth was single-family homes. However, the aggregation of local plans suggests that single-family housing growth will decrease significantly to only 13% of total growth. The supply and availability of single-family homes in the South Suburban MSA will decline significantly.

- The East Suburban MSA is the only area anticipated to add a significant inventory of single-family homes. Historically, single-family homes accounted for 71% of overall growth in the East Suburban MSA, largely owed to the development of eastern Chula Vista. However, the magnitude of growth was rather nominal. From 2000 to 2010, East Suburban only added 6,728 single-family homes, well below the pace of other MSAs. According to the aggregation of local plans, the East Suburban will be the major supplier of single-family homes with anticipated growth of 23,425 homes - representing 39% of total single- family home growth in San Diego County.

This aggregation of local plans suggests a gap between the geographical distribution of historical growth and future growth. Historically, most additions to single-family inventory have occurred in the North County. The aggregation of local plans suggests that single-family growth will be pushed to the southeast portions of the County. There will be insufficient additions in the places planned to experience significant job growth (e.g. North County West and North City), which have the highest jobs-to-housing ratios – see Demand Based on Jobs to Housing).

The maps on the following page provide a visual representation of the housing growth shift. We have also included several charts that further analyze each MSA in the Appendix (Anticipated Housing Growth by MSA).

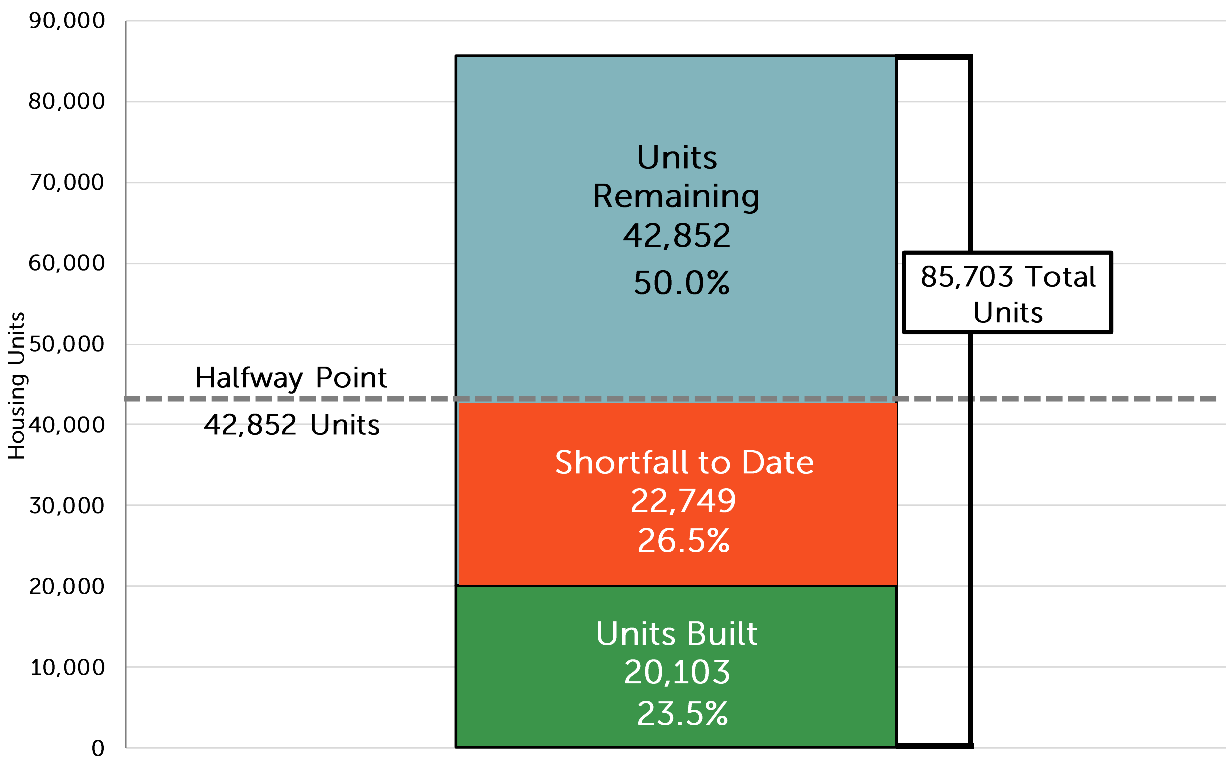

Historical Housing Growth 2000 - 2010
N.C. West
MF: 5,393 (26%)
SF: 15,711 (74%)
N.C. East
MF: 4,317 (24%)
SF: 13,503 (76%)
East County
MF: 180 (13%)
SF: 1,156 (87%)
East Suburban
MF: 2,704 (29%)
SF: 6,728 (71%)
North City
MF: 21,770 (69%)
SF: 9,554 (31%)
Central San Diego
MF: 10,508 (57%)
SF: 8,041 (43%)
South Suburban
MF: 8,457 (37%)
SF: 14,125 (63%)


Potential Housing Growth 2012 - 2050
N.C. West
MF: 10,844 (62%)
SF: 6,766 (38%)
N.C. East
MF: 23,968 (56%)
SF: 19,039 (44%)
East County
MF: 57 (1%)
SF: 4,002 (99%)
East Suburban
MF: 19,505 (45%)
SF: 23,425 (55%)
North City
MF: 63,469 (91%)
SF: 6,317 (9%)
Central San Diego
MF: 110,702 (100%)
South Suburban
MF: 44,017 (87%)
SF: 6,826 (13%)

Progress Update

The following chart examines San Diego County's progress as it is applied to residential housing growth as aggregated by SANDAG. According to SANDAG, San Diego County was expected to add a total of 85,703 housing units between 2012 and 2020. At the halfway point in 2016 San Diego County should have built 42,852 units. However, only 20,103 units have been built (23.5% of total expected growth). This translates to only 46.9%[17] of the total growth expected by 2016, demonstrating a considerable shortage caused by an inability to deliver the housing units required.

San Diego County Progess Update
2012 - 2020



Source: London Moeder Advisors, SANDAG

The following table examines each of the MSA's progress as it is applied to housing growth as aggregated by SANDAG. It examines the achieved growth of each MSA compared to the halfway point of SANDAG's aggregation of plans.

[17] 20,103 units built divided by 42,852 units aggregated

Housing Growth Progress Update
San Diego County

	Achieved Growth (2012-2016)	Halfaway Point (Forecast)	% of Forecasted Growth Achieved
Central	2,282	5,623	40.6%
East County	290	385	75.3%
East Suburban	1,408	4,091	34.4%
North City	7,575	14,036	54.0%
North County East	2,712	7,220	37.6%
North County West	2,351	4,517	52.0%
South Suburban	3,485	6,981	49.9%
Total	**20,103**	**42,852**	**46.9%**

The table demonstrates that all seven MSAs have not kept pace with SANDAG's aggregation of plans. In fact, only two MSAs have seen the delivery of one-half of units required. The Central and North County East MSA's have fallen extremely short (40.6% and 37.6%). This is significant because these MSAs are home to a large portion of the region's jobs. In a more balanced market they ought to realize a large portion of regional housing demand. (While the East County MSA seems to be performing the strongest, we note the limited number of units the MSA was expected to deliver, 385 total units.

The following table depicts the same analysis but by individual jurisdiction. Just six of the 19 jurisdictions have achieved more than one-half of the units required. Carlsbad, Chula Vista, Encinitas, Lemon Grove, San Marcos and Vista have all achieved housing growth that is at least 50% of the mid-point of the aggregation of plans through 2020. Multiple jurisdictions, including the unincorporated portions of the County, still have a long way to go to catch up.

San Diego County Housing Growth Progress Update
By Jurisdiction

	Achieved Growth (2012-2016)*	Halfway Point (Forecast)	% of Forecasted Growth Achieved
Carlsbad	1,046	1,638	63.9%
Chula Vista	2,767	5,150	53.7%
Coronado	-18	36	-50.0%
Del Mar	-26	5	-577.8%
El Cajon	-54	129	-42.0%
Encinitas	371	280	132.5%
Escondido	217	2,630	8.3%
Imperial Beach	4	69	5.8%
La Mesa	104	398	26.2%
Lemon Grove	133	153	87.2%
National City	132	385	34.3%
Oceanside	591	1,279	46.2%
Poway	50	155	32.3%
San Diego	10,078	20,791	48.5%
San Marcos	1,661	2,043	81.3%
Santee	159	674	23.6%
Solana Beach	-1	44	-2.3%
Unincorporated	1,851	6,865	27.0%
Vista	620	132	469.7%
Total	**19,685**	**42,852**	**45.9%**

**Total achieved growth differs from the MSA analysis due to SANDAG's methodology*

Residential Growth: By City

Historical Growth (Building Permits)

The following chart details residential housing growth by housing type in each jurisdiction between 1998 and 2017. The majority of the residential growth (43.6% of region) has taken place in the region's largest geographical municipality, the City of San Diego, within which building permits totaled approximately 25,000 single-family homes[18] and 65,000 multifamily homes.

The next largest capture for growth was Chula Vista, which increased its housing stock by approximately 30,000 units (18,000 single-family and 12,000 multifamily).

The northern part of the County added approximately 26,500 single-family homes in the cities of Carlsbad, Oceanside and San Marcos, which represented approximately 25% of single-family unit growth. This is an important distinction because 1 in 4 housing units added over the past 20 years has been added in these three north county cities.

The unincorporated area of the County has historically been a key subregion for supplying single-family homes. The unincorporated area accounted for 20.5% of total single-family home growth during the past 20 years, adding approximately 22,000 homes since 1997, second to the City of San Diego.

[18] The U.S. Census defines a single-family home as "…fully detached, semidetached (semiattached, side-by-side), row houses, and townhouses. In the case of attached units, each must be separated from the adjacent unit by a ground-to-roof wall in order to be classified as a single-family structure. Also, these units must not share heating/air-conditioning systems or utilities."

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San Diego County Housing Stock Growth by Product Types
Total Units Added
1998 - 2017

	Single Family		Multifamily		Total	
	Units Added	% of Growth	Units Added	% of Growth	Units Added	% of Growth
Carlsbad	12,988	12.2%	3,459	3.5%	16,447	8.0%
Chula Vista	17,622	16.5%	11,857	11.9%	29,479	14.3%
Coronado	772	0.7%	176	0.2%	948	0.5%
Del Mar	105	0.1%	2	0.0%	107	0.1%
El Cajon	1,193	1.1%	0	0.0%	1,193	0.6%
Encinitas	3,142	2.9%	413	0.4%	3,555	1.7%
Escondido	3,656	3.4%	1,625	1.6%	5,281	2.6%
Imperial Beach	317	0.3%	196	0.2%	513	0.2%
La Mesa	581	0.5%	1,013	1.0%	1,594	0.8%
Lemon Grove	217	0.2%	262	0.3%	479	0.2%
National City	545	0.5%	997	1.0%	1,542	0.7%
Oceanside	5,589	5.2%	2,905	2.9%	8,494	4.1%
Poway	1,026	1.0%	400	0.4%	1,426	0.7%
San Diego	25,089	23.5%	64,884	65.1%	89,973	43.6%
San Marcos	7,882	7.4%	6,027	6.0%	13,909	6.7%
Santee	1,987	1.9%	692	0.7%	2,679	1.3%
Solana Beach	325	0.3%	34	0.0%	359	0.2%
Vista	1,827	1.7%	1,737	1.7%	3,564	1.7%
Unincorporated	21,918	20.5%	3,018	3.0%	24,936	12.1%
Total	**106,781**	**100.0%**	**99,697**	**100.0%**	**206,478**	**100.0%**

Source: London Moeder Advisors, U.S. Census

Potential Growth

This section details historical housing growth (building permits) and the SANDAG aggregation of potential growth based on the various general plans and housing elements in each jurisdiction. Overall, the majority of cities are anticipated to shift housing additions from single-family to multifamily, which is a shift from historical growth patterns. The following bullet points summarize the table and chart which follows:

- The cities in the northern part of the County (Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, and Vista) have historically experienced the largest increase in single-family home additions across the County. These cities are anticipated to significantly shift their housing additions to mostly multifamily. This shift will have a significant impact on these regions: a major attractor to these cities by consumers has been the availability of single-family homes. As the aggregation of local plans demonstrates a repositioning of the growth composition, many potential buyers who continue to prefer single-family dwellings will live further away (e.g. South County, Unincorporated or Temecula/Murrieta) where single-family homes are available and within their price range.

- Poway and the unincorporated area are the only two areas that are not anticipated to significantly shift their composition of housing additions. These two areas (and Chula Vista in the South County) will present the greatest opportunity for those wishing to purchase a new, single-family home in the future.

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- Chula Vista was one of the largest contributors to single-family home growth between 1998 and 2017, adding approximately 18,000 single-family units, nearly 900 annually. From 2018 to 2050, the City is anticipated to add more than 2,600 single-family homes (approximately 81 single-family homes annually). However, the City is anticipated to increase multifamily housing by more than 22,000 units (9% of countywide multifamily growth and 90% of total growth in Chula Vista).

- The City of San Diego was the largest contributor of multifamily units from 1998 to 2017. In the past 20 years, the City has added approximately 65,000 multifamily units. During this same time period the City also added approximately 25,000 single-family homes (28% of countywide total growth). From 2018 to 2050, the City of San Diego plans to shift increases in inventory to predominantly multifamily by adding more than 154,000 multifamily units.

The vast majority of housing inventory growth is anticipated to be multifamily. The only places to provide a substantial amount of single-family homes are in the unincorporated areas, which would make sense going forward.

Regardless of historical growth patterns, all other cities in San Diego County are expected to see multifamily units as the main composition of growth. This dramatic shift in the composition and location of the supply is likely to create a shortage of single-family homes in those areas, potentially bidding up home prices, exasperating commuting patterns to work or otherwise shutting out household access to homes.

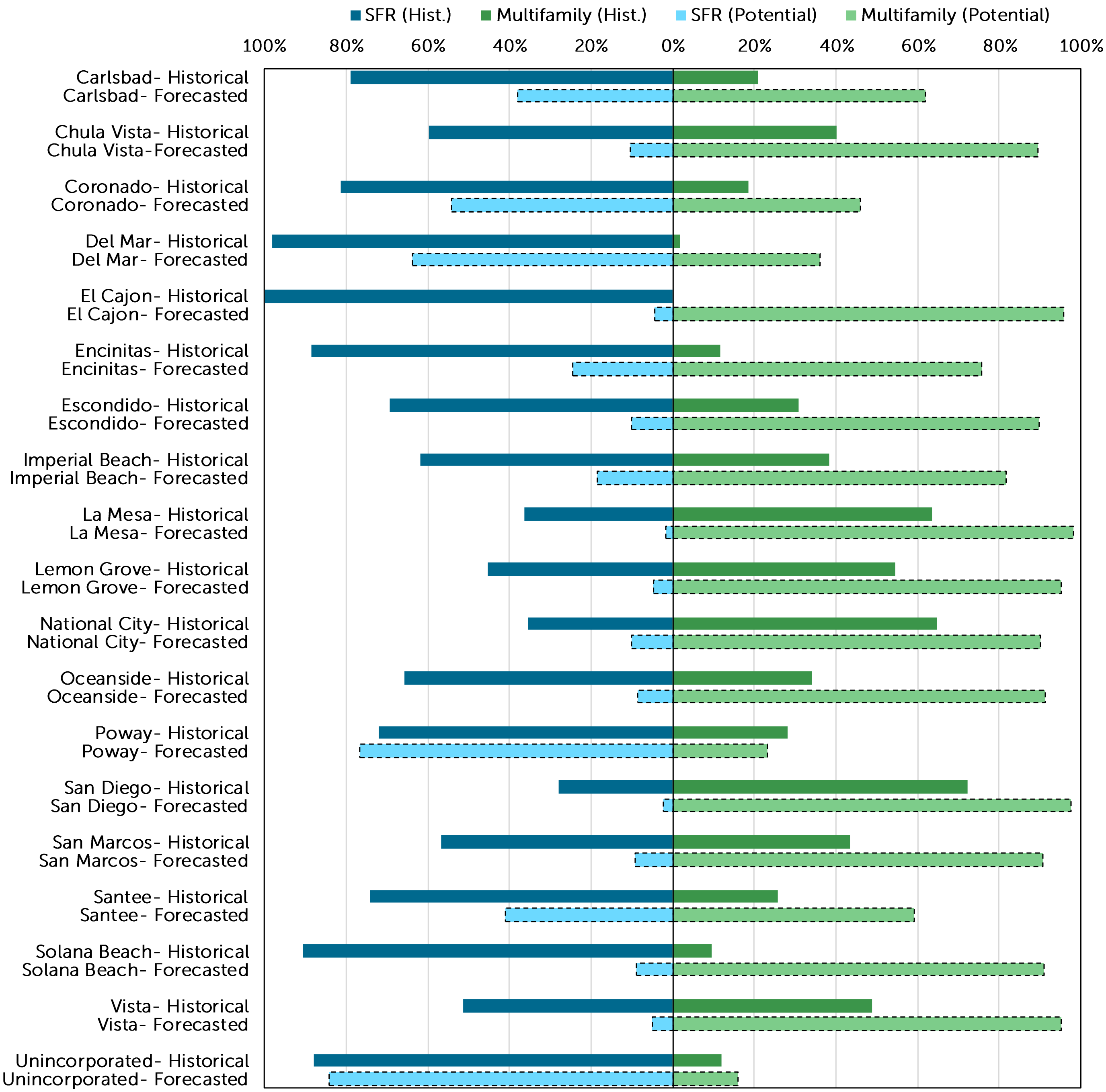
Historical & Potential Housing Growth by Product Type
U.s. Census (1998 - 2017) & SANDAG (2018 - 2050)

	Historical (1998 - 2017)				Potential (2018 - 2050)			
	Single Family		Multifamily		Single Family		Multifamily	
	Units Added	% of Growth	Units Added	% of Growth	Units Added	% of Growth	Units Added	% of Growth
Carlsbad	12,988	79.0%	3,459	21.0%	1,062	38.1%	1,725	61.9%
Chula Vista	17,622	59.8%	11,857	40.2%	2,606	10.5%	22,313	89.5%
Coronado	772	81.4%	176	18.6%	-341	668.6%	290	-568.6%
Del Mar	105	98.1%	2	1.9%	-30	230.8%	17	-130.8%
El Cajon	1,193	100.0%	0	0.0%	-234	-4.8%	5,149	104.8%
Encinitas	3,142	88.4%	413	11.6%	346	24.5%	1,069	75.5%
Escondido	3,656	69.2%	1,625	30.8%	680	10.1%	6,035	89.9%
Imperial Beach	317	61.8%	196	38.2%	-443	-29.0%	1,970	129.0%
La Mesa	581	36.4%	1,013	63.6%	135	1.8%	7,273	98.2%
Lemon Grove	217	45.3%	262	54.7%	-77	-5.3%	1,538	105.3%
National City	545	35.3%	997	64.7%	-949	-12.5%	8,531	112.5%
Oceanside	5,589	65.8%	2,905	34.2%	330	8.6%	3,516	91.4%
Poway	1,026	71.9%	400	28.1%	1,657	76.8%	500	23.2%
San Diego	25,089	27.9%	64,884	72.1%	-3,607	-2.4%	154,716	102.4%
San Marcos	7,882	56.7%	6,027	43.3%	557	9.3%	5,438	90.7%
Santee	1,987	74.2%	692	25.8%	1,226	40.8%	1,776	59.2%
Solana Beach	325	90.5%	34	9.5%	-60	-11.0%	605	111.0%
Vista	1,827	51.3%	1,737	48.7%	388	4.9%	7,483	95.1%
Unincorporated	21,918	87.9%	3,018	12.1%	40,233	84.1%	7,604	15.9%
Total	106,781	51.7%	99,697	48.3%	43,479	15.5%	237,548	84.5%

Source: London Moeder Advisors, U.S. Census, SANDAG

Historical and Potential Housing Growth by Type

Historical (1998-2017) & Potential (2018-2050)



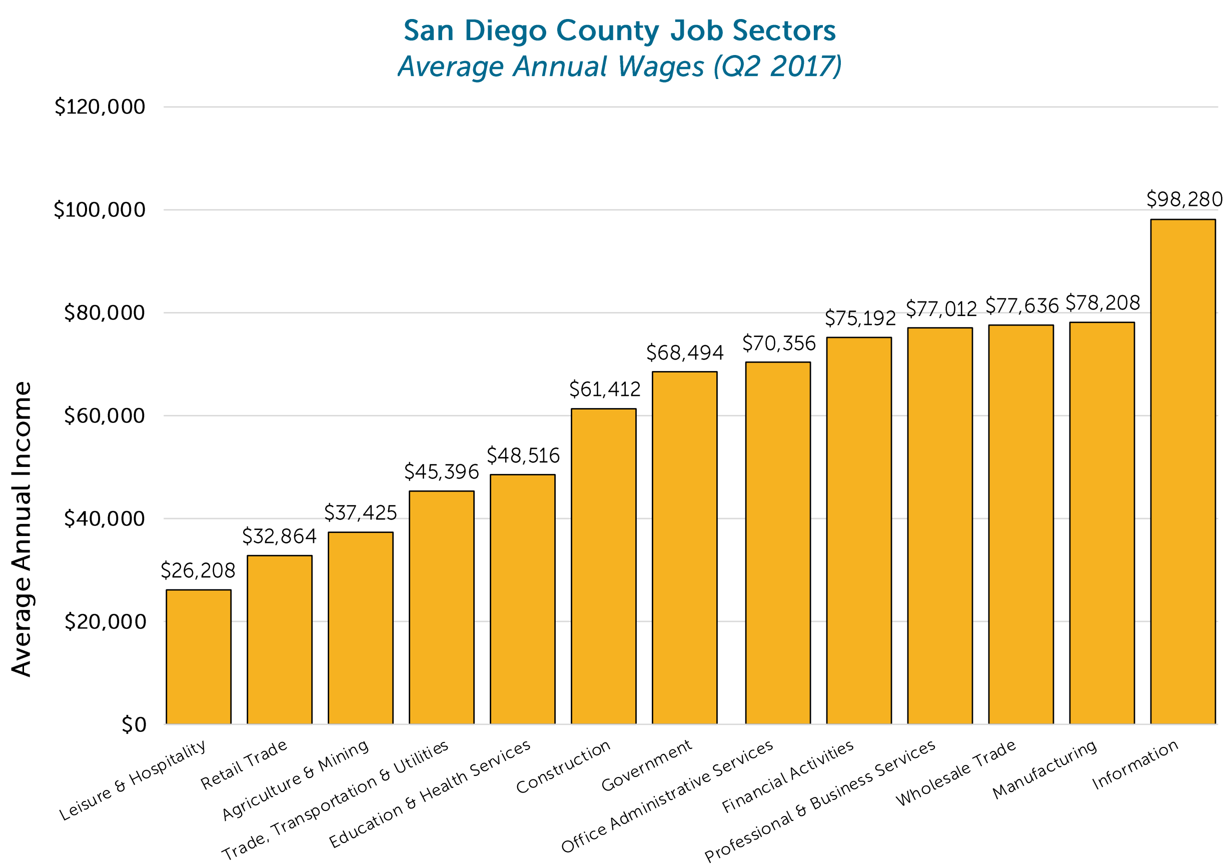
Source: The London Group Realty Advisors, U.S. Census, SANDAG

Distribution Analysis

The purpose of this section is to analyze "where" the jobs and housing units are being added in the region. Equally important is to understand the classification and salaries of jobs that are being added. We have analyzed those jobs that are in single-family home income ranges (over $70,000 annually) that traditionally represent the preponderance of demand for single-family homes (because they can afford the higher associated housing cost).

Job Classifications & Salaries

The following chart details the second quarter 2017 average annual wages by job sector[19]. The single-family home income sectors include Information Systems ($98,280), Manufacturing ($78,208), Wholesale Trade ($77,636), Professional and Business Services ($77,012), Finance and Real Estate ($75,192), and Office Services ($70,356).



Source: London Moeder Advisors, EDD

[19] We utilized the NAICS classification of jobs due to the correlation of data by MSA from SANDAG

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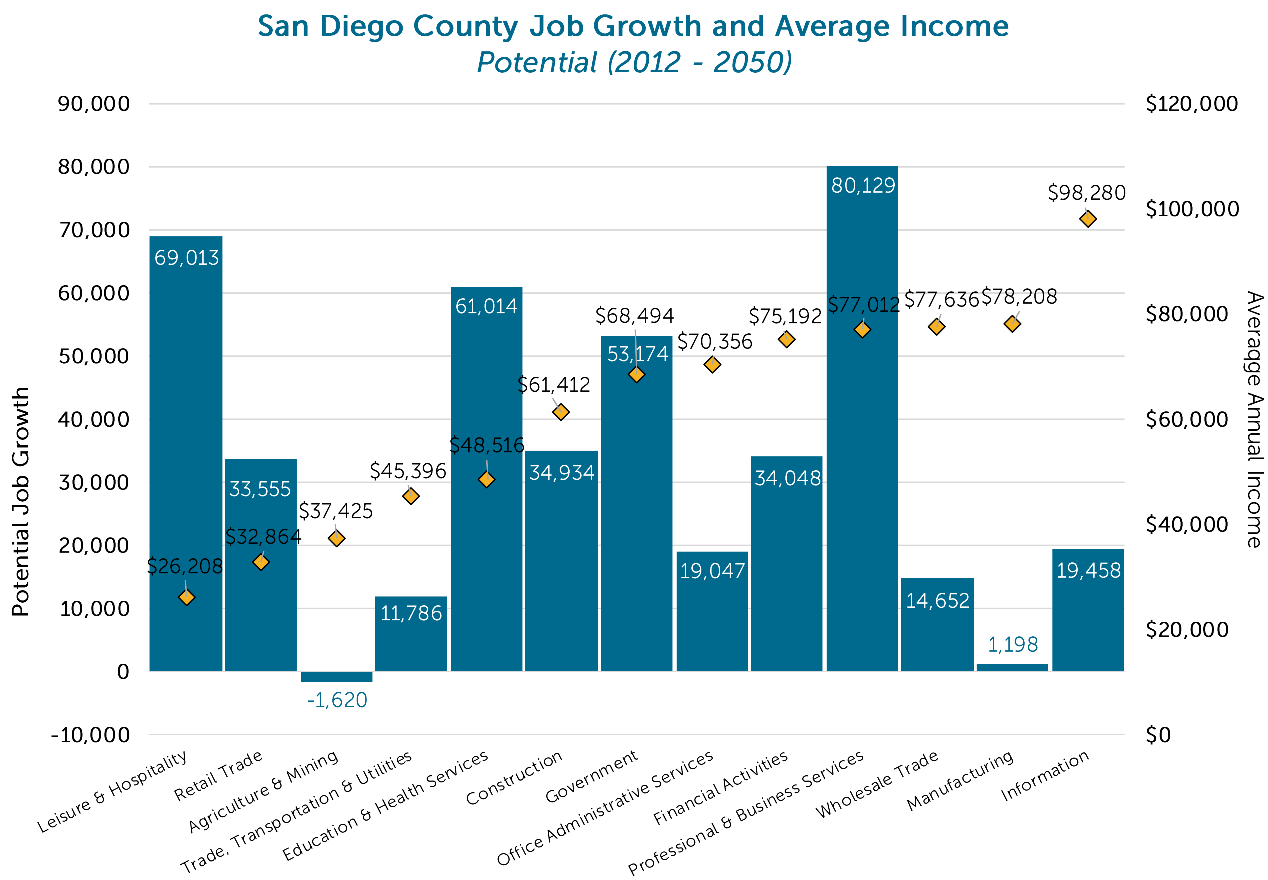
The following chart details the number of jobs anticipated in each sector as well as the 2017 Q2 average annual salary. Professional and Business Services is anticipated to experience the largest growth (80,129 new jobs) while commanding one of the larger incomes ($77,012). The other sector expected to grow significantly is leisure and hospitality (69,013 new jobs) with an average income of $26,208. By focusing on the job growth by sector and corresponding salary, we can predict where the demand for single-family homes and multifamily units will occur. The following section examines this relationship.



Source: London Moeder Advisors, SANDAG, EDD

Demand Based on Jobs to Housing

This section analyzes the relationship between job and housing growth. One of the key metrics for measuring job/housing balance is the jobs-to-housing ratio. Based on the 2000 U.S. Census, the San Diego region exhibited a ratio of 1.33 jobs for every housing unit. However, based on SANDAG's identified potential growth for the region, we will require a ratio of 1.41 jobs for every housing unit to accommodate future growth, or 326,117 new homes for the 460,492 anticipated new jobs.

The map on the following page depicts the jobs-to-housing ratio (in black) in each of the MSAs. To better understand single-family home demand, we analyzed the ratio of jobs at the single-family home income ranges to single-family homes (blue numbers), based on a minimum income level of $70,000.

Jobs at single-family home income ranges are mostly being added in those portions of the region where the lack of new single-family homes is most acute.[20]

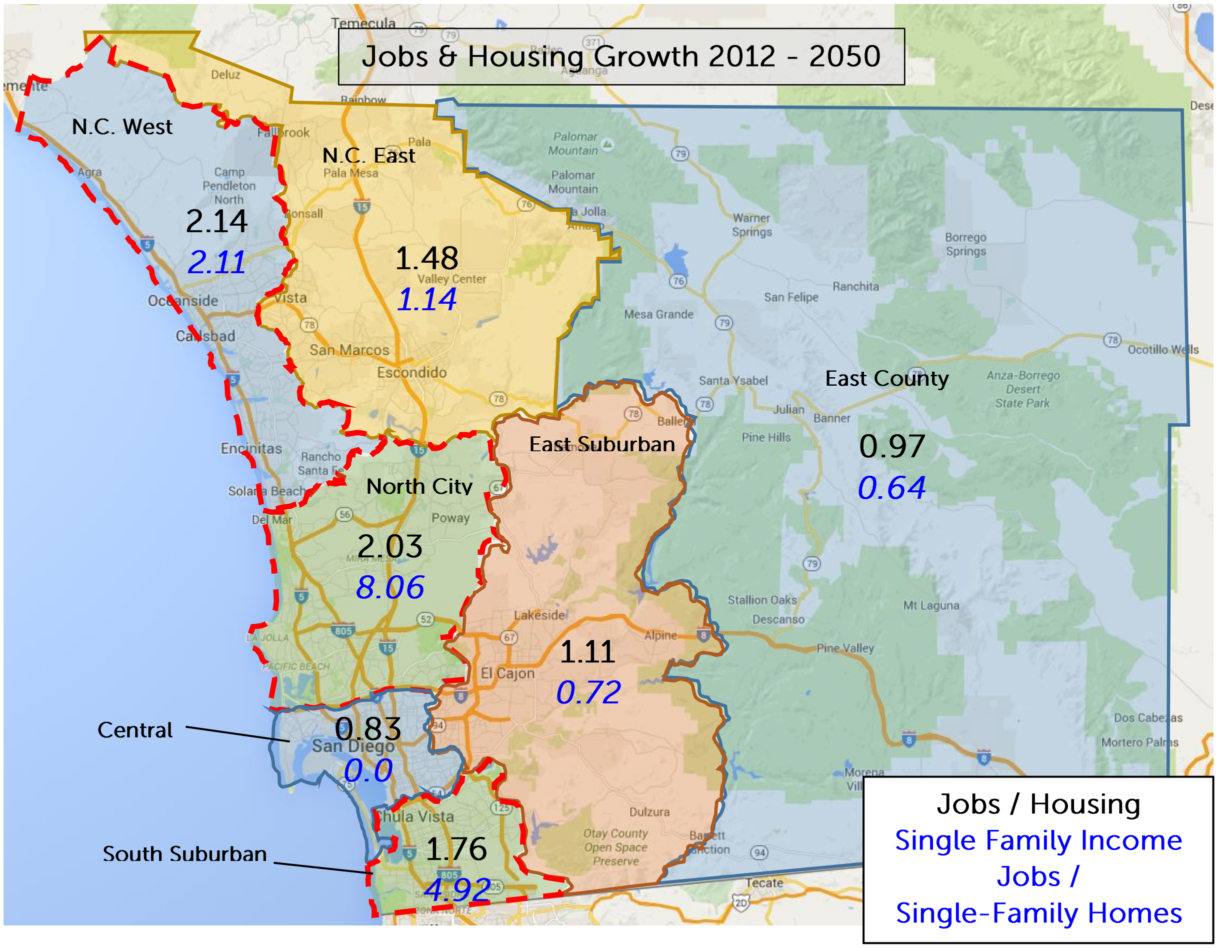
Based on this geographical analysis, the areas highlighted in red demonstrate where there is a significant gap between where the jobs are being added compared to where housing is being added. In North City, the jobs-to-housing ratio is 2.03, which suggests that there is more demand for housing based on the current job growth analysis.

However, the disconnect is more troubling when observing the number of jobs at the single-family home income ranges to single-family homes, which is anticipated to surpass 8.0. This is an important metric because the number of jobs at single-family home income ranges is a major determinant for demand of single-family homes. An examination of projected demand in North City suggests that those with jobs at single-family home income ranges will look for housing options outside of North City.

Both the North County West and South Suburban markets are anticipated to generate more jobs than housing to support them (2.14 and 1.76 respectively). This is also true of the ratio of jobs at single-family home income ranges to single-family homes (2.11 and 4.92, respectively).

While employees in South Suburban may find accessible housing options in East Suburban, the same is not true in North City and contiguous North County West. Employees in these areas will also have to look to East Suburban or Central and commute further north, which is an ongoing trend that can be witnessed along the I-805 from Chula Vista to the Sorrento Mesa area. The other option for North County West and North City employees will be to live in Downtown or the high-density neighborhoods surrounding Downtown.

[20] If additional income categories are included, the ratio of jobs to single-family homes will increase.



Job and Housing Growth Potential by MSA
2012 - 2050

	Job growth	Housing growth	Ratio
Central	85,725	103,485	0.83
East County	3,956	4,059	0.97
East Suburban	46,067	41,631	1.11
North City	139,358	68,663	2.03
North County East	63,125	42,616	1.48
North County West	37,117	17,372	2.14
South Suburban	85,144	48,291	1.76
Total	**460,492**	**326,117**	**1.41**

Single-Family Home Income Job and SFD Housing Growth Potential by MSA
2012 - 2050

	SFH Growth	SFD Growth	Ratio
Central	28,668	-6,250	-4.59
East County	2,555	4,002	0.64
East Suburban	16,904	23,425	0.72
North City	50,925	6,317	8.06
North County East	21,647	19,039	1.14
North County West	14,245	6,766	2.11
South Suburban	33,588	6,826	4.92
Total	**168,532**	**60,125**	**2.80**

By Supervisorial District

We have also conducted the analysis of potential job and housing growth from the perspective of the five supervisorial districts which govern San Diego County. The countywide job-to-housing ratio is 1.41, suggesting that to effectively balance job growth with housing each District must be at or below this ratio. According to SANDAG, District 1, District 3 and District 5 are expected to add more jobs than housing. This suggests that persons employed within these three Districts must seek housing in District 2 and District 4, or perhaps outside of San Diego County.

Another way to illustrate this *spillover demand* from one district is to examine the ratio of jobs at the single-family income range to single-family homes. While the countywide average was 0.69 in 2012, the SANDAG potential aggregation of growth from 2012 to 2050 shows a ratio of 2.80 jobs at the single-family income range to single-family homes. All five Districts are expected to grow at a ratio above the 2012 ratio of 0.69. Essentially, all five Districts will fail to produce an adequate supply of single-family homes

The following table demonstrates this analysis:

Job and Housing Growth by Supervisorial District
2012-2050

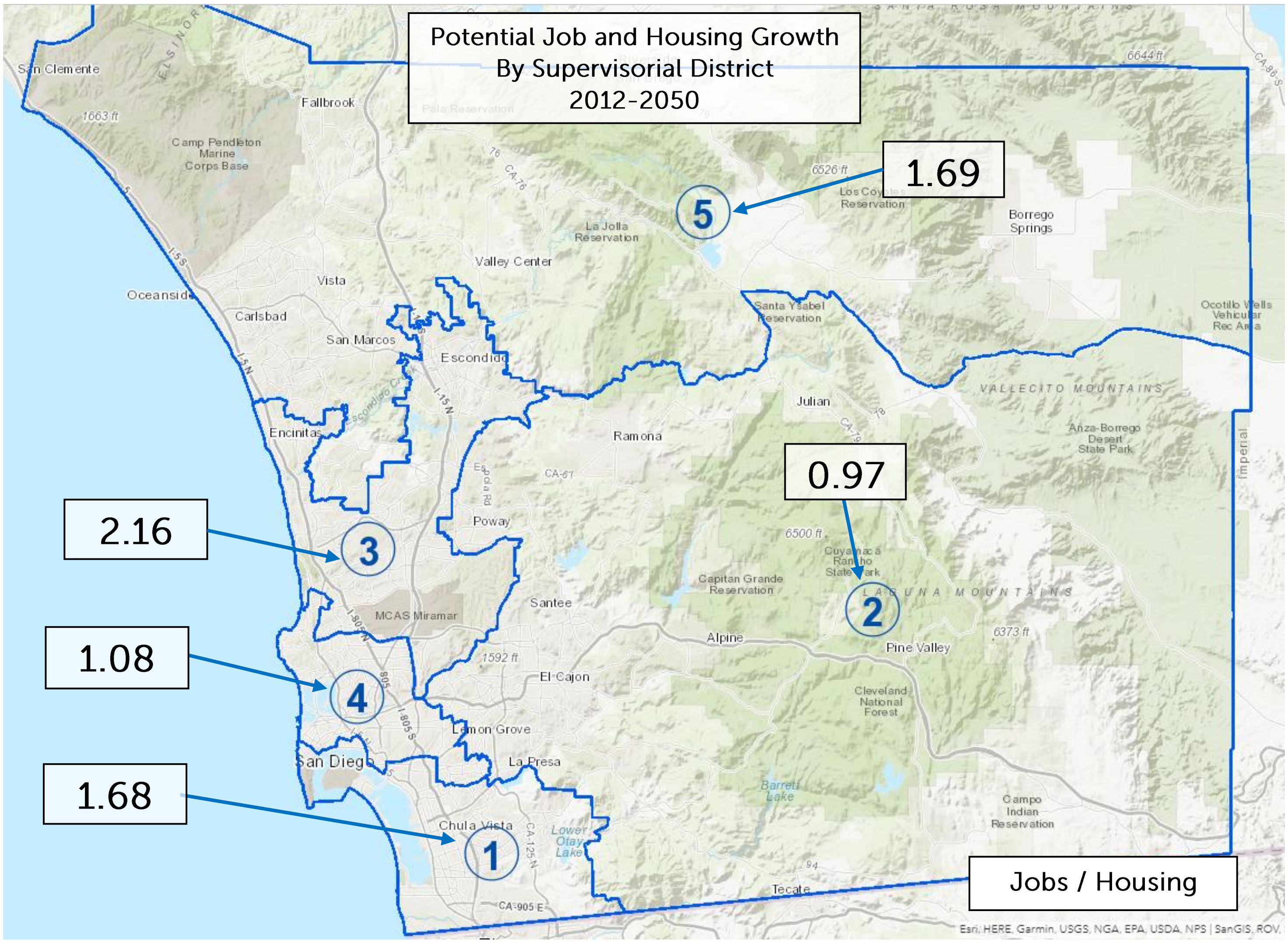
	Job Growth			Housing Growth				Jobs to
	SFH Incomes	Other Incomes	Total	Single Family	Multifamily	Mobile Homes	Total	Housing
District 1	43,488	61,023	113,795	7,966	62,816	(2,987)	67,795	1.68
District 2	22,779	34,412	60,846	25,686	38,142	(1,299)	62,529	0.97
District 3	30,978	50,427	85,654	10,108	29,964	(431)	39,641	2.16
District 4	40,669	65,702	114,549	(8,306)	115,177	(1,250)	105,621	1.08
District 5	30,618	50,292	85,648	24,671	26,463	(603)	50,531	1.69
Total	**168,532**	**261,856**	**460,492**	**60,125**	**272,562**	**(6,570)**	**326,117**	**1.41**

Source: London Moeder Advisors, SANDAG

The following map examines the ratios of jobs-to-housing and jobs at the single-family home income range to single-family homes. The 1st, 3rd and 4th Supervisorial Districts are expected to create demand for 166,979 single-family homes but will only deliver a total of 9,768 single-family homes, creating a deficiency of 157,211 single-family homes over the next 38 years.

However, most of the single-family homes will be built in Districts 2 and 5 (total of 50,357 homes). The unmet demand from Districts 1, 3, and 4 will ultimately spill over into District 2 and District 5 which are also expected to fall short of single-family home demand. This is a phenomenon for which policymakers must prepare by 1) understanding the magnitude of the potential impact; and 2) ensuring an adequate supply of single-family homes for both its internal employment growth as well as spillover demand.

District 5 already includes the high price and high-paying job market of Carlsbad and other parts of North County. But District 2 has typically been affordable to those who actually work in District 2 (e.g. Santee, El Cajon, La Mesa, etc.).


Potential Job and Housing Growth
By Supervisorial District
2012-2050
1.69
5
0.97
2
2.16
3
1.08
4
1.68
1
Jobs / Housing
San Clemente
Fallbrook
Camp Pendleton Marine Corps Base
Valley Center
Vista
Oceanside
Carlsbad
San Marcos
Escondido
Encinitas
Ramona
Julian
Borrego Springs
Poway
Santee
MCAS Miramar
El Cajon
Alpine
Pine Valley
Lemon Grove
La Presa
San Diego
Chula Vista
Tecate
Cleveland National Forest
Campo Indian Reservation
Anza-Borrego Desert State Park
VALLECITO MOUNTAINS
LAGUNA MOUNTAINS
Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS | SanGIS, ROV,

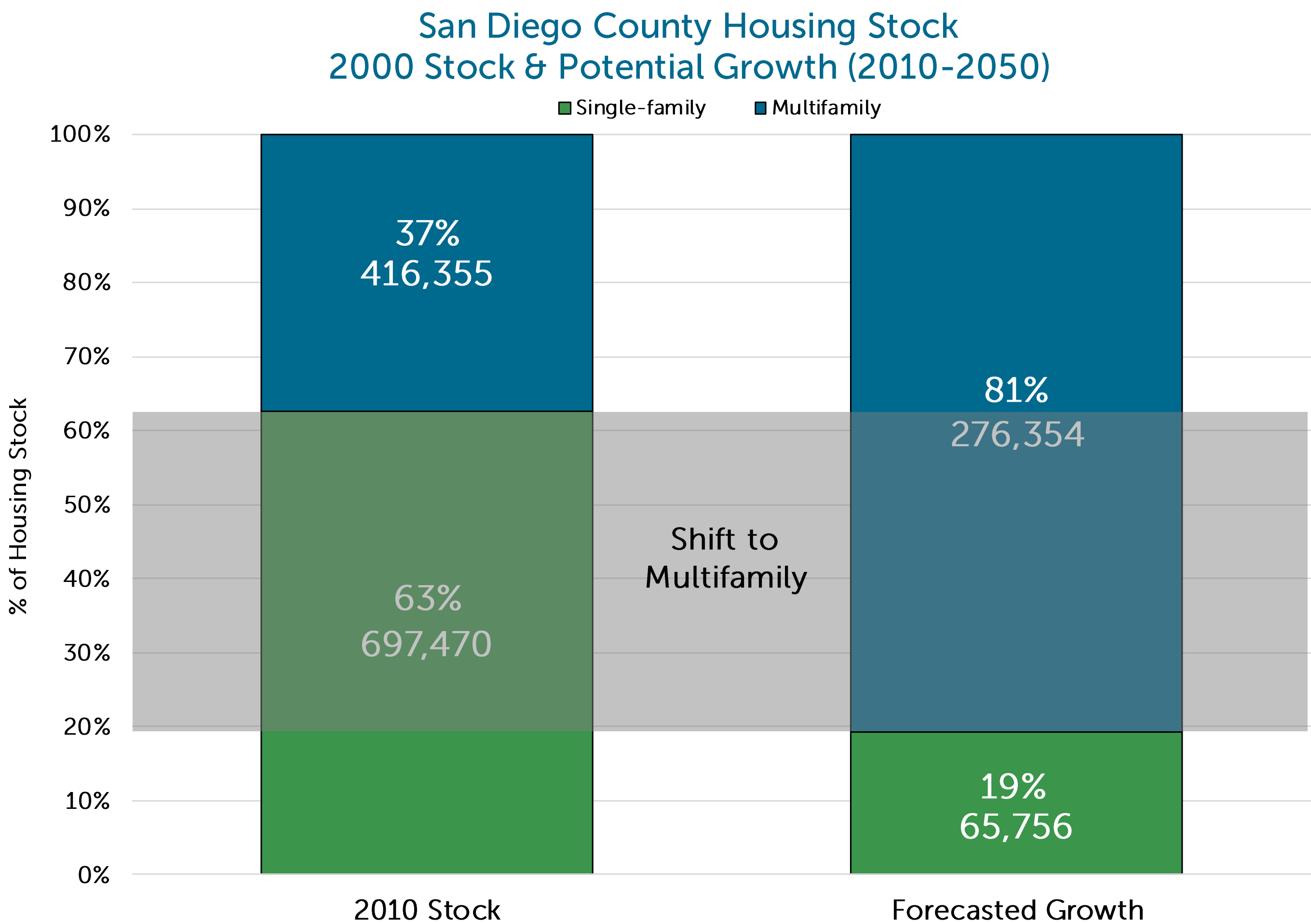
Shift in Housing Preferences

The purpose of this section is to analyze the shift of housing types being built compared to historical and future housing preferences.

Composition of Potential Growth

Historically, the County has been able to accommodate the consumer preference for single-family homes over multifamily. This is represented by the County's 2010 housing stock which was comprised of 63% single-family homes (697,470 units). According to the SANDAG aggregation of local plans this will be changing: only 19% of potential housing growth will include single-family homes (65,756 units). The balance of growth is anticipated to be multifamily (81% or 276,354 units).

If we anticipated single-family demand by using the existing housing stock as our best measure of historical preferences (63% single-family), an estimated 214,515 single-family homes would be demanded. However, the aggregation of local plans predicts we will only add as many as 65,756 homes, a ratio of 3 out of 10, suggesting that only 30% of future residents will be able to purchase a new, single-family home. The other 70% will be accommodated in multifamily units or move to a more affordable area either with a substantially longer commute to their San Diego County employer, or where they can find employment with a lower cost of living. The anticipated unavailability of single-family homes across the County will significantly impact commute times, vehicle miles traveled, home values, carbon emissions and housing prices.



Source: London Moeder Advisors, SANDAG

Future Generations

This section analyzes the anticipated demand for housing types from future generations. Extensive research has been conducted in recent years pertaining to the 78.6-million-person Millennial population. This cohort is now 20 to 37 years old and is larger than the Baby Boom generation. It is important to note that Gen Next (sometimes referred to as or Gen Z, persons under 20 years of age) is next up in generating housing demand likely expected to be as strong as their predecessor cohorts. Therefore, strong housing demand is anticipated for at least two generations.

Recent historical development has been focused on building smaller units, usually in multifamily settings, the demand from Millennial consumers was centered on smaller, more urban product. However, current research is now demonstrating that the housing propensities for Millennials are changing, just as it has for the generations before it.

In a 2015 presentation at the International Builders Show, the National Association of Home Builders[21] presented a survey indicating that 75% of Millennials (formerly Gen Y), who are mostly first-time buyers, want to purchase a single-family home. They also prefer (66%) to live in the suburbs.

According to the recently published study on Millennials by the Urban Land Institute ("ULI")[22], approximately 51% of Millennials consider themselves "City People" and 49% consider themselves "Suburbanites".[23] In addition, approximately 70% of Millennials expect to be homeowners over the next five years (by 2021). This generation is the single largest source of new housing demand as well as first-time homebuyers.

The table on the following page details the composition of housing required to accommodate this population with their preferred housing type. The table assumes that 100% of City People live in multifamily units. Suburbanites are assumed to live in the same ratio of single-family/multifamily that has been demanded historically (62.5% single-family versus 37.5% multifamily). Based on this housing type preference, there will be a shortage of single-family homes demand of at least 39,015 homes.

[21] Home Trends & Millennials' Home Preferences. Rose Quint. January 2015
[22] 2015 ULI Report: Gen Y and Housing (What they want and where they want it).
[23] Excludes that portion of the population that consider themselves small town rural people.

Reconciliation of Future Generations Housing Expectations
San Diego Region
Scenario 1: MF Growth is Dispersed Throughout Region

Supply	
	2010-2050 Growth
Single-family	65,756
Multifamily	276,354
Total Units	**342,110**

Demand			
Housing Preferences			
City People	51%	100.0% MF	**174,476**
Suburbanites	49%	62.5% SF	104,771
		37.5% MF	62,863
			167,634
Total Units			**342,110**

Multifamily Reconciliation	
Future Supply	276,354
Future Demand	237,339
Over Supply:	**39,015**

Single Family Reconciliation	
Future Supply	65,756
Future Demand	104,771
Shortage:	(39,015)

Source London Moeder Advisors, U.S. Census, ULI, SANDAG

The ULI study also points out that of the portion of the population that are City People, approximately 75% live in central-city neighborhoods outside of downtowns. In San Diego this is largely represented by the Central MSA, which includes Downtown and the surrounding areas (e.g. Coronado, Hill Crest, South Park, Point Loma, etc.).

This statistic of living in central-city neighborhoods is not surprising. Communities surrounding downtown are quite vibrant with restaurants, shops and walkable communities. Gentrification has also taken place as a younger and more affluent demographic segment has brought higher incomes and expenditures to these neighborhoods. This is consistent with the phenomenon in the urban rings that surround other downtown areas throughout the nation.

We have prepared a second scenario that adjusts for "where" the Gen Y City People choose to live. SANDAG anticipates that as many as 276,354 multifamily units will be added to the region during the 2010-2050 period. In addition, there are 112,203 multifamily units planned for the Central MSA. This indicates that the balance of multifamily (164,151 units) will be dispersed throughout the County in otherwise more suburban areas.

However, based on our research only 86,215 multifamily units would be demanded outside of the Central MSA. This suggests that production of single-family homes will fall 77,936 units short of accommodating the preferences of Gen Y.

The following table details our analysis:

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Reconciliation of Future Generations Housing Expectations
San Diego Region
Scenario 2: MF Growth Focused on Central Subregion

Supply	
	2010-2050 Growth
Single-family	65,756
Multifamily	276,354
Total Units	**342,110**

Demand			
Housing Preferences			
City People	51%	100.0% MF	**112,203**
Suburbanites	49%	62.5% SF	143,692
		37.5% MF	86,215
			229,907
Total Units			**342,110**

Multifamily Reconciliation	
Future Supply	
Central Subregion	112,203
Balance of County (37.5%)	164,151
Total Supply	276,354
Future Demand	
Central Subregion	112,203
Balance of County (37.5%)	86,215
Total Demand	198,418
Over Supply:	**77,936**

Single Family Reconciliation	
Future Supply	65,756
Future Demand	143,692
Shortage:	**(77,936)**

Source London Moeder Advisors, U.S. Census, ULI, SANDAG

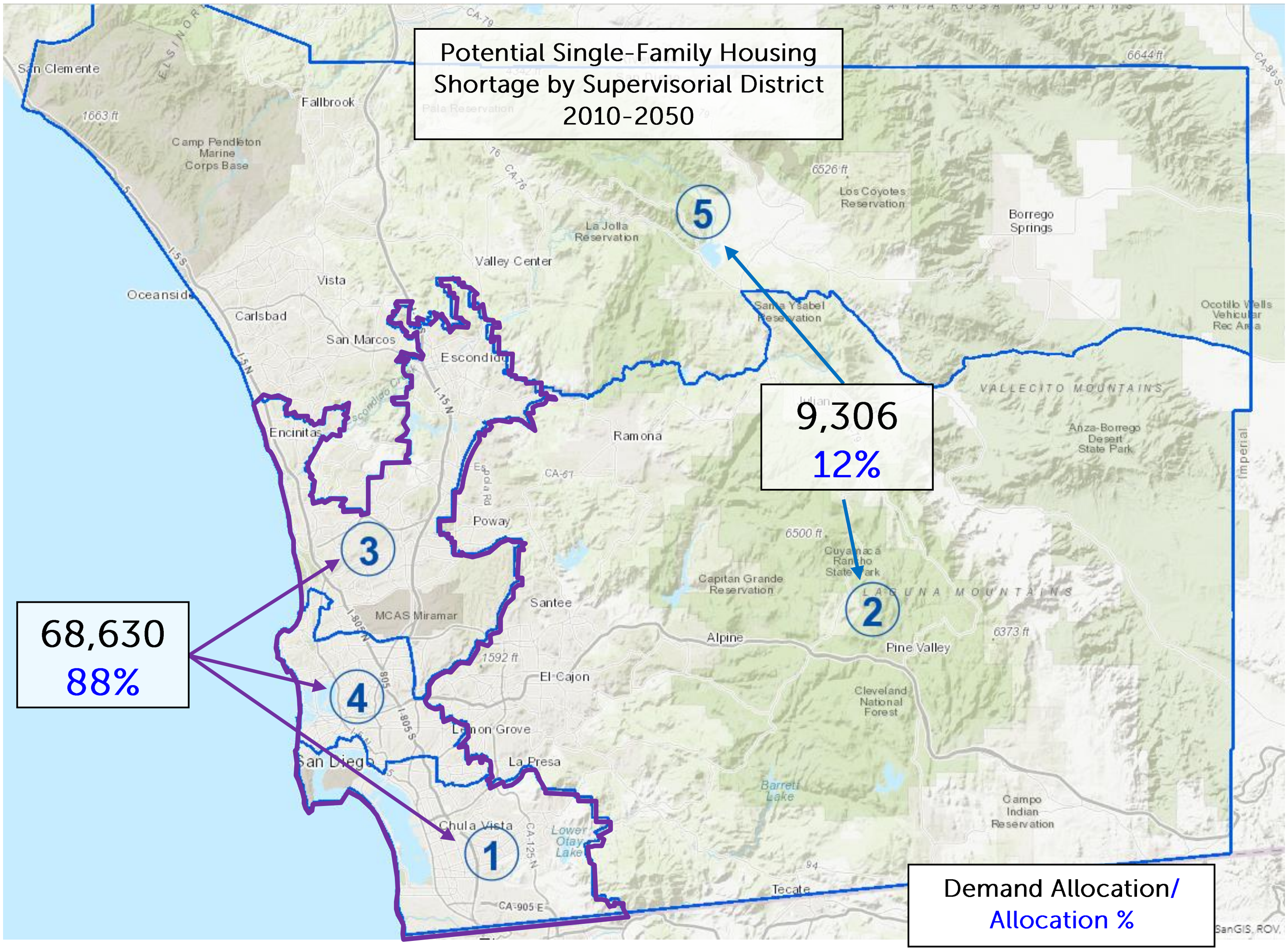
The following table estimates the potential single-family home shortage by allocating the demand based on the fair share of housing on the ground today. When we allocate the estimated 143,692 demanded single-family homes across the county based on current stock we find that all five of the county's districts are expected to experience a shortage of single-family homes between 2010 and 2050.

District 4, which currently contains 19% of the county's single-family homes is expected to experience a decrease of single-family homes which leads to an overall shortage of 35,301 units by 2050. SANDAG's aggregation of plans assumes that older single-family detached homes will be demolished and replaced by multifamily product leading to the decrease in single-family homes in District 4. District 3 is expected to create a demand for 31,444 single-family homes however, only 11,892 are expected to be delivered, creating a shortage of 18,565 single-family homes.

Potential Housing Growth Distribution 2010-2050

	2010 SF Stock	%	Single-Family Growth 2010 - 2050	Demand Allocation	Shortage
District 1	113,194	16%	8,556	23,320	(14,764)
District 2	152,629	22%	27,414	31,444	(4,030)
District 3	147,836	21%	11,892	30,457	(18,565)
District 4	130,376	19%	(8,441)	26,860	(35,301)
District 5	153,435	22%	26,335	31,611	(5,276)
Total	697,470		65,756	143,692	(77,936)

The map on the following page provides a visual representation of the table above. The 1st, 3rd and 4th Supervisorial Districts (outlined in purple) are expected to experience a shortage of 68,630 single-family homes (88% of the county-wide shortage). While Districts 2 and 5 are expected to experience a shortage of 9,306 single-family homes (12% of the county-wide shortage). This is significant because most of the jobs in the single-family home income ranges are located in the more central Districts (1, 3 and 4). It is important to recognize this relationship and understand how the single-family home shortage will impact all five districts.


Potential Single-Family Housing
Shortage by Supervisorial District
2010-2050
9,306
12%
68,630
88%
Demand Allocation/
Allocation %
1
2
3
4
5

Affordability Implications

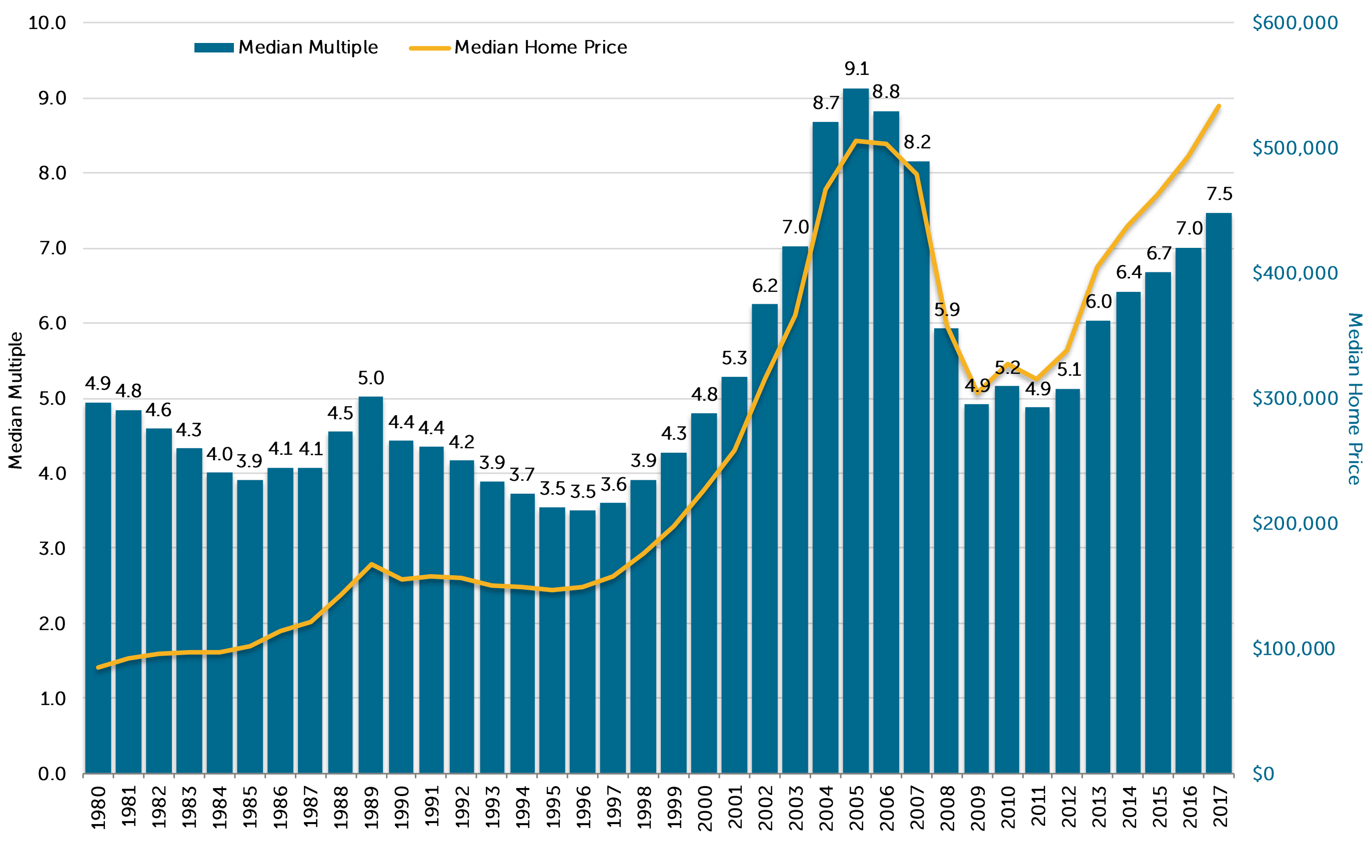
For Sale Housing

The median home price in San Diego County continued to increase in 2017 to $533,600 and has surpassed the pre-recession peak set in 2005 ($506,000). However, the median multiple[24] (price divided by income) is much lower (7.5 compared to 9.1). Median income in San Diego County has increased 29% since 2005 compared to a median home price that is just 5% higher than the 2005 peak.

We anticipate the median multiple to continually increase due to the inability of supply (new building permits) to keep up with housing demand, particularly for single-family homes near employment centers.

Housing Affordability

Median Multiple (Median Price / Median Income)



Source: The London Group Realty Advisors, MLS, U.S. Census

[24] The 2018 Demographic International Housing Affordability Survey delineates housing affordability into the following median multiple categories: Affordable- 3.0 & under, Moderately Unaffordable- 3.1 to 4.0, Seriously Unaffordable- 4.1 to 5.0, Severely Unaffordable- 5.1 & over.

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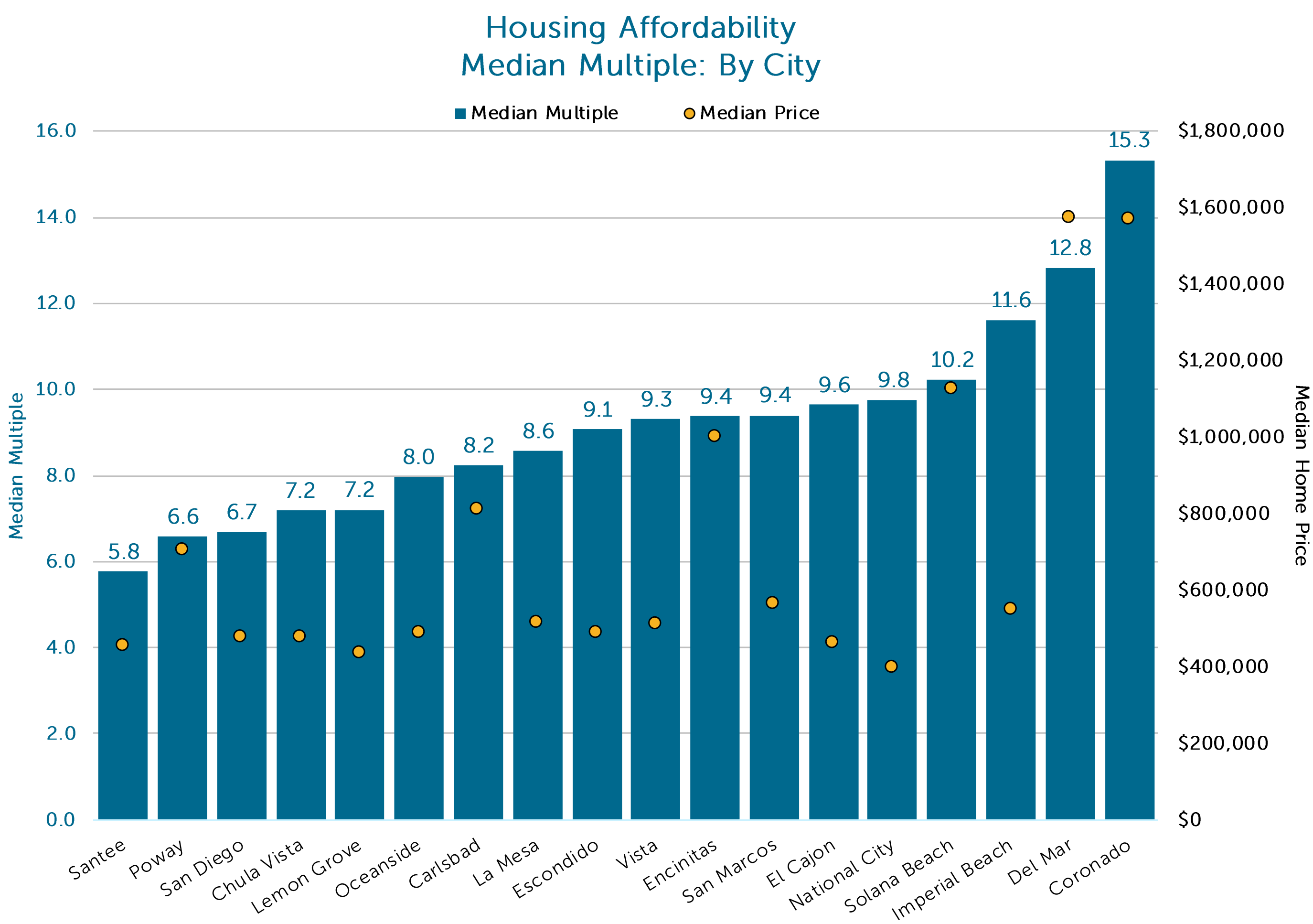
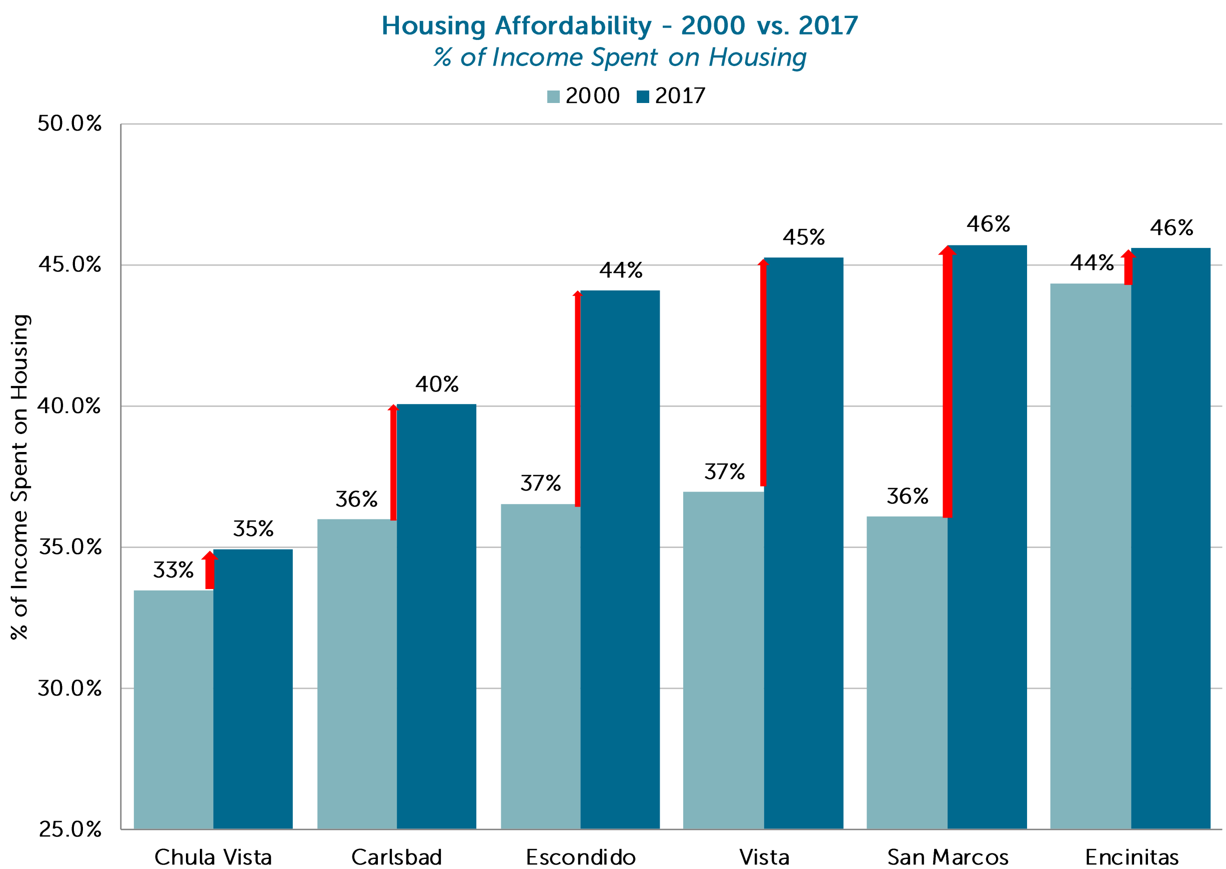
The following chart highlights median home price in relation to median income in various cities across San Diego County. Not surprisingly, housing is least affordable in the beach cities of Solana Beach and Del Mar, as well as the island of Coronado. Poway and San Diego are relative bargains because median incomes on par with the previously mentioned beach cities, but with lower median housing prices.



Source: London Moeder Advisors, MLS, SANDAG

The following chart highlights the percentage of income spent on housing for individual key areas in the County (e.g. North County and South County cities). The housing data includes all for-sale housing (e.g. condos, townhomes, single-family detached). The housing cost is based on a 30-year loan with 15% down payment. It also accounts for the higher interest rate of 8.05% in 2000 and the 3.99% today.

Chula Vista and Encinitas experienced the smallest increases in housing cost between 2000 and 2017. All North County cities now require a larger portion of income dedicated to housing cost. Compared to 2000, it now requires approximately $12,000 more in annual income to afford housing in North County. This is a product of relatively limited housing construction coupled with above average job growth in North County, particularly in higher paying job sectors.



Source: London Moeder Advisors, MLS, SANDAG

Rental Housing

Between 2007 and 2016, San Diego County rental households increasingly spent more of their income on rent. The median income for rental households was $42,341 in 2007 while the median rent was $1,116 per month. This translates to 31.6% of household income spent on rent. By 2016, median household income increased 12%, or 1.3% annually. However, the median rent increased more than double the rate of income at 25%, or 2.8% annually. This translates to 35.3% of household income spent on rent in 2016.

San Diego County
Renter Household Income vs. Monthly Rent

	2007	2016	Total Change	Annual Change
Median Income	$42,341	$47,364	12%	1.3%
Median Rent	$1,116	$1,395	25%	2.8%
Rent as a % of Income	31.6%	35.3%		

Source: London Moeder Advisors, U.S. Census

The continuous increase in San Diego rents in recent years has made the region one of the most expensive places to live in the nation. The following table details the percentage of income spent on housing costs for renters according to the U.S. Census. Renting in San Diego requires 35% of income, which is more than the areas of Mountain View, San Francisco and Santa Clara. While these markets have higher rents, they also experience much higher median incomes that make rent more affordable compared to San Diego, as well as Orange and Los Angeles counties.

Rental Housing Affordability
2016

Jurisdiction	Monthly Rent	Annual Renter's Median Household Income	% Income
Mountain View City	$1,912	$88,235	26%
San Francisco	$1,632	$68,324	29%
Santa Clara County	$1,813	$71,248	31%
San Diego County	**$1,395**	**$47,364**	**35%**
Orange County	$1,608	$53,471	36%
Los Angeles County	$1,264	$40,785	37%

Source: London Moeder Advisors, U.S. Census

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Economic Impact Analysis

North County Housing 2018

February 2018

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IMPACT OF HOUSING ON EMPLOYMENT & THE ECONOMY

BW Research was commissioned by London Moeder Advisers to follow-up on a 2016 study of the economic impacts of housing on the regional San Diego County economy. This study focused more specifically on the economy and businesses in North County and the I-15 corridor. The research objectives of the study are to:

- Assess and update the impact housing has on the region's workforce and labor supply
- Evaluate and update the impact housing has on the region's employers and their businesses
- Identify the impact housing has on regional and local economic development

After updating an analysis of economic, demographic and labor market data, the follow-up research included a survey of 102 businesses in San Diego's North County. The random sampling of businesses was stratified by geography[1], business size (by number of employees) and industry. The survey was meant to assess the priorities of San Diego North County businesses and the challenges facing the region's employers.

What We Learned from the 2016 & 2018 Housing Studies

The research findings for the housing studies in San Diego County (2016) and North San Diego County (2018) illustrated several key findings, including;

1. **2016: Even as the economy has improved in San Diego County, approximately half of the region's renters spend over 35 percent of their total household income on housing**. In fact, renters from North County have experienced an increase in the proportional cost (as a percentage of household income) of rents from 2011 to 2014. **2018**: **In North County, approximately half of renters continue to spend over 35 percent of their gross income on housing**, a higher portion than communities in the Bay Area, such as Santa Clara County[2]. The discrepancy between increased housing costs and minimal wage increases continues to exacerbate this challenge and as the results show below is negatively impacting employers ability to find qualified workers.

2. **2016: "Ability to find reasonably priced housing for employees that is close to work"** was the issue San Diego County employers were most dissatisfied with (28%) of the eight issues tested. The only other issue to register just over 10 percent dissatisfaction, was the "Ability to attract new employees that live outside the region". The nexus between talent and housing was a consistent theme in the employer survey results. **2018**: **"Ability to find reasonably priced housing for employees that is close to work" remains the issue North County employers were most dissatisfied with**, of the eight examined, and dissatisfaction went up considerably from 25 percent in 2016 to 47 percent in 2018.

[1] Sample was stratified by the four sub-regions, City of San Diego, East County, North County and South County.
[2] Source: American Fact Finder, Santa Clara County: 2016

3. **2016: Retaining and attracting talent was the biggest challenge identified by San Diego County businesses,** when asked to identify the biggest obstacle for their firm's growth. The need to attract and retain talent was identified more often than the overall cost/expenses associated with doing business in the region. **2018: The challenge of recruiting and retaining talent who can find housing in the area** continues to be a real difficulty for most North County employers. Almost one in three (30%) North County employers indicated that "recruiting employees who can find adequate housing within a reasonable distance from work" was a great difficulty and another 43 percent indicated that it is providing some difficulty. Almost three-quarters (74%) of North County businesses are having at least some difficulty "retaining valuable employees who want to purchase housing within a reasonable distance from work".

What We Learned from the 2018 North County Housing Update

The 2018 North County housing study showed that the fundamental housing and employment challenges that were initially identified in 2016 have only worsened in North County over the last two years as a growing proportion of employers indicate dissatisfaction and difficulty with finding and keeping qualified workers, particularly as it relates to their ability to find housing. The research findings from the 2018 housing study in North County not only strengthened the initial findings from the baseline San Diego County housing study in 2016 they introduced three new findings;

1. **Almost one-third (31%) of North County employers have provided some type of housing assistance for their employees to move into or near North County**. This house assistance could take the form of relocation or mortgage assistance, housing allowances or company provided housing. Another 21 percent of North County employers are at least possibly considering some type of housing benefit or subsidy for their North County employees.
2. **Unemployment levels have dropped below three percent[3], commute times have increased[4] and job growth has started to slow in North County,** as employers in North County face an increasingly tight labor market with less available qualified job applicants.
3. **North County employers have grown less positive about the region as a place to do business and have indicated more difficulty finding qualified job applicants.** In 2016, 47 percent of North County businesses indicated that San Diego County was an excellent place to do business, in 2018 that number dropped to 26 percent. Over the same time period, the proportion of North County employers that indicated difficulty finding qualified applicants went from four percent indicating great difficulty and another 56 percent indicating some difficulty to 17 percent great difficulty and another 61 percent indicating some difficulty.

All of these results indicate that North County employers are already feeling the costs associated with inadequate housing supply and the direct impact it has upon a qualified local workforce.

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[3] Compiled from California EDD Data, January 2018
[4] North County Prospects 2017 to 2018

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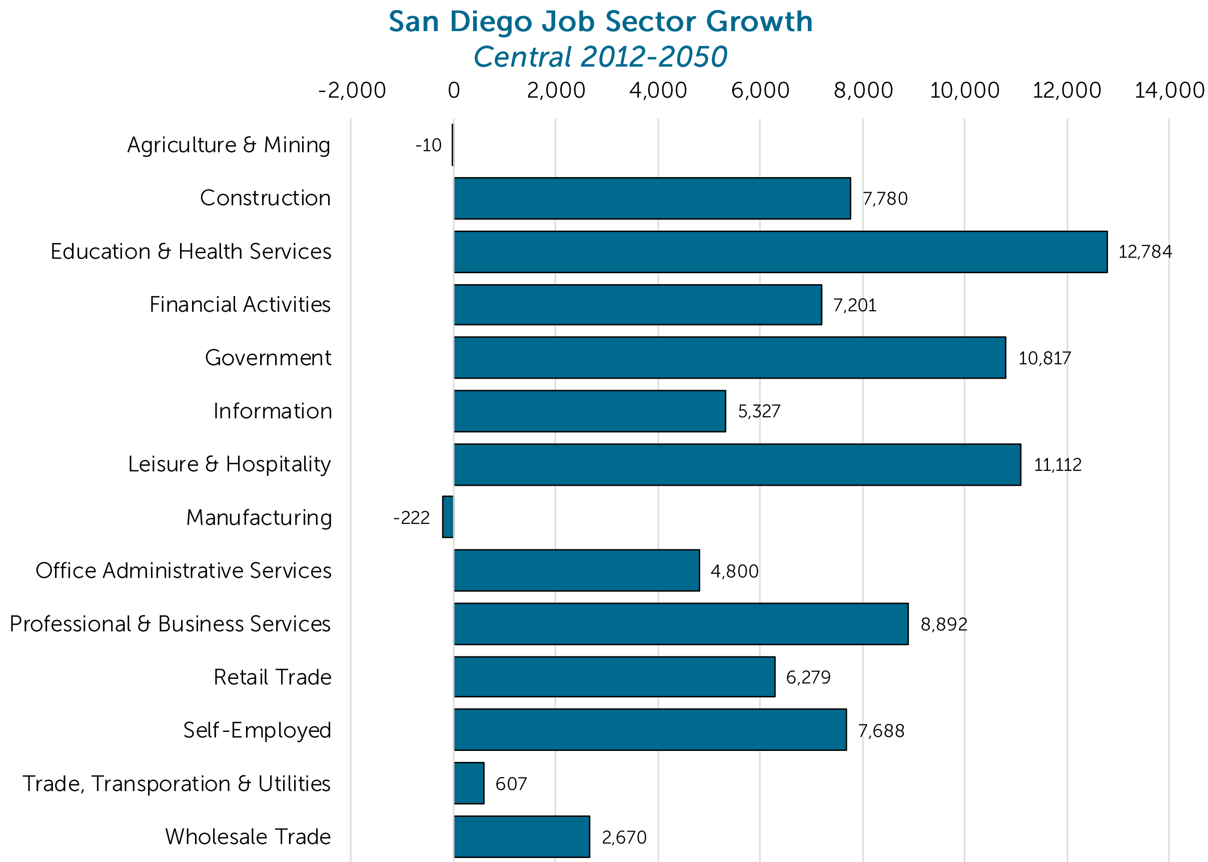
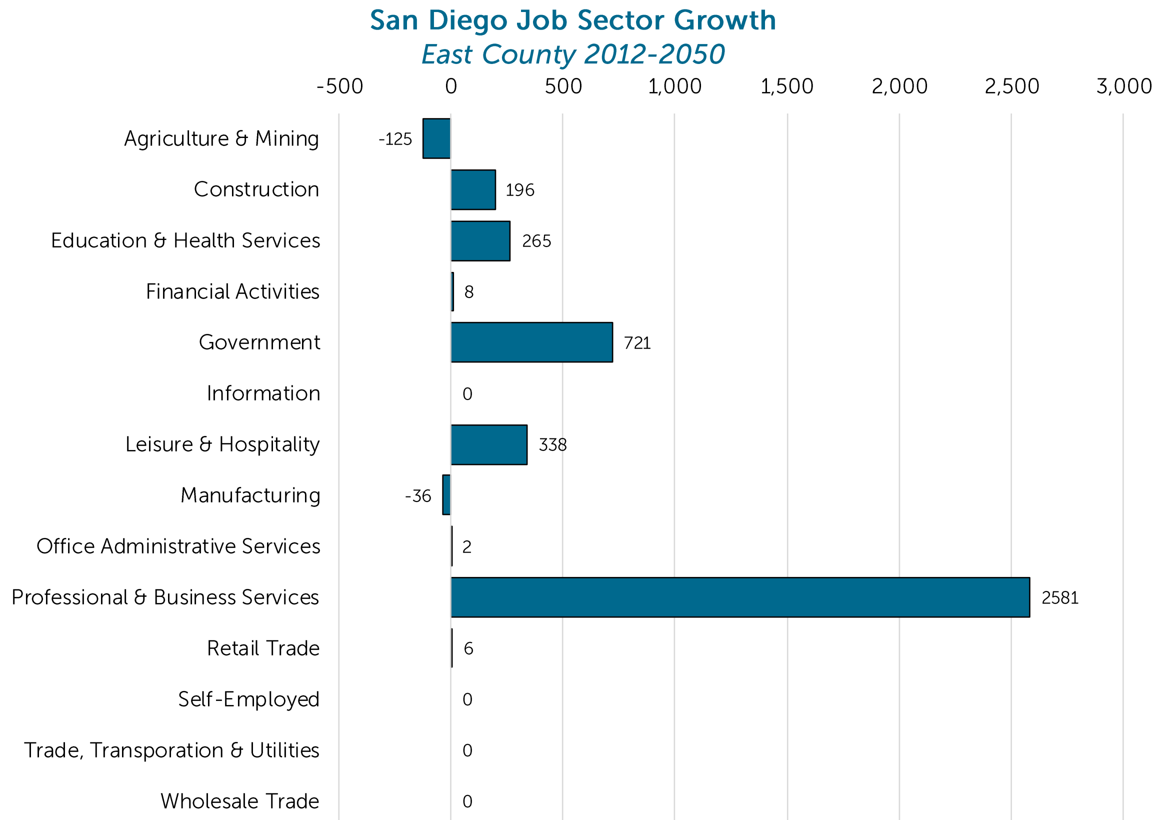
Appendix

Projected Job Sector Growth: By MSA



Source: London Moeder Advisors, SANDAG



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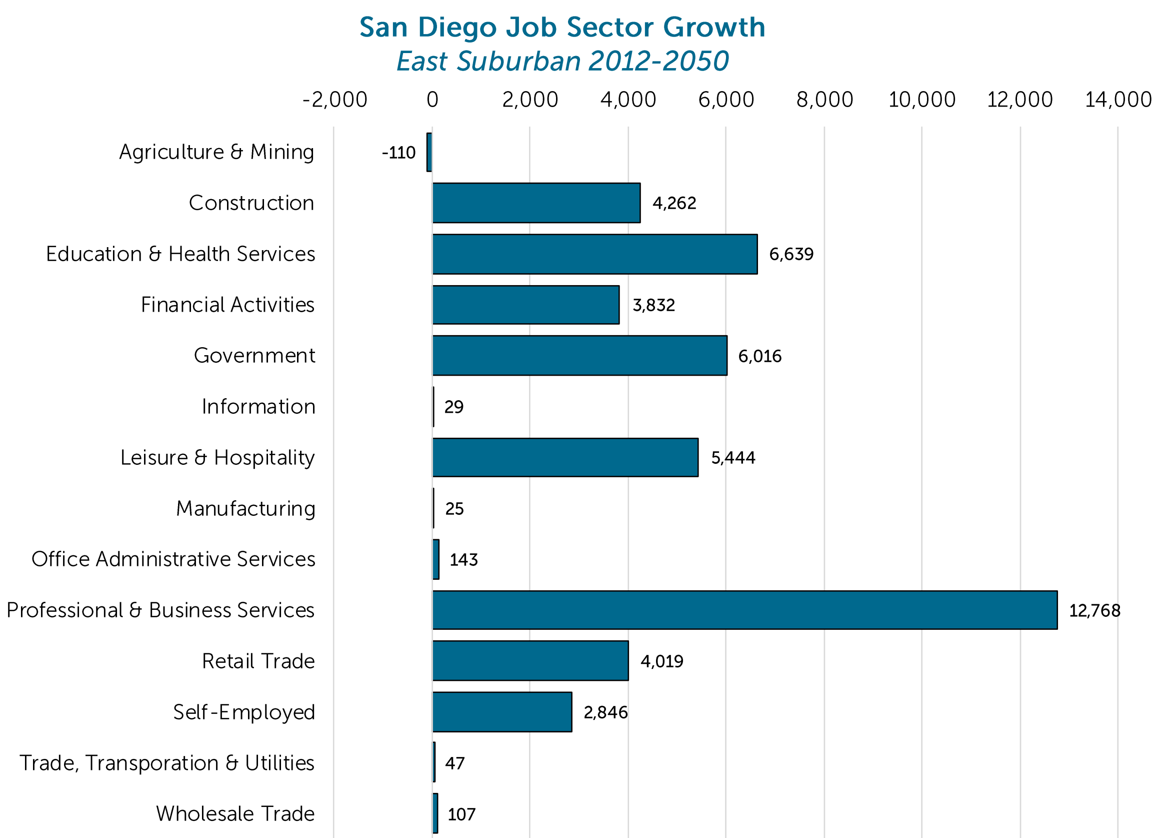
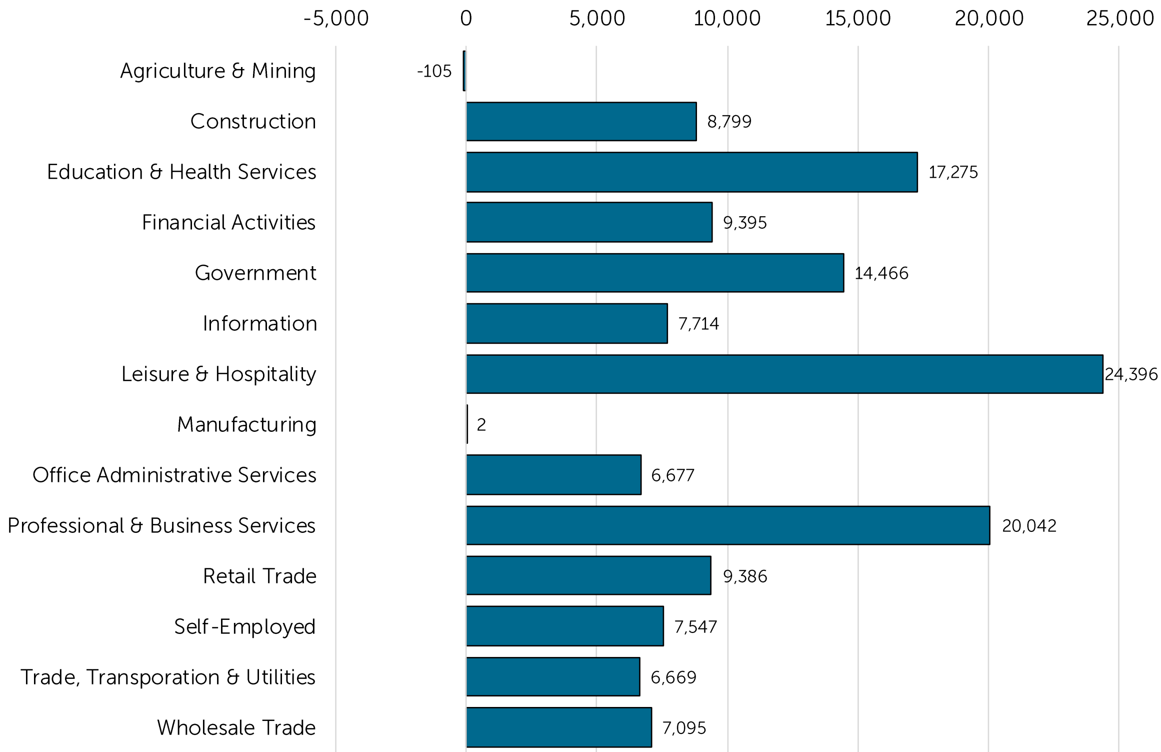


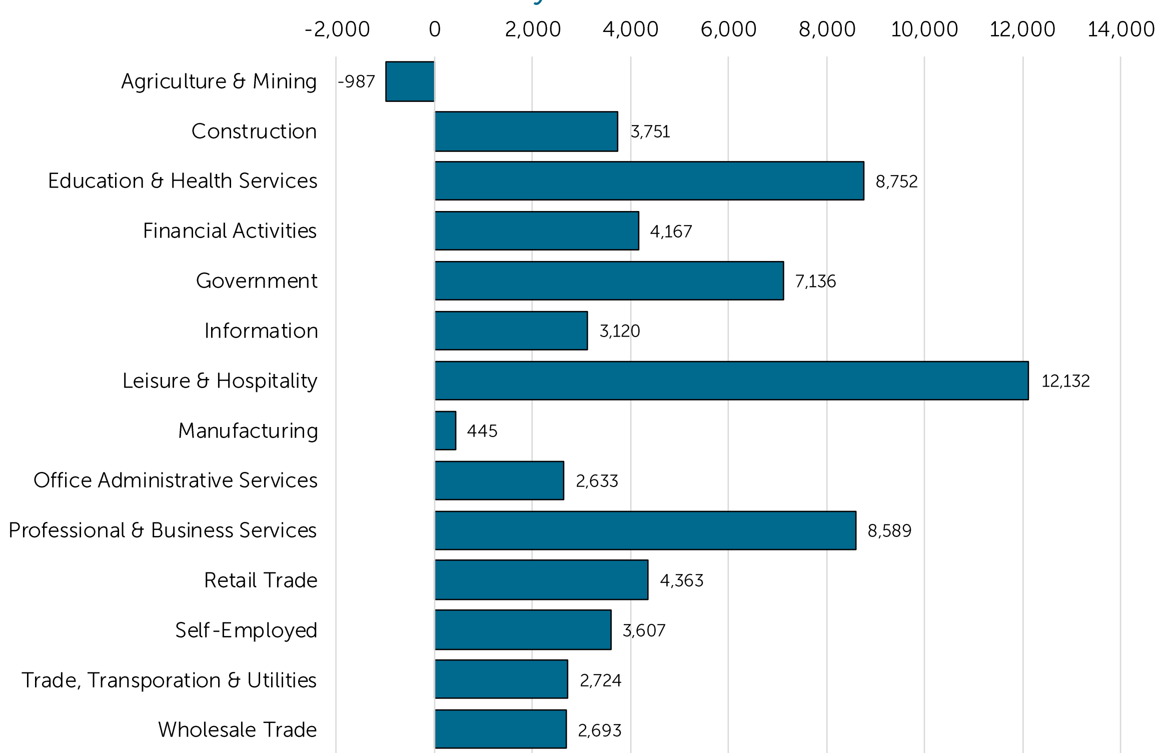
Source: London Moeder Advisors, SANDAG

San Diego Job Sector Growth
North City 2012-2050



Source: London Moeder Advisors, SANDAG

San Diego Job Sector Growth
North County East 2012-2050



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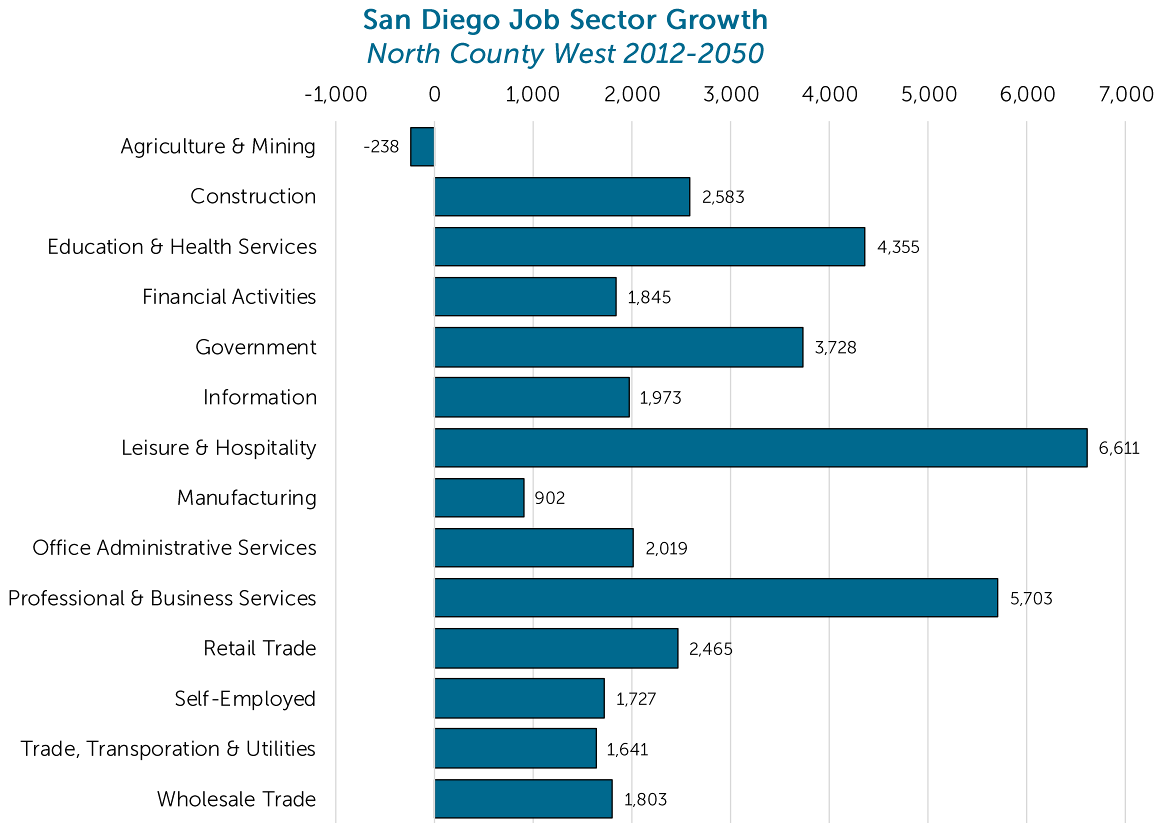

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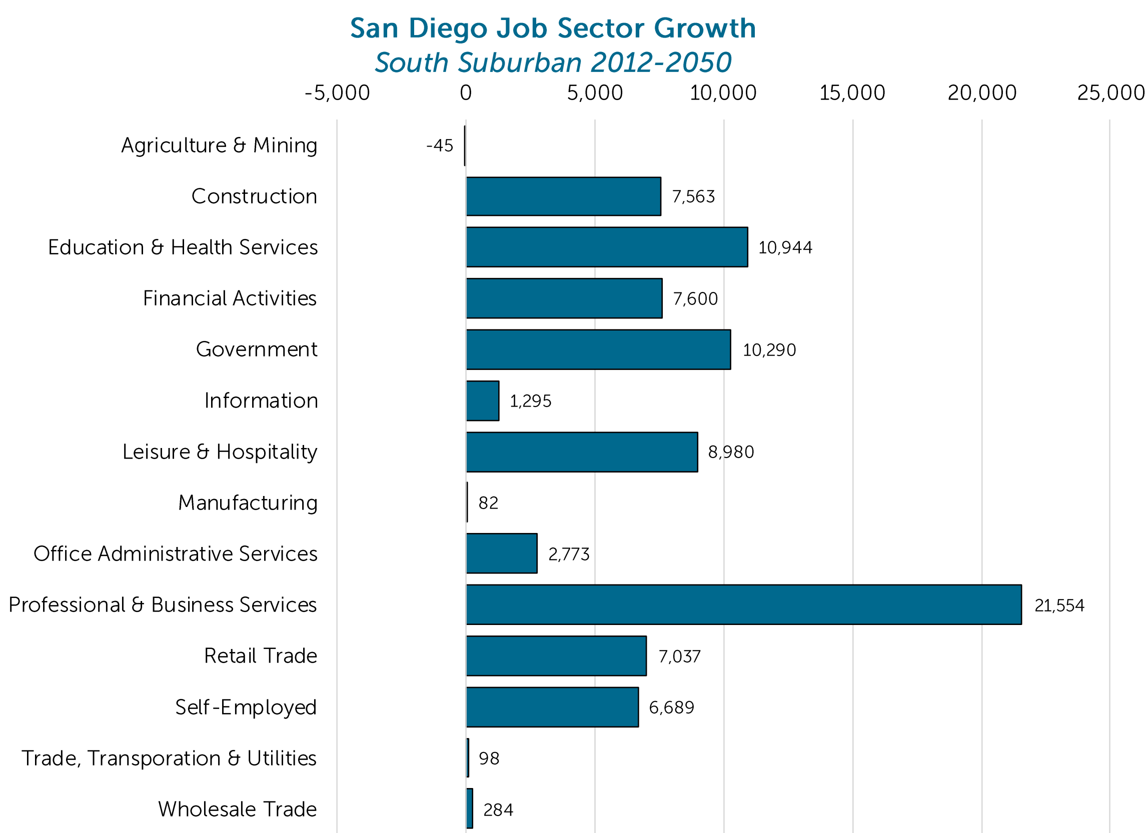
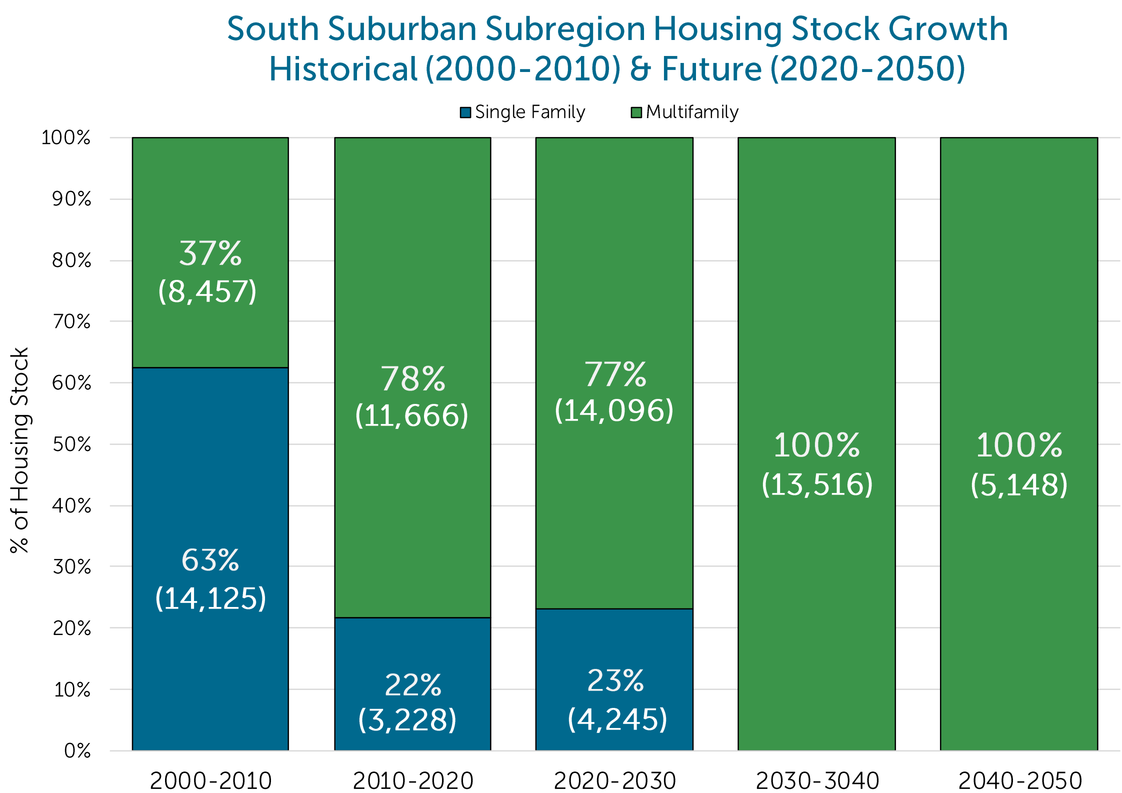
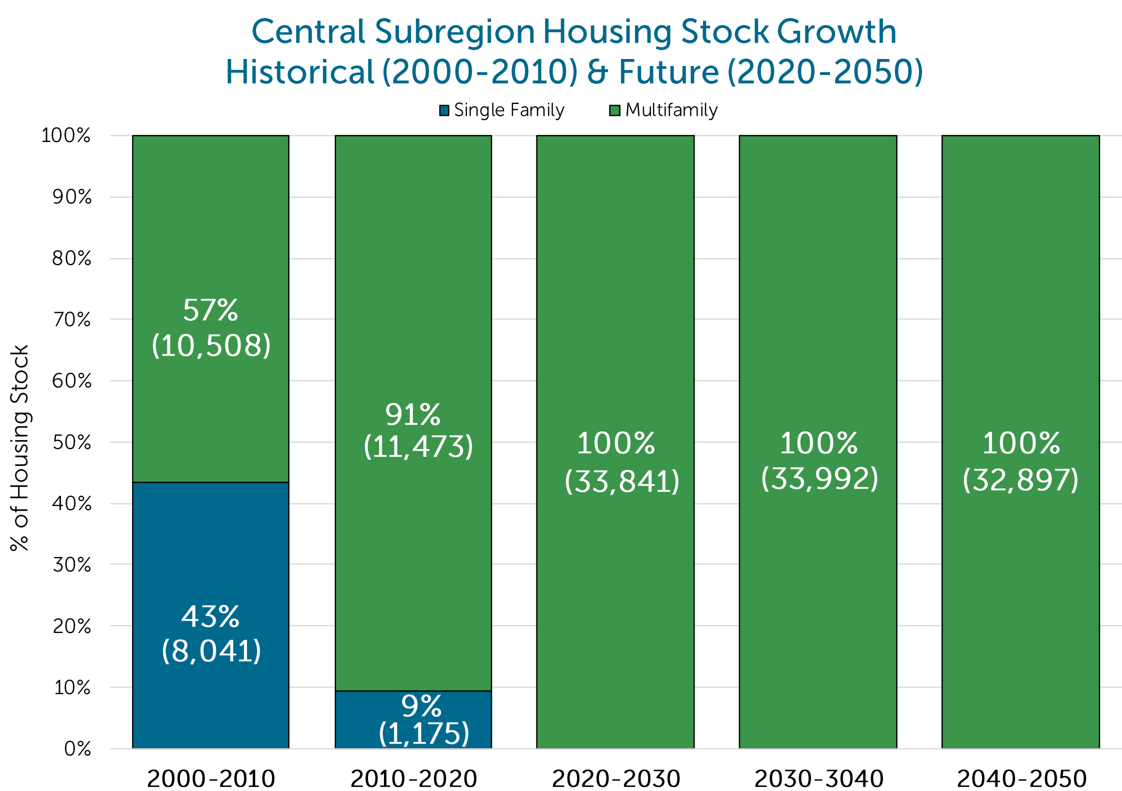


Source: London Moeder Advisors, SANDAG

Anticipated Housing Growth: By MSA

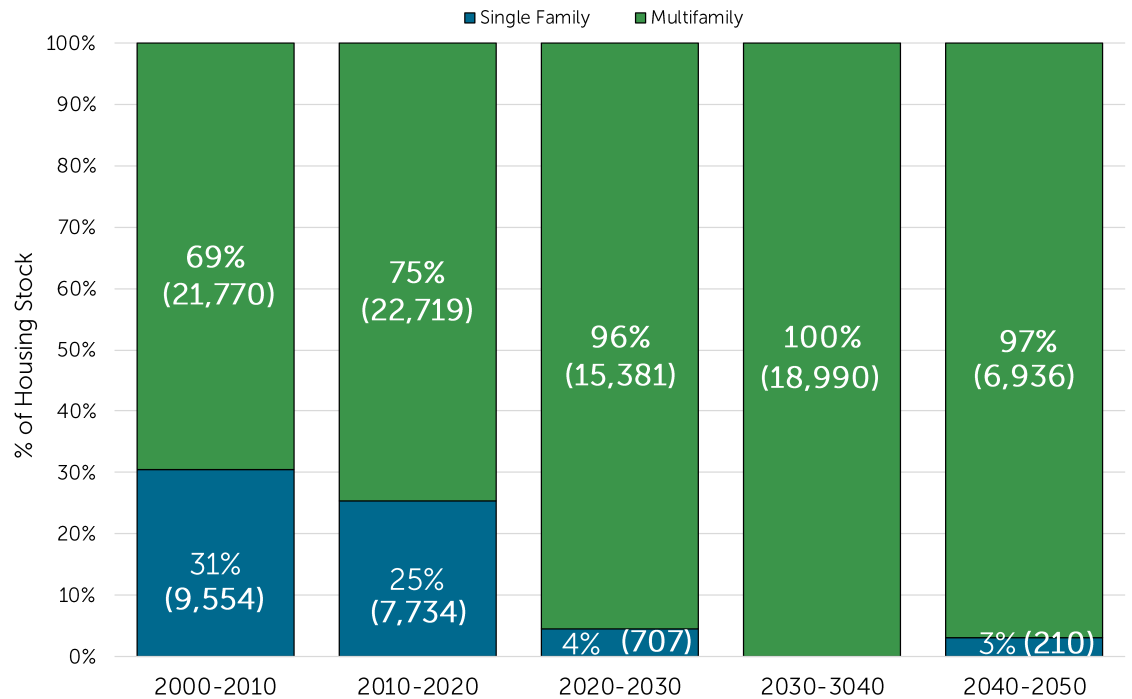


Source: London Moeder Advisors, U.S. Census, SANDAG



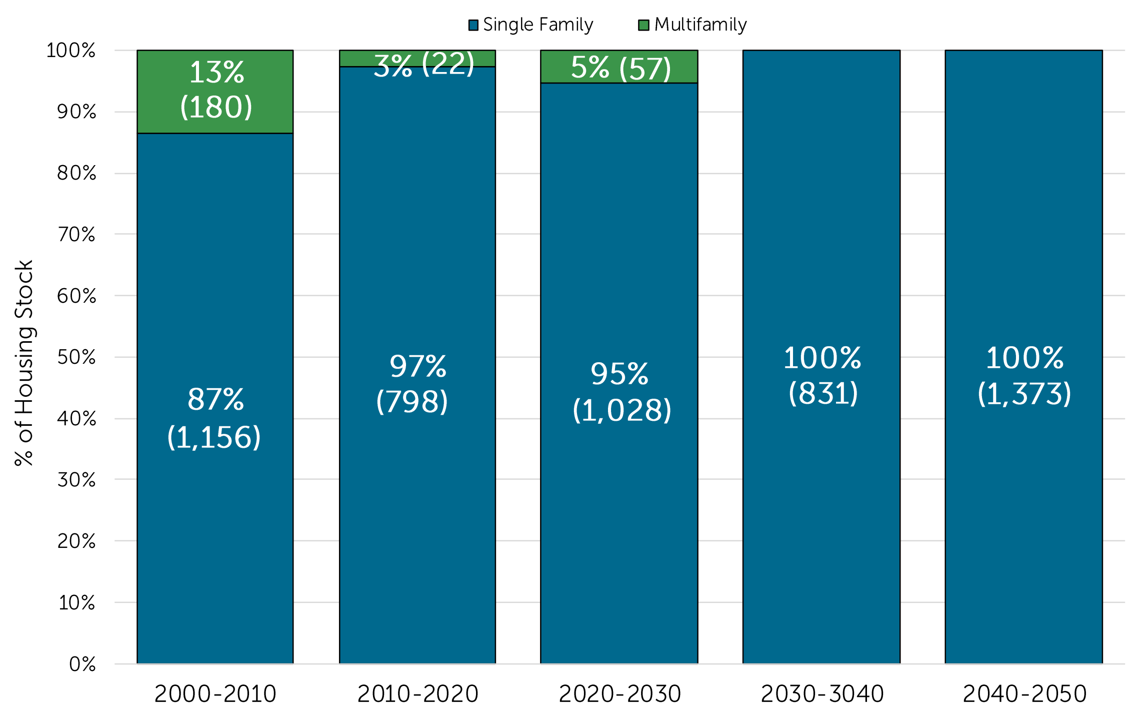
Source: London Moeder Advisors, U.S. Census, SANDAG

North City Subregion Housing Stock Growth
Historical (2000-2010) & Future (2020-2050)



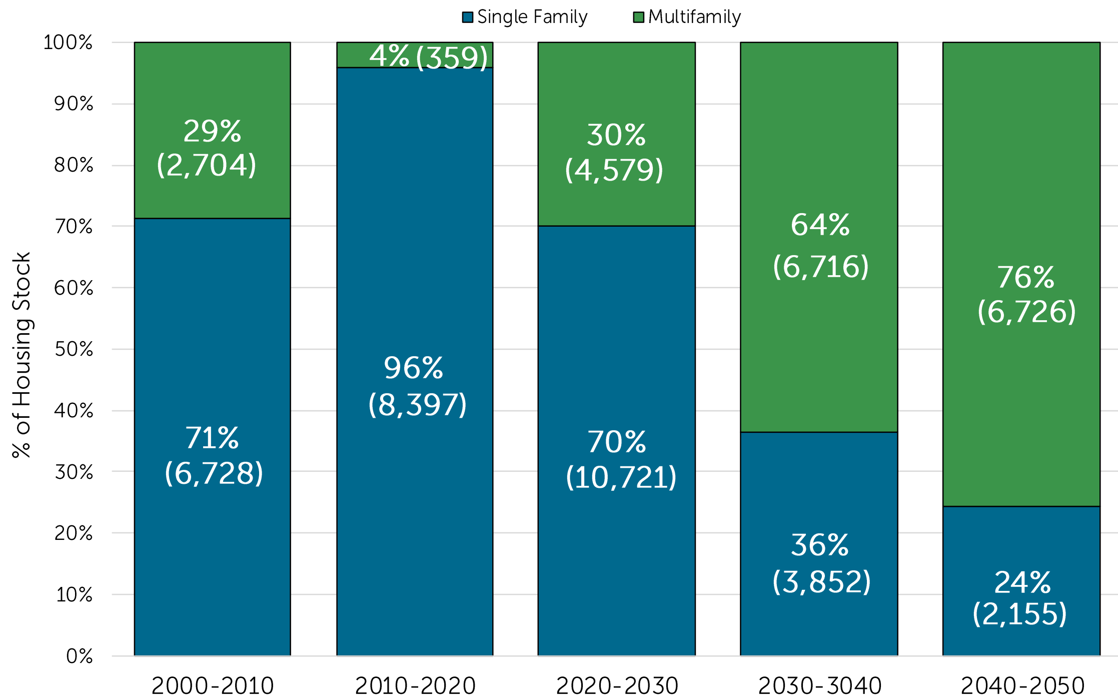
Source: London Moeder Advisors, U.S. Census, SANDAG

East County Subregion Housing Stock Growth
Historical (2000-2010) & Future (2020-2050)



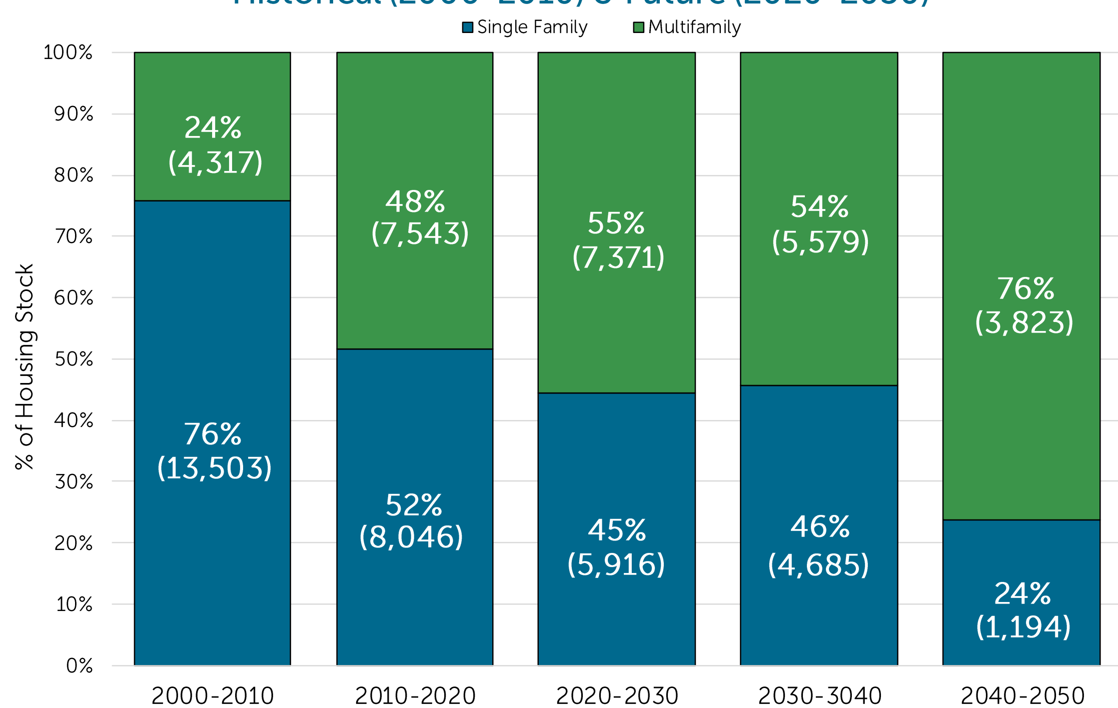
Source: London Moeder Advisors, U.S. Census, SANDAG

East Suburban Subregion Housing Stock Growth
Historical (2000-2010) & Future (2020-2050)

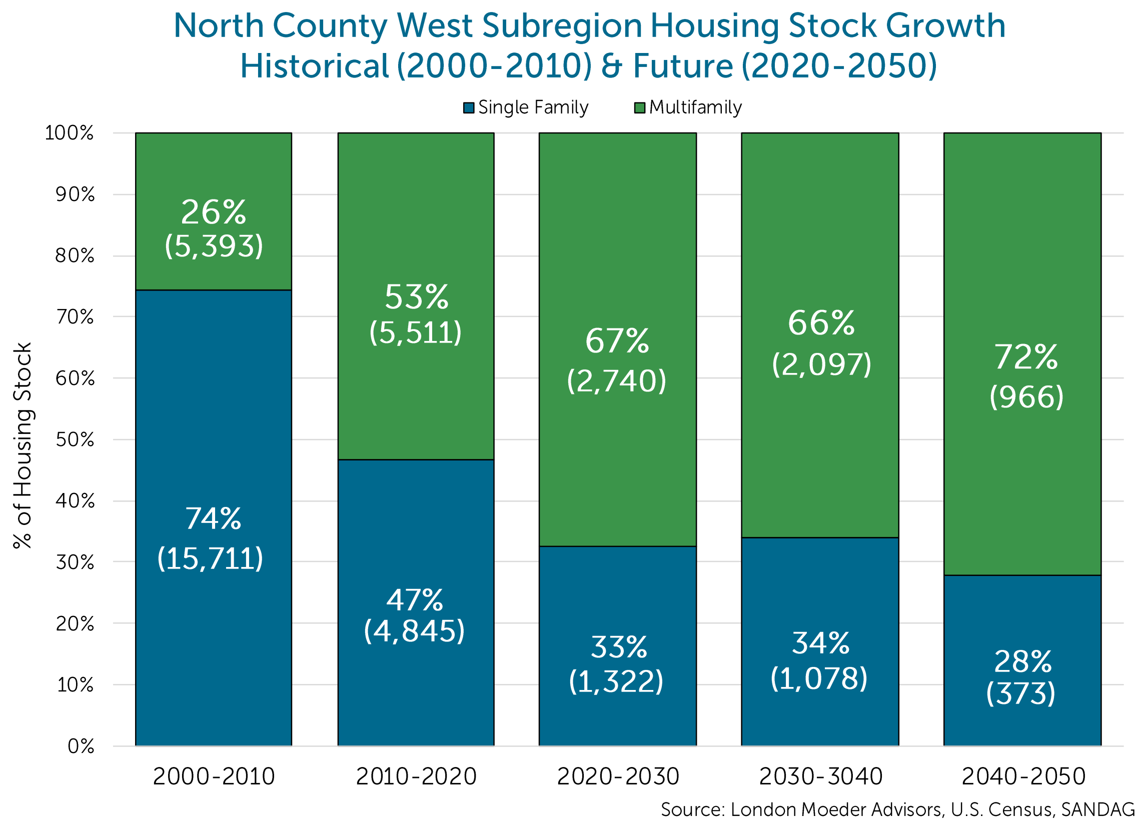


Source: London Moeder Advisors, U.S. Census, SANDAG

North County East Subregion Housing Stock Growth
Historical (2000-2010) & Future (2020-2050)



Source: London Moeder Advisors, U.S. Census, SANDAG


North County West Subregion Housing Stock Growth
Historical (2000-2010) & Future (2020-2050)
Single Family
Multifamily
% of Housing Stock
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
26%
(5,393)
74%
(15,711)
53%
(5,511)
47%
(4,845)
67%
(2,740)
33%
(1,322)
66%
(2,097)
34%
(1,078)
72%
(966)
28%
(373)
2000-2010
2010-2020
2020-2030
2030-3040
2040-2050
Source: London Moeder Advisors, U.S. Census, SANDAG

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Corporate Profile

London Moeder Advisors

REPRESENTATIVE SERVICES

Market and Feasibility Studies	Development Services	Litigation Consulting
Financial Structuring	Fiscal Impact	Workout Projects
Asset Disposition	Strategic Planning	MAI Valuation
Government Processing	Capital Access	Economic Analysis

London Moeder Advisors (formerly The London Group) was formed in 1991 to provide real estate advisory services to a broad range of clientele. The firm principals, Gary London and Nathan Moeder, combine for over 60 years of experience. We have analyzed, packaged and achieved capital for a wide variety of real estate projects. Clients who are actively pursuing, developing and investing in projects have regularly sought our advice and financial analysis capabilities. Our experience ranges from large scale, master planned communities to urban redevelopment projects, spanning all land uses and development issues of all sizes and types. These engagements have been undertaken principally throughout North America and Mexico.

A snapshot of a few of the services we render for both the residential and commercial sectors:

- **Market Analysis** for mixed use, urban and suburban properties. Studies concentrate on market depth for specific products, detailed recommendations for product type, absorption and future competition. It also includes economic overviews and forecasts of the relevant communities.

- **Financial Feasibility Studies** for new projects of multiple types, including condominium, apartment, office, and master-planned communities. Studies incorporate debt and equity needs, sensitivity analyses, rates of return and land valuations.

- **Litigation support/expert witness services** for real estate and financial related issues, including economic damages/losses, valuations, historic market conditions and due diligence. We have extensive deposition, trial, mediation and arbitration experience.

- **Investment studies for firms acquiring or disposing of real estate.** Studies include valuation, repositioning projects and portfolios, economic/real estate forecasts and valuation of partnerships. Often, the commercial studies include the valuation of businesses.

- **Estate Planning services** including valuation of portfolios, development of strategies for disposition or repositioning portfolios, succession planning and advisory services for high net worth individuals. We have also been involved in numerous marriage dissolution assignments where real estate is involved.

- **Fiscal Impact, Job Generation and Economic Multiplier Effect Reports**, traditionally prepared for larger commercial projects and in support of Environmental Impact Reports. We have been retained by both developers and municipalities for these reports. The studies typically relate to the tax revenues and employment impacts of new projects.

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Contact Information

This analysis was prepared by London Moeder Advisors and commissioned by the San Diego Regional Chamber of Commerce.

Research for this project was completed in June 2018. Conclusions and recommendations are strictly those of London Moeder Advisors. Users of this information should recognize that assumptions and projections contained in this report *will* vary from the actual experience in the marketplace. Therefore, London Moeder Advisors is not responsible for the actions taken or any limitations, financial or otherwise, of property owners, investors, developers, lenders, public agencies, operators or tenants.

This assignment was completed by the staff of London Moeder Advisors. **Nathan Moeder**, Principal, served as project director. **Robert Martinez,** Senior Analyst, conducted analysis and prepared exhibits in this report. **Michael McFadden,** Analyst, conducted analysis and prepared exhibits in this report. **Gary London,** Senior Principal, provided strategic consultation and recommendations. For further information or questions contact us at:

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