

Appendix B

**Projections of Jobs, Population and Households
For the City of San Jose**

A Summary of Results and Methodology

Prepared for the City of San Jose

For the

Envision San Jose 2040 General Plan Update

By

Center for the Continuing Study of the California Economy

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I. Introduction

The Center for Continuing Study of the California Economy (CCSCE) prepared projections of job, population and household growth for the City of San Jose. The work was conducted under a contract with Beacon Economics to assist the City in the Envision San Jose 2040 General Plan Update planning process.

CCSCE was asked to review relevant projections already prepared by CCSCE, the Association of Bay Area Governments (ABAG) and the California Department of Finance (DOF) and, subsequently, to prepare projections of job, population and household growth for the City of San Jose to the year 2040. This report provides the background for the job and population projections that were presented to the Envision San Jose 2040 General Plan Update Task Force (Task Force) on May 27, 2008 and incorporates projections of household growth that were prepared after that meeting.

These projections were prepared to provide background on where San Jose fits into national, state and regional trends in job, population and household growth. These projections **did not** incorporate analyses of land use or policy considerations. Those factors will be incorporated as the General Plan Update moves forward. The projections **do** provide insights into probable growth trends and pressures that will face San Jose as a result of likely Bay Area growth.

A. Methodology and Source of Projections

The first step was to develop regional (Bay Area) job projections to 2040 followed by the preparation of regional population projections.

The standard methodological approach for regional economic projections is to develop regional job projections based on national job trends and an assessment of how the region will grow (i.e., compete for new jobs) given the national and state job growth trends. CCSCE had just completed a set of regional job projections to 2017 and extended these projections to 2040 as described below in this report.

Regional population projections prepared by CCSCE for 2017 were also extended to 2040 to be consistent with the projected job growth.

The second step was to develop projections of total jobs and population for Santa Clara County and the City of San Jose based on the CCSCE regional job and population growth projections. For the county and city share projections, CCSCE incorporated the analysis by ABAG of what share of regional growth would go to Santa Clara County and the City of San Jose. CCSCE did not do an independent analysis of these shares. The final projections of total job and population growth were based on the CCSCE regional projections and the ABAG analysis of city and county shares of regional growth.

The third step was to develop projections of population by age and ethnic group for the City of San Jose. The most relevant published projections of population by age and ethnic group are for Santa Clara County, which were prepared by DOF in 2007. CCSCE reviewed these projections and decided to incorporate the DOF projections into the projections of population by age and ethnic group for the City of San Jose.

This was accomplished by using the **pattern** of population growth projected by DOF for Santa Clara County and the absolute level of growth projected by CCSCE for the City of San Jose.

This is equivalent to saying that the pattern of population growth in San Jose will match the pattern projected by DOF for Santa Clara County.

The results of these three steps were presented to the Task Force on May 27, 2008.

The fourth step was to develop projections of household growth for the City of San Jose based on the projected population by age and ethnic group. These projections were prepared by CCSCE and incorporated an analysis of household forming behavior in the City of San Jose from the 2000 Census.

The results and methodology are described in more detail in the remaining sections of this report.

B. Summary of Projections

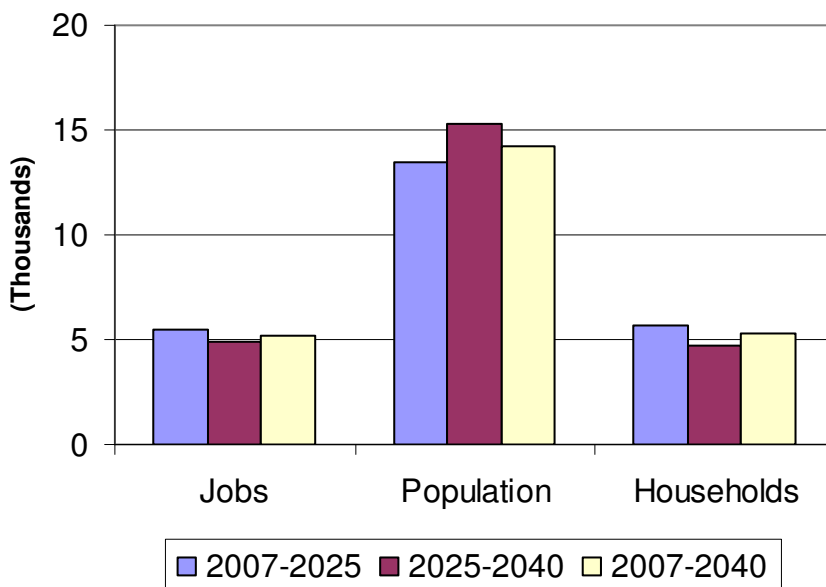
The City is projected to add 172,000 jobs and 471,000 residents between 2007 and 2040. This growth is projected to lead to an increase of 173,000 households during this period.

***Table 1. City of San Jose: Total Jobs, Population and Households
2007-2040 (Thousands)***

	<u>2007</u>	<u>2025</u>	<u>2040</u>	<u>2007-2025</u>	<u>2025-2040</u>	<u>2007-2040</u>
Jobs	398	497	570	99	73	172
Population	974	1,216	1,445	242	229	471
Households	299	401	472	102	71	173

In terms of annual growth levels between 2007 and 2040, the projections show an average increase of 5,200 jobs per year, 14,300 residents per year and 5,200 households per year. As shown on the next page the projected annual growth is roughly equal between the first 18 years (2007-2025) and the last 15 years (2025-2040) of the General Plan Update planning period.

Figure 1: Annual Growth in San Jose



C. Major Demographic Trends Shaped the Projections

Three major demographic trends, discussed throughout this report, shaped the outlook for the General Plan Update planning period.

One, a tidal wave of baby boomer retirements will affect the outlook for job growth. Most of the retirements will occur between 2010 and 2030 and job growth in the nation, state, region and City will slow between 2017 and 2030.

Two, most population growth in the City between 2007 and 2030 will be in two age groups—20 to 34 and 65+. These trends will affect the demand for city services and will have a large impact on housing demand in the City and region. Growth in the 35 to 54 age groups will be close to 0 in contrast to the past 20 years in which these age groups provided a large share of new residents.

Three, most of the population increase in San Jose as well as throughout the region and state will be in Hispanic and Asian residents and residents who are multi-racial. Some of these residents will be new immigrants but most will be long-time U.S. residents and the children and grandchildren of recent immigrants.

II. Job Projections to 2040

The first step was to project Bay Area job growth to 2040. CCSCE had just completed a set of Bay Area and United States job projections to 2017 for publication in California Economic Growth—2008 Edition. These projections were developed using more than 100 industry sectors based on U.S. projections prepared by the U.S. Bureau of Labor Statistics (BLS) in November 2007.

Table 2. United States and Bay Area: Total Jobs 2007-2040 (Millions)

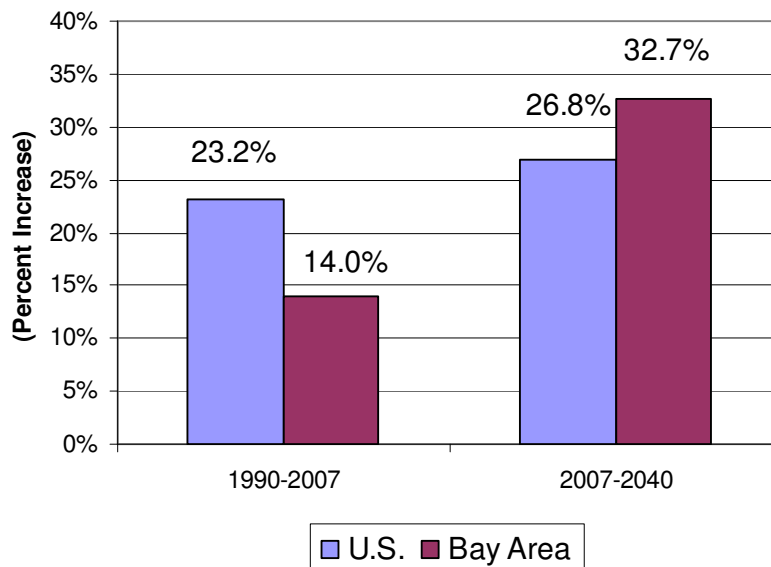
	<u>2007</u>	<u>2017</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	% Change <u>2007-2040</u>
U.S.	150.2	166.0	169.0	173.3	177.7	184.0	190.5	26.8%
Bay Area	3.7	4.2	4.3	4.4	4.5	4.7	4.9	32.7%

CCSCE projects that the Bay Area will outpace the nation in job growth between 2007 and 2017 because the region's economic base is concentrated in sectors projected to have above-average growth in world markets. These sectors include professional services such as computer services, Internet-related activities, foreign trade and newer sectors of biotech and alternative energy technologies.

The Bay Area is expected to continue to experience job growth between 2017 and 2040 that is slightly faster than the national average. It will be hard for the region to substantially outpace the nation in job growth as the region becomes more fully developed.

The projected Bay Area job growth stands in contrast to the 1990-2007 period in which national job growth exceeded the region's job gains. Bay Area job growth matched the nation between 1990 and 2000 (+19% versus +18%) but for the 2000-2007 period Bay Area job levels fell while the nation posted a 4% job gain.

Figure 2: U.S. Bay Area Job Growth

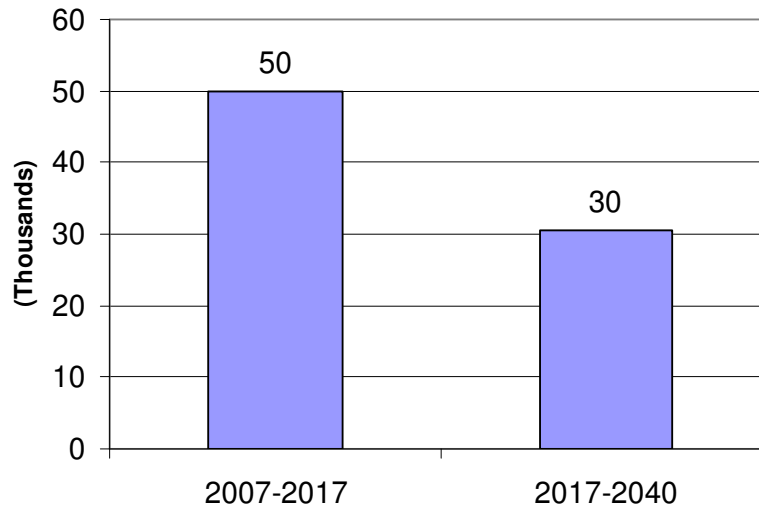


The effect of baby boomer retirements is seen in the slowing pace of job growth after 2017 in the nation, state and region. Despite a substantial increase in the number of people delaying retirement, the large growth in population aged 65 and above will cause labor force growth in the nation and Bay Area to slow substantially after the next ten years.

U.S. job growth is projected to decline from 1.6 million per year between 2007 and 2017 to 1.1 million per year from 2017 through 2040. The decline is completely the result of demographic factors (baby boomer retirements) and does not represent any loss of strength in the national economy.

Bay Area job growth is projected to average 50,000 added jobs per year to 2017 but job growth after that is projected to decline to near 30,000 per year even as the Bay Area continues to outpace the nation in the rate of job gains.

Figure 3: Annual Bay Area Job Growth 2007-2040



A. Job Growth in Santa Clara County and the City of San Jose

In December 2006 ABAG published growth projections for Bay Area cities and counties to 2035. These sub-regional projections were based on analyses of past trends, land use and consultations with local officials. CCSCE reviewed these projections and methodologies and used **ABAG's share projections** to develop job projections for Santa Clara County and the City of San Jose **based on the Bay Area job projections developed by CCSCE** as described above. The ABAG share analysis is presented in Appendix A.

The resulting city and county job projections are shown below. The estimate of jobs for San Jose in 2007 came from data provided to Joint Venture Silicon Valley from the California Employment Development Department (EDD). Job estimates for the Bay Area and Santa Clara County are from EDD data with the addition of estimates of self-employment from the American Community Survey, which were also incorporated into the San Jose estimates.

Table 3. Bay Area, Santa Clara County and San Jose: Total Jobs 2007-2040 (Thousands)

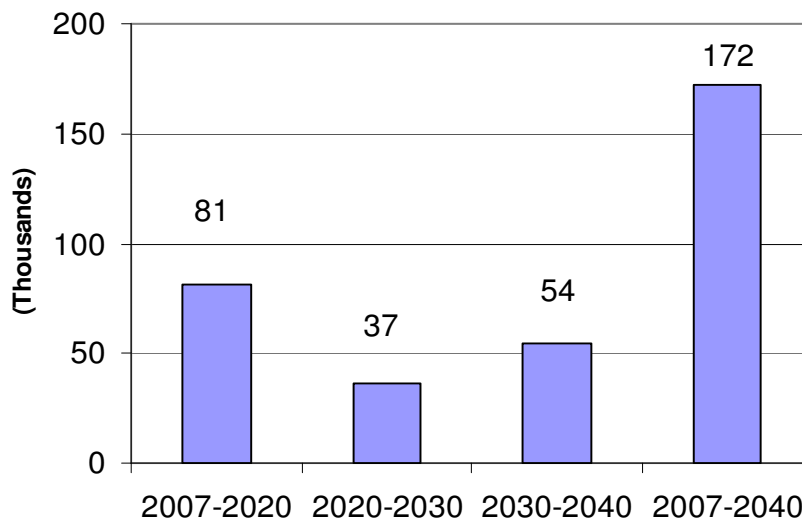
	<u>2007</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	% Change <u>2007-2040</u>
Bay Area	3,677	4,261	4,383	4,510	4,690	4,878	32.7%
Santa Clara County	960	1,118	1,152	1,187	1,237	1,289	34.3%
San Jose	398	479	497	516	542	570	43.4%

The ABAG projections have job growth in Santa Clara County slightly outpacing region wide job growth between 2007 and 2040. Job growth in San Jose is projected to be faster than in Santa Clara County and the Bay Area.

San Jose’s share of Santa Clara County jobs is projected to increase from 41% in 2007 to 45% in 2040. ABAG has allocated San Jose slightly over half of the County’s projected job growth to 2040.

San Jose is projected to add 172,000 jobs between 2007 and 2040. A large share of these jobs (81,000) is expected by 2020. Job growth declines to 37,000 for the next ten years ending in 2030 as the wave of baby boomer retirements reaches it peak. Projected job growth increases to 54,000 between 2030 and 2040 as another wave of young adults enter the workforce in the region.

Figure 4: Job Growth in San Jose



B. Note: Job Projections by Industry

Industry job projections will be developed later in the project after more detailed industry data is received from EDD.

III. Population Projections to 2040

CCSCE prepared regional population projections to 2040 based on the regional job projections as described in Appendix A. The methodology involved 1) starting with the projected national trends in the relationship between job and population growth to 2040 and 2) evaluating the possibility of differences in Bay Area trends as a result of variations in fertility rates, labor force participation rates (the share of the population that is in the workforce) and commuting (trends in the share of workers living outside the region).

The population projections for the nation and Bay Area are shown below.

Table 4. United States and Bay Area: Total Population 2007-2040 (Millions)

	<u>2007</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>% Change 2007-2040</u>
U.S.	301.6	335.8	349.4	363.6	377.9	391.9	29.9%
Bay Area	7.2	8.2	8.5	8.9	9.2	9.5	31.8%

Bay Area population is projected to increase by 2.3 million or an average of 70,000 residents per year between 2007 and 2040. The Bay Area's population is projected to increase slightly faster than U.S. population growth following the pattern projected for job growth in the region and nation.

Figure 5: Bay Area Projected to Grow Slightly Faster Than the Nation 2007-2040



A. Population Growth in Santa Clara County and the City of San Jose

In December 2006 ABAG published growth projections for Bay Area cities and counties to 2035. These sub-regional projections were based on analyses of past trends, land use and consultations with local officials. CCSCE reviewed these projections and used **ABAG's share**

projections to develop population projections for Santa Clara County and the City of San Jose based on the Bay Area population projections developed by CCSCE as described above.

The resulting city and county population projections are shown below. The 2007 population estimates are from DOF.

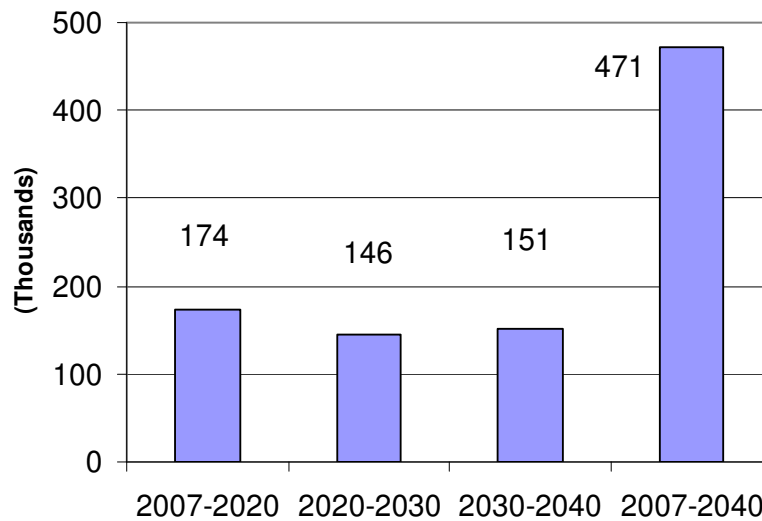
Table 5. Bay Area, Santa Clara County and San Jose: Total Population 2007-2040 (Thousands)

	<u>2007</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>	<u>% Change 2007-2040</u>
Bay Area	7,245	8,181	8,550	8,898	9,211	9,548	31.8%
Santa Clara County	1,820	2,090	2,197	2,306	2,405	2,513	38.0%
San Jose	974	1,148	1,216	1,294	1,367	1,445	48.4%

The ABAG projections have population growth in Santa Clara County outpacing region wide population growth between 2007 and 2040. Population growth in San Jose is projected to be faster than in Santa Clara County and the Bay Area.

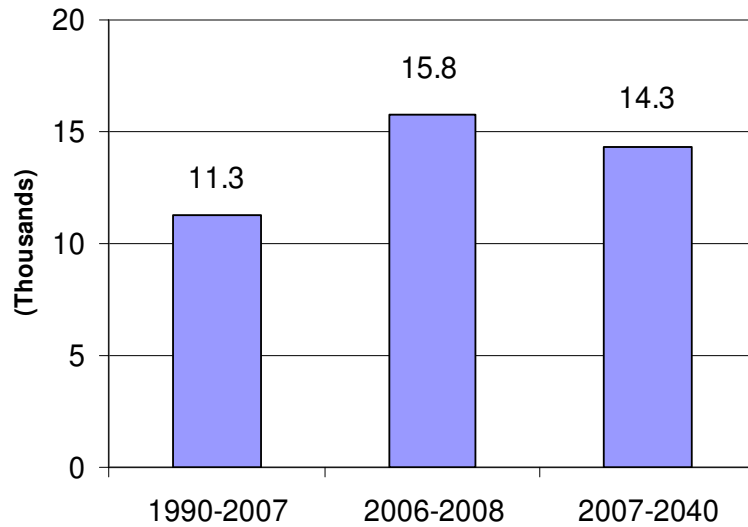
San Jose’s share of Santa Clara County population is projected to increase from 54% in 2007 to 58% in 2040. ABAG has allocated San Jose slightly over two-thirds of the County’s projected population growth to 2040. San Jose is projected to add 471,000 residents between 2007 and 2040. The projected population growth is spread evenly through the period to 2040.

Figure 6: Population Growth in San Jose



Population growth is expected to average 14,300 residents per year between 2007 and 2040 with the growth fairly evenly spread throughout the planning period. The projected growth is slightly higher than the growth experienced since 1990 (11,300 per year) but slightly below population growth for the past two years (15,800 per year).

Figure 7: Annual Population Growth in San Jose



B. Population by Ethnic Group for the City of San Jose

Projections were prepared for population by age and ethnic group for the City of San Jose. Projections of population by ethnic group were developed as a first step because they are necessary to preparing accurate projections of population by age group, which are important both for the housing analysis and for analyses of public service demands in the future.

The detailed methodology for projecting population by ethnic group for the City of San Jose is described in Appendix A. The overall methodology includes 1) starting with the estimates of population by ethnic group for San Jose from the 2000 Census and 2) assuming that changes in population by ethnic group between 2000 and 2040 in San Jose follow the pattern of population change by ethnic group projected for Santa Clara County by DOF.

For example, DOF projects that Hispanic residents will account for 53% of Santa Clara County population growth between 2007 and 2020. This 53% share was applied to the projected San Jose population growth for 2007-2020 to determine the increase in Hispanic residents in San Jose for these years.

The projections of population by ethnic group for San Jose are shown below.

Table 6. San Jose: Total Population 2000-2040 (Thousands)

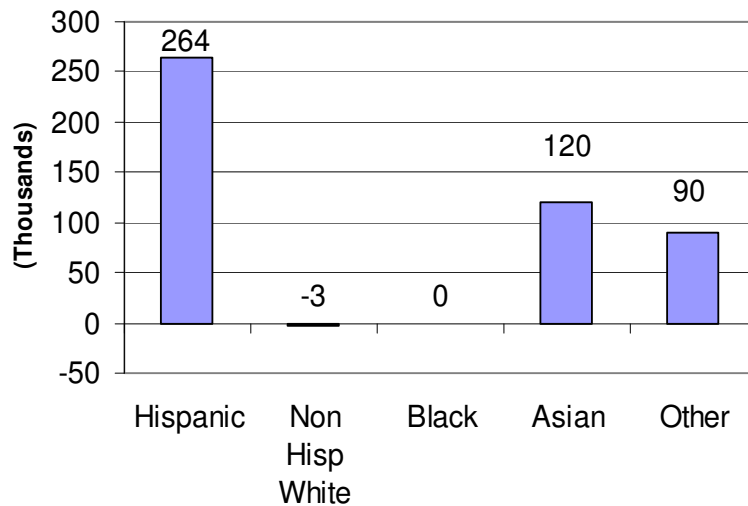
	<u>2000</u>	<u>2007</u>	<u>2020</u>	<u>2030</u>	<u>2040</u>	<u>2007-2040</u>
Hispanic	270	306	399	481	571	264
Non Hispanic White	323	325	317	320	323	-3
Black	29	31	32	31	31	0
Asian	238	278	336	369	398	120
Other	35	34	65	92	123	90
Total	895	974	1148	1294	1445	471

Five major ethnic groups were used for the San Jose projections—1) Hispanic (Latino), 2) Non Hispanic White, 3) Non Hispanic Black (African American), 4) Non Hispanic Asian and 5) Non Hispanic Other. The Other ethnic group includes individuals who marked multi-race, Pacific Islander or American Indian. In Santa Clara County and San Jose in 2000 the majority of the Other category was residents who marked multi-race followed by Pacific Islander.

All of San Jose’s projected population growth is concentrated in three ethnic groups—Hispanic, Asian and Other. San Jose’s Hispanic population is projected to increase by 264,000 between 2007 and 2040 and account for 55% of the City’s projected total growth. The number of Asian residents is projected to increase by 120,000 and account for 25% of the total population growth. The remaining growth is in the Other ethnic group and represents increases in the City’s multi-race and Pacific Islander population.

The number of Non Hispanic White and Black residents is projected to remain close to their 2007 levels.

Figure 8: San Jose Population Growth by Ethnic Group 2007-2040



C. Population by Age Group for the City of San Jose

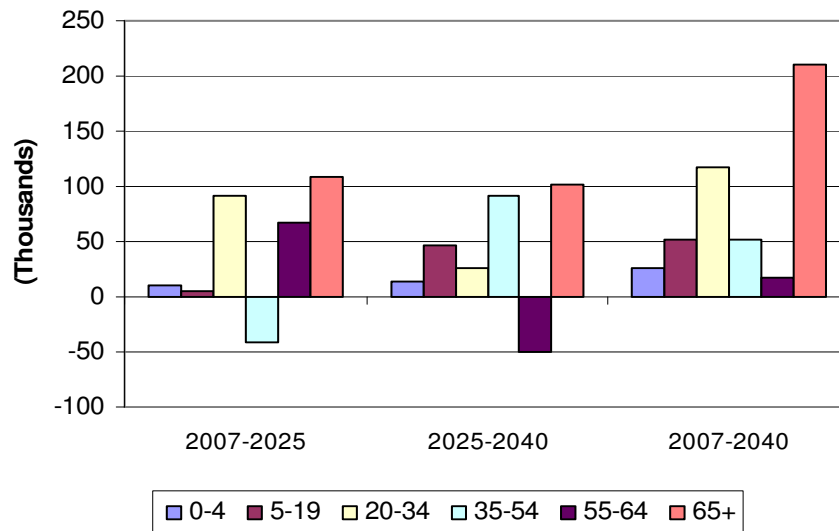
San Jose’s projected population growth is concentrated in two age groups—1) young adults aged 20 to 34 and 2) older residents aged 65 and above. The city’s age profile changes even more substantially in the first part of the planning period between 2007 and 2025. San Jose’s projected population by age group is shown below for 2007, 2025 and 2040.

Table 7. San Jose: Population by Age Group 2007-2040 (Thousands)

	<u>2007</u>	<u>2025</u>	<u>2040</u>	<u>2007-2025</u>	<u>2025-2040</u>	<u>Change 2007-2040</u>
0-4	72	83	97	11	14	25
5-19	210	215	261	5	46	51
20-34	178	269	295	91	26	117
35-54	315	275	366	-41	92	51
55-64	98	166	115	68	-51	17
65+	100	209	310	108	102	210
Total	974	1216	1445	242	229	471

The pattern of population growth by age group is shown below in graphical form for the periods 2007-2025, 2025-2040 and 2007-2040.

Figure 9: San Jose: Population Growth by Age Group 2007-2040



In the first part of the planning period virtually all of the City's growth is in population aged 20 to 34 (+91,000), population aged 55 to 64 (+68,000) and population aged 65 and above (+108,000). The number of residents in the prime working age and family forming age groups (35 to 54) is projected to decline by 41,000 and there is very small growth projected for school-age population.

The baby boomer generation finishes moving into the 65+ age groups between 2025 and 2030 and the age pattern of population growth changes at that point. The number of people in the 35 to 54 age groups starts growing again (+92,000 between 2025 and 2040) as does the number of school-age residents. Still, the largest population growth in this period (102,000) is again in the 65+ age groups.

IV. Household Projections for San Jose to 2040

This section describes how the initial set of household projections for the City of San Jose was developed and discusses the initial findings about future household growth.

The initial set of projections was based on the population projections by age and ethnic group described above. The household projections were developed based on projected population growth and projections of **household formation rates**. This is the standard methodology for projecting household growth, used by the California Department of Finance, CCSCE and most regional planning agencies.

These initial household projections may be refined as the planning process moves forward. Beacon Economics will translate these projections of household growth into projections of new housing demand. The housing projections will be translated into land use requirements and compared to existing plans and land use availability.

Projections of job growth by industry will be developed in a later part of the planning process. The housing and job projections will be analyzed to identify possible feedback implications. Staff and the project team will identify the extent to which the recent decline in housing prices and concerns about affordability can be incorporated into the housing analysis.

Analyses of alternatives will be considered based on the refinements discussed above.

The section below describes the initial set of household projections.

A. What is a Household?

A household includes all residents living in a dwelling unit. By definition the number of households is equivalent to the number of occupied housing units.

Two families can live in one housing unit and they are counted as one household. Relatives such as uncles or grandparents can live in a housing unit with the primary family and the entire group is counted as one household.

This definition of a household means that projecting household growth directly helps in projecting the number of housing units that will be needed to serve the projected population growth.

B. What is a Household Formation Rate?

A household formation rate tells us how many adults are in the average household. Or, put another way, household formation rates tell us how adults (people 20 years and older) combine to form households. If there are two adults in the average household, for example a husband and wife or two roommates, then the household formation rate for that age and ethnic group is 50%. For every 1000 people in that age/ethnic group, 500 households will be formed or 50% of the total adult population in that age/ethnic group.

Household formation rates reflect behavioral choices and, as shown below, vary widely by age and ethnic group, reflecting cultural differences as well as age-related differences such as some residents living alone when their spouse dies or there is a divorce.

The table below shows the household formation rates for San Jose residents tabulated from the 2000 Census. The table makes understanding household formation rates easier. The population groups are the same as in the projection analysis-Hispanic and Non Hispanic (NH) White, Black, Asian and Other.

**Table 8. San Jose: Household Formation Rates
2000**

<u>Age</u>	<u>Total</u>	<u>Hispanic</u>	<u>NH White</u>	<u>NH Black</u>	<u>NH Asian</u>	<u>NH Other</u>
20-34	29%	24%	37%	33%	26%	36%
35-54	51%	46%	55%	56%	47%	59%
55-64	54%	47%	60%	63%	43%	61%
65+	52%	49%	62%	57%	32%	56%
Total	44%	36%	52%	49%	37%	50%

Source: 2000 Census

The household formation rate for San Jose in 2000 was 44% for all residents 20 years of age and older. That means that for every 1000 residents 20 and over, there were 440 households reported in the 2000 Census.

Generally the lowest household formation rates were found in the 20-34 age groups where some residents lived with their parents and many lived with several roommates. The average household formation rate for this age group was 29%, which means that for every 1000 residents in these age groups, San Jose had 290 households in 2000 headed by someone age 20 to 34.

Generally the highest household formation rates were found for residents aged 65 and above, except, as discussed below, for Asian residents. The table shows that the household formation for Non Hispanic White residents aged 65 and above was 62% meaning that for every 1000 residents in this age/ethnic group, San Jose had 620 households headed by someone in this age/ethnic group.

The household formation rates for Hispanic and Asian residents aged 55 and above were lower than similar rates for Non Hispanic White and Black residents. This probably reflects the cultural tradition of having older generations living in the same household with their children and grandchildren.

One approach to developing alternative household projections for San Jose is to identify possible changes in the 2000 household formation rates either because cultural preferences change or in response to dramatic changes in income and living choices.

Alternative sets of household formation rate assumptions will be examined later in the project work plan. The next part of this section presents and discusses the initial set of household projections developed using the 2000 Census household formation rates shown above.

C. Initial Set of Household Projections

The initial set of household projections developed by CCSCE is shown below.

Table 9. City of San Jose: HH by Age Group (Thousands)

<u>Age</u>	<u>2000</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
20-34	65.9	67.1	76.1	78.6	81.1	81.7
35-54	135.5	143.6	136.9	141.7	158.3	181.6
55-64	36.4	80.4	84.2	80.6	67.5	59.8
65+	38.6	85.3	103.6	123.4	139.0	148.6
Total	276.4	376.3	400.8	424.4	445.9	471.7

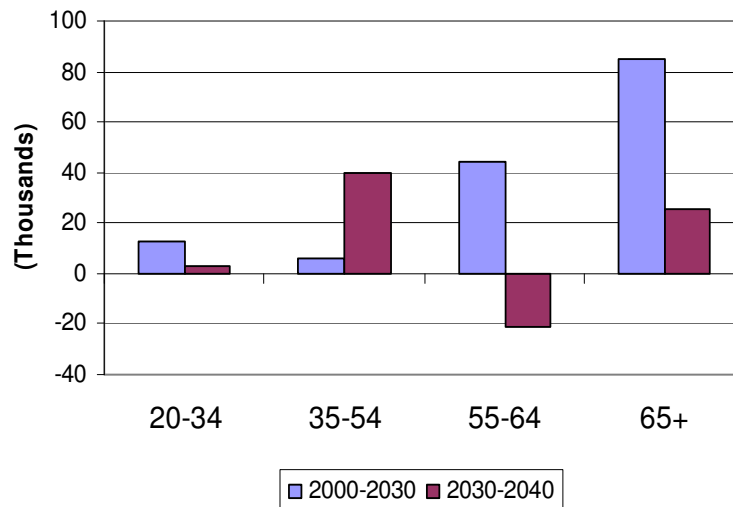
Source: 2000-Census; 2020-2040-CCSCE

Household growth is projected to average approximately 5,000 per year for both the 2000-2020 period and the 2020-2040 period.

This level of household growth would require that new housing be built at a higher rate than the 3,229 annual average from 1980 through 2007.

The household growth by age group shows one pattern of growth until 2030 and then a different pattern for the following ten years.

Figure 10: San Jose: Household Growth by Age Group



Between 2000 and 2030 more than 85% of San Jose’s projected household growth is projected to be in the 55-64 and 65+ age groups. This translates into household growth of 129,100 for these age groups out of a total household increase of 148,000 during this 30-year period.

On the other hand virtually no growth (6,300 HH) is projected in the 35-54 age groups and slightly more growth (12,600 HH) is expected in the City’s 20-34 age groups. The low growth in the 35-54 age groups is the result of small projected increases in population. The low growth for households headed by someone aged 20-34 is the result of projecting forward the current household forming behavior where many residents live in households headed by parents or roommates.

The large growth projected for older households is based on current cultural patterns where some Asian and Hispanic older residents live with other family members. Household growth could be higher if these patterns change.

After 2030, when the influence of the baby boomers is less, there is a new wave of population growth and household formation from younger residents—the children and grandchildren of current residents and new immigrants.

D. Households by Ethnic Group

The pattern of household growth by ethnic group follows the pattern of projected population growth.

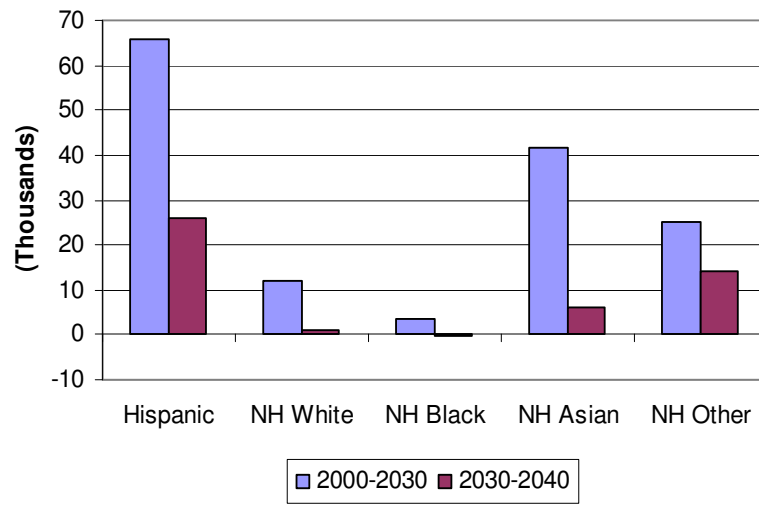
The initial set of household projections by ethnic group is shown below.

***Table 10. City of San Jose: HH by Ethnic Group
(Thousands)***

	<u>2000</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
Hispanic	59.2	102.5	112.6	124.8	136.1	151.0
NH White	132.6	141.5	144.0	144.7	145.5	145.6
NH Black	10.1	13.3	13.4	13.5	13.5	13.4
NH Asian	64.3	96.8	101.7	106.0	108.9	112.2
NH Other	10.2	22.2	29.1	35.4	41.8	49.6
Total HH	276.4	376.3	400.8	424.4	445.9	471.7

The largest growth is projected for households headed by Hispanic residents followed by Asian-headed households and those in the “other” group, which primarily includes multi race households.

Figure 11: San Jose: Household Growth by Ethnic Group



Appendix A
Additional Detail on Projection Methodology and Results

I. ABAG Analysis of the Share of Bay Area Growth Projected for Santa Clara County and the City of San Jose

As explained in the main report CCSCE developed independent projections of jobs and population for the Bay Area region and used ABAG's analysis of Santa Clara County and City of San Jose shares of projected regional growth. ABAG published projections for the region, counties and cities in December 2006. These projections and the Projections 2007 report incorporate local data and input so they are the best published source for analyzing sub-regional growth patterns. CCSCE used the ABAG analyses for jobs and population. The CCSCE household projections were developed, as described above, directly from the population projections developed by CCSCE for the City of San Jose.

A. ABAG Job Projections

The ABAG job projections were developed with 2005 as the base year and ended in 2035. These projections are shown below.

Table 11. ABAG Job Projections
2007 Report (Thousands)

	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>Growth</u>	
						<u>2005-2020</u>	<u>2020-2035</u>
Bay Area	3,449.6	4,280.7	4,595.2	4,921.7	5,247.8	831.1	967.1
Santa Clara County	872.9	1,098.3	1,183.8	1,273.0	1,365.8	225.4	267.5
San Jose	349.0	464.9	508.1	554.5	607.4	115.9	142.5
Santa Clara County Share of Bay Area						27.1%	27.7%
San Jose Share of Santa Clara County						51.4%	53.3%

As shown on the table, ABAG projected that Santa Clara County would get 27.1% of Bay Area job growth between 2005 and 2020 and 27.7% of the growth between 2020 and 2035. CCSCE used these growth shares to develop Santa Clara County job projections based on the CCSCE regional projections. The 2020-2035 growth share was used to develop projections for the 2035-40 period.

ABAG projected that the City of San Jose would get 51.4% of Santa Clara County job growth between 2005 and 2020 and 53.3% between 2020 and 2035. CCSCE used these growth shares to develop Santa Clara County job projections based on the CCSCE regional projections. The 2020-2035 growth share was used to develop projections for the 2035-40 period.

Santa Clara County's share of Bay Area jobs increase slightly in the CCSCE projections from 26.1% in 2005 to 26.4% in 2040 based on the ABAG analyses. San Jose's share of Santa Clara County jobs is projected to increase from 41.4% in 2005 to 44.2% in 2040. As a result job

growth in San Jose is projected to be larger between 2007 and 2040 (+43.4%) than job growth in Santa Clara County (+34.3%) or the Bay Area (+32.7%).

Figure 12: Santa Clara County Share of Bay Area Jobs

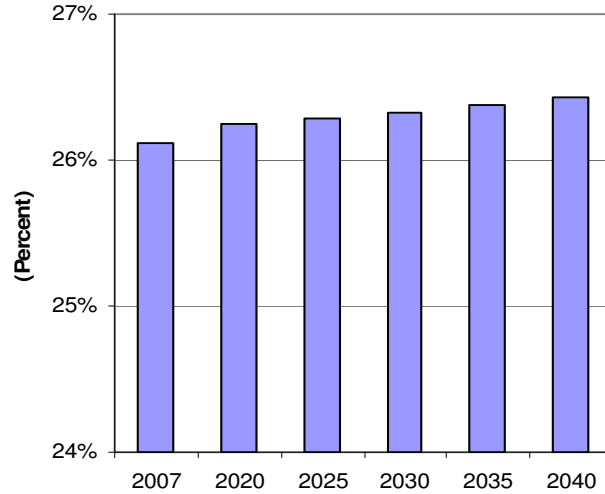
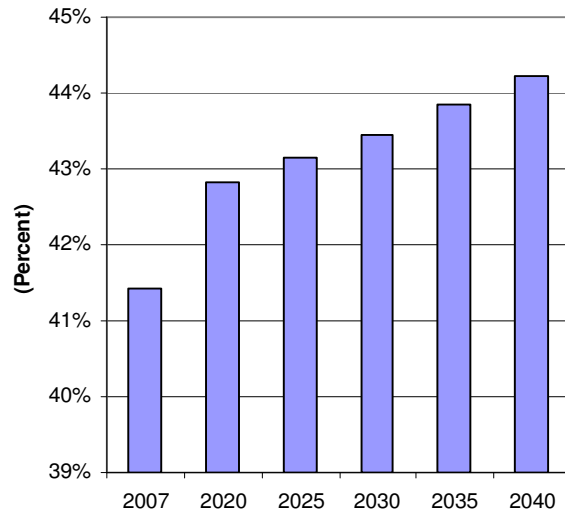


Figure 13: San Jose Share of Santa Clara County Jobs



B. ABAG Population Projections

The ABAG population projections were developed with 2005 as the base year and ended in 2035. These projections are shown below.

**Table 12. ABAG Population Projections
2007 (Thousands)**

	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	Growth	
						<u>2005-2020</u>	<u>2020-2035</u>
Bay Area	6,951.5	8,069.7	8,389.6	8,712.8	9,031.5	1,118.2	961.8
Santa Clara County	1,763.0	2,085.3	2,177.8	2,279.1	2,380.4	322.3	295.1
San Jose	943.3	1,150.9	1,210.3	1,282.7	1,356.6	207.6	205.7
Santa Clara County Share of Bay Area						28.8%	30.7%
San Jose Share of Santa Clara County						64.4%	69.7%

As shown on the table, ABAG projected that Santa Clara County would get 28.8% of Bay Area population growth between 2005 and 2020 and 30.7% of the growth between 2020 and 2035. CCSCE used these growth shares to develop Santa Clara County job projections based on the CCSCE regional projections. ABAG projected that Santa Clara County would get an increasing share of Bay Area population growth after 2030 (31.8% between 2030 and 2035). The 2030-2035 growth share was used to develop projections for the 2035-40 period.

ABAG projected that the City of San Jose would get 64.4% of Santa Clara County population growth between 2005 and 2020 and 69.7% between 2020 and 2035. CCSCE used these growth shares to develop Santa Clara County population projections based on the CCSCE regional projections. ABAG projected that the City of San Jose would get an increasing share of Santa Clara County population growth after 2030 (73.0% between 2030 and 2035). The 2030-2035 growth share was used to develop projections for the 2035-40 period.

Santa Clara County's share of Bay Area population increase slightly in the CCSCE projections from 25.4% in 2005 to 26.3% in 2040 based on the ABAG analyses. San Jose's share of Santa Clara County population is projected to increase from 53.5% in 2005 to 57.5% in 2040. As a result, population growth in San Jose is projected to be larger between 2007 and 2040 (+48.4%) than population growth in Santa Clara County (+38.0%) or the Bay Area (+31.8%).

Figure 14: Santa Clara County Share of Bay Area Population

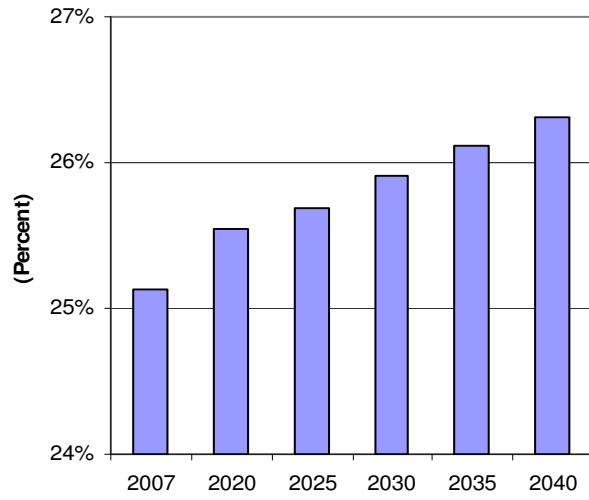
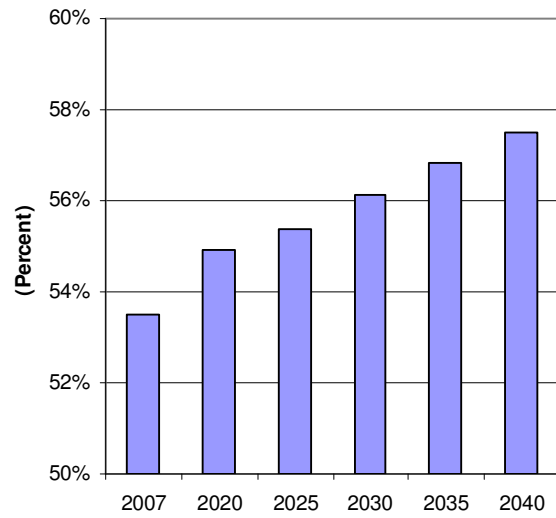


Figure 15: San Jose Share of Santa Clara County Population



II. Comparison of ABAG and CCSCE Projections

CCSCE did not use the ABAG regional job, population and household projections as a starting point in developing projections for the City of San Jose. This section compares the ABAG and CCSCE projections and explains why there are differences.

A. Jobs

The table below compares job projections for the Bay Area prepared by CCSCE and ABAG for the period from 2005 through 2035, the end of the ABAG projection period in the Projections 2007 report.

**Table 13. Bay Area Job Projections
CCSCE and ABAG (Thousands)**

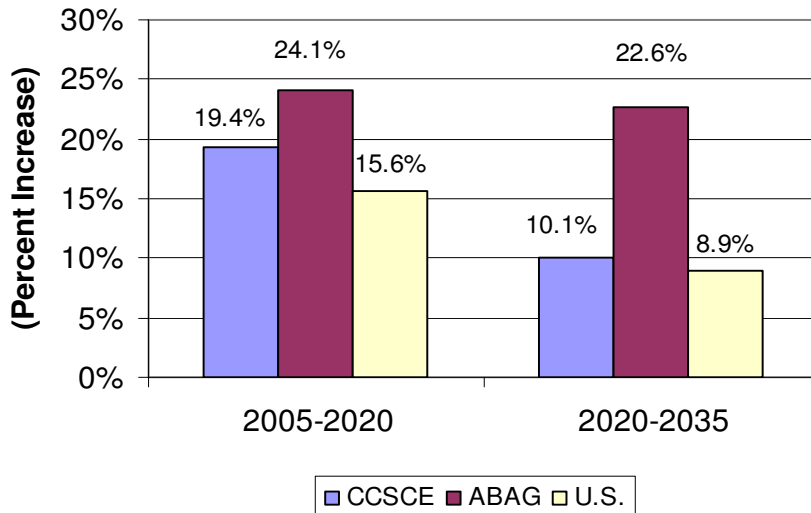
	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>Growth</u> <u>2005-2020</u>	<u>2020-2035</u>
CCSCE	3,569	4,261	4,383	4,510	4,690	19.4%	10.1%
ABAG	3,450	4,281	4,595	4,922	5,248	24.1%	22.6%

Both series include wage and salary jobs plus self-employed workers. The CCSCE historical estimates are from the California Employment Development Department (EDD) and the American Community Survey for self-employed workers. The Projections 2007 report says that ABAG uses base year data from the 2000 Census Transportation Planning Package.

The ABAG projections were prepared in 2006 while the CCSCE regional projections were prepared in 2008 based on new national projections from BLS released in November 2007.

The ABAG projections show faster regional job growth as compared with the CCSCE projections. The largest difference between the two sets of regional job projections occurs after 2020. The graph below compares the Bay Area job growth projected by CCSCE and ABAG with projected U.S. job growth based on BLS analyses used by CCSCE.

Figure 16: Comparison of CCSCE and ABAG Bay Area Job Projections with U.S. Job Growth



The ABAG regional job projections have the Bay Area growing faster than the nation by a larger amount than CCSCE between 2005 and 2020. But the gap between CCSCE and ABAG widens substantially after 2020. CCSCE has the Bay Area job growth rate still outpacing the nation but regional job growth is projected to slow along with national job growth during the peak period of baby boomer retirements. On the other hand the ABAG projections do not reflect much slowdown in Bay Area job growth after 2020 and, as a result, ABAG has the Bay Area growing more than twice as fast as the nation after 2020 using the new BLS national projections.

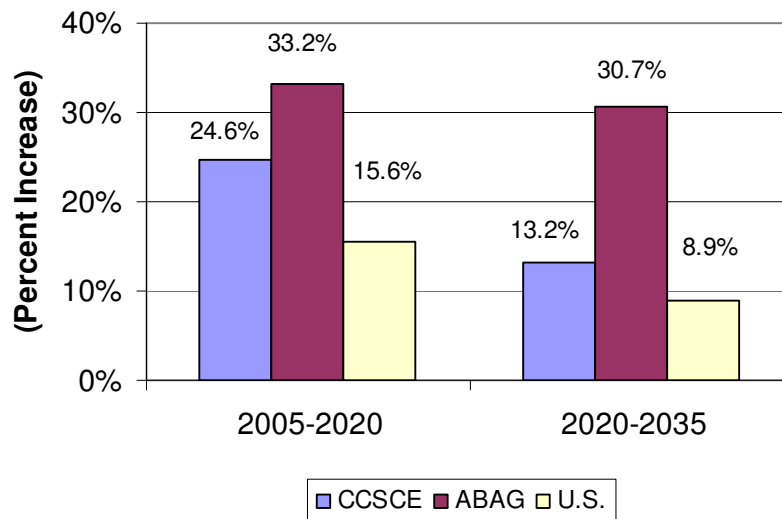
Based on this review of the ABAG regional projections and the fact that the CCSCE regional projections were prepared in 2008, CCSCE used the CCSCE regional job projections as the basis for developing projections of total jobs for the City of San Jose.

**Table 14. San Jose Job Projections
CCSCE and ABAG
(Thousands)**

	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	<u>Growth</u> <u>2005-2020</u>	<u>2020-2035</u>
CCSCE	384.6	479.1	497.2	515.8	542.4	24.6%	13.2%
ABAG	349.0	464.9	508.1	554.5	607.4	33.2%	30.7%

The CCSCE and ABAG job projections for San Jose differ solely because they are based on different regional job projections. The Santa Clara County and San Jose shares of regional job growth are the same in both cases. As a result the ABAG projections for San Jose do not reflect a decline in job growth as baby boomers retire and far outpace the national job growth rates that were the basis of the CCSCE projections.

Figure 17: Comparison of CCSCE and ABAG San Jose Job Projections with U.S. Job Growth



The ABAG projections have San Jose job growth at 30.7% between 2020 and 2035 or more than three times the projected national job growth rate of 8.9%.

B. Population

The table below compares population projections for the Bay Area prepared by CCSCE and ABAG for the period from 2005 through 2035, the end of the ABAG projection period in the Projections 2007 report.

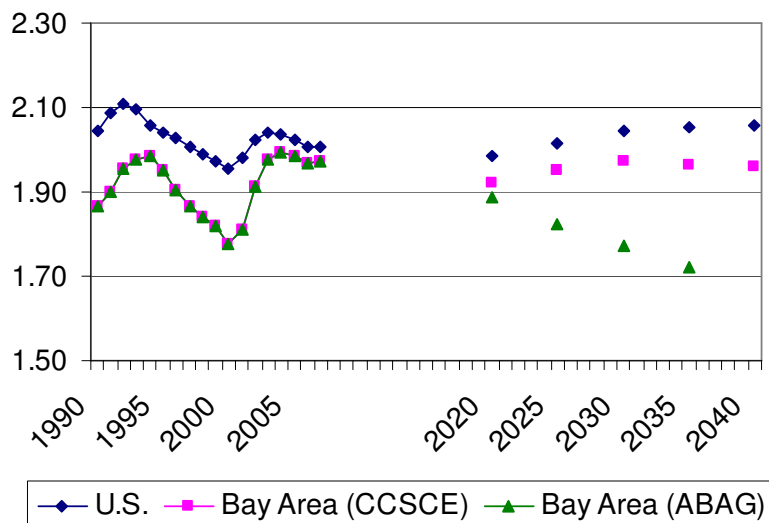
***Table 15. Bay Area Population Projections
CCSCE and ABAG
(Thousands)***

	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	Growth <u>2005-2020</u>	<u>2020-2035</u>
CCSCE	7,088	8,181	8,550	8,898	9,211	15.4%	12.6%
ABAG	7,096	8,070	8,390	8,713	9,032	13.7%	11.9%

The projected level of population growth for the region is similar between the CCSCE and ABAG projections. CCSCE projects a slightly higher level of population growth compared to ABAG although CCSCE has projected substantially slower regional job growth compared to the ABAG projections.

Both CCSCE and ABAG used similar methodologies for relating regional population growth to regional job growth and yet ended up with very different projected job population ratios. In 2020 CCSCE and ABAG project similar ratios of population to jobs and both are in line with the historical relationship between the Bay Area and U.S. relationship as shown below. But after 2020 the ABAG projections show a sharp drop in the ratio of population to jobs in contrast to the CCSCE projections that roughly follow the national trends.

Figure 18: Number of Residents per Job



Trends in labor force participation rates are the main link in relating regional population growth to regional job growth. Trends in the number of workers living outside the region, for example in the San Joaquin Valley, are another factor that is more important in the Bay Area compared to most regional economies.

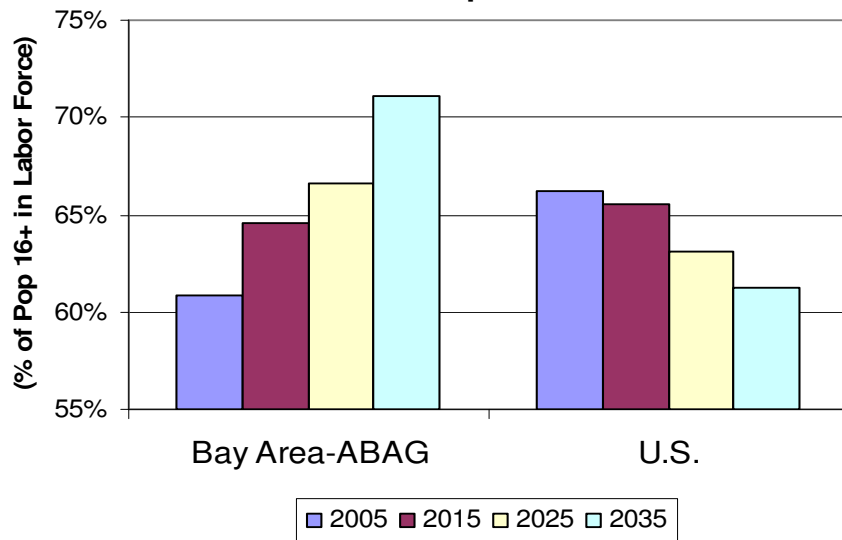
If labor force participation rates are rising, that means more people in the existing population are available to work and fewer new residents are needed to fill projected job growth. On the other hand, if labor force participation rates are falling, for example, when baby boomers retire, then any given level of job growth will require more new residents.

The ABAG projections combine relatively high levels of projected job growth with relatively low levels of projected population growth because ABAG assumes very large increases in labor force participation rates at a time when BLS is projecting a drop in overall labor force participation as baby boomers retire.

Both sets of projections assume a substantial increase in the share of older workers who delay retirement past the age of 65. Still, the BLS projections show a sharp slowing in labor force growth as the size of the baby boomer generation pushes overall labor force participation rates down as they age. Even though labor force participation for residents over 65 will increase in the future, they will still be much lower than when these same workers were 45 or 55.

The ABAG projections show a much different trend with overall labor force participation rates **increasing** during the period of peak baby boomer aging and eventual retirement from the workforce.

Figure 19: Projected Trends in Labor Force Participation



ABAG projected very large increases in labor force participation for residents under 65. For example, labor force participation rates for residents aged 25 to 45 are projected to increase from near 75% in 2005 to 90% in 2035. Labor force participation rates in the prime college-going age group (20-24) are projected to increase from 68% in 2005 to 86% in 2035.

CCSCE used the national trends in projected labor force participation along with an analysis of historical trends in the relationship of population and job growth in the Bay Area compared to the nation to develop regional population projections from the CCSCE regional job projections.

The amount of commuting from outside the region will affect the ratio of population growth to job growth in the Bay Area. If more workers live outside the region and commute in to work, then the ratio of Bay Area population to jobs will be less than if more workers in the future decide to live within the region.

There are three reasons to believe that the trends of the 1990s where many workers chose to live outside the region will be reduced or reversed in the next 20 years. One, the ABAG Projections 2007 report incorporates the policy goal of reducing the amount of commuting by promoting infill housing development.

Two, both the price of gasoline and demographic factors will favor living closer to where one works. The largest growth in the workforce will be in younger workers (aged 20 to 34) and older workers (aged 55 and above). Both groups may prefer living in active urban communities to farther away suburban living.

Three, there is evidence that the share of wages earned in Santa Clara County by non-residents is falling. In 2000 non-residents accounted for 18% of wages and benefits earned in Santa Clara County but by 2006 the non-resident share had declined to 15%. There is no similar data for the City of San Jose.

CCSCE projected a slight increase in the share of jobs held by workers living outside the region after 2030. This assumption had the effect of slightly lowering the CCSCE regional population projection.

The CCSCE and ABAG population projections for San Jose are shown below.

**Table 16. San Jose Population Projections
CCSCE and ABAG
(Thousands)**

	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	Growth	
						<u>2005-2020</u>	<u>2020-2035</u>
CCSCE	944.5	1,147.6	1,216.0	1,293.9	1,366.5	21.5%	19.1%
ABAG	943.3	1,150.9	1,210.3	1,282.7	1,356.6	22.0%	17.9%

The CCSCE and ABAG population projections for San Jose are similar although, as explained above, they were developed using very different assumptions.

C. Households

CCSCE developed the household projections for San Jose directly from the San Jose population projections as described above. The ABAG household projections were not analyzed since they were prepared using a completely different methodology.

The CCSCE and ABAG household projections for San Jose are compared below.

**Table 17. San Jose Household Projections
CCSCE and ABAG
(Thousands)**

	<u>2005</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>2035</u>	Growth <u>2005-2020</u>	<u>2020-2035</u>
CCSCE	293.3	376.3	400.8	424.4	445.9	28.3%	18.5%
ABAG	293.9	359.1	378.1	402.2	427.2	22.2%	19.0%

The overall level of growth between 2005 and 2035 is similar between the two sets of projections. CCSCE projects an increase of 152,600 households for this period, which is slightly higher than the ABAG projection of an increase of 133,300 households.

III. Methodology for Projecting San Jose Population by Age and Ethnic Group

The California Department of Finance (DOF) published projections of population by age and ethnic group for all counties in California in July 2007. The DOF projections for Santa Clara County were used in developing similar projections for the City of San Jose.

The DOF projections were used to identify trends in population growth by age and ethnic group. These trends were applied to the previously projected growth in total population in San Jose as described in the main report.

A. Projections of Population by Ethnic Group

The step by step methodology for developing projections of population by ethnic group for the City of San Jose is listed below.

- 1) The projections started with Census estimates for 2000 for San Jose for population by the five ethnic groups described on page 11.
- 2) Shares of county population growth by ethnic group were tabulated from the DOF projections for Santa Clara County. Shares were tabulated for 2000-2007, 2007-2020, 2020-2025, 2025-2030, 2030-2035 and 2035-2040. For example, DOF projects Hispanic residents will account for 53.1% of Santa Clara County population growth between 2007 and 2020.
- 3) The DOF share projections were used to project San Jose's population by ethnic group. For example, 53.1% of San Jose's population growth between 2007 and 2020 was projected to be Hispanic.

The overall methodology starts with the ethnic population distribution in San Jose in 2000 and projects it forward using ethnic shares of growth developed by DOF for Santa Clara County. This methodology is supported by the fact that ABAG has allocated to San Jose approximately 70% of Santa Clara County's total population growth.

B. Projections of Population by Age Group

The step by step methodology for developing projections of population by age group for the City of San Jose is listed below.

- 1) The projections started with Census estimates for 2000 for San Jose for population by age for each of the five ethnic groups described on page 11.
- 2) The projections of population by age group were developed by projecting population by age group for each ethnic group and then adding the five ethnic groups to get the City totals by age group.
- 3) Projections were developed for six age groups—a) 0-4, b) 5-19, c) 20-34, d) 35-54, e) 55-64 and f) 65+

- 4) Population growth by age group for each ethnic group were developed using the DOF projections of population by age and ethnic group for Santa Clara County as described above.
- 5) The assumption was made for the projection years that the age distribution of each ethnic group in San Jose would match the projected age distribution of that ethnic group in Santa Clara County. For example, 21.7% of Santa Clara County Hispanic residents were projected by DOF to be aged 5-19 in 2030. That 21.7% share was applied to San Jose's projected Hispanic population.
- 6) The DOF age by ethnic group projections for Santa Clara County were used for 2020, 2025, 2030, 2035 and 2040 to develop projections using the CCSCE projections of total population by ethnic group for each of those years.

IV. The Use of Historical Estimates for the City of San Jose from DOF and the American Community Survey

There are two sources of historical estimates for total population and households for the City of San Jose for years after 2000. These are annual estimates from DOF and recently developed estimates from the American Community Survey now conducted each year by the Census Bureau. The DOF estimates are not based on survey data while the ACS estimates are derived from a survey. In addition the ACS estimates cover a much wider range of demographic information compared to the DOF estimates.

Beacon Economics will use the ACS estimates throughout the planning process to identify trends in the characteristics of San Jose’s population and housing in recent years.

The ACS estimates of detailed characteristics all use the Census Bureau estimate of total population and households for San Jose as a control total or starting point. There is a longstanding dispute between DOF and the Census Bureau about the size of California’s population with DOF estimates since 2000 being consistently **higher** than the Census Bureau estimates.

The CCSCE analyses use the DOF estimates for base year totals for population and households.

A comparison of DOF and ACS estimates for San Jose for 2006 is shown below.

**Table 18. San Jose: Total Population and Households
2006 (Thousands)**

	<u>Population</u>	<u>Households</u>
DOF	957.9	296.2
ACS	916.2	290.8