

Which comes first – the chicken or the egg?

Land use and transportation decisions are much like the chicken and the egg (neither really proceeds the other). They influence and react to each other, and develop as a system, rather than as individual, unrelated topics. Since the Solano CTP is primarily a transportation document, the majority of the Plan will address that topic. But given the close association of land use and transportation, it is important to start out with an overview of existing and projected local and regional land uses.

LOCAL

The Solano Transportation Authority (STA) has 8 member agencies: Solano County, and the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville and Vallejo. Their existing and planned land uses have the greatest influence on Solano’s countywide transportation system. Each of the eight jurisdictions is briefly described in this section and shown in Figure 1. More detailed community profiles are found in Appendix ____.

Solano County is part of the San Francisco Bay Area, and is also part of the larger Northern California Mega Region. The Northern California Mega Region covers the San Francisco Bay and Sacramento regions, with strong connections to San Joaquin County and lesser connections to the Monterey, North Coast and upper and lower Central Valley areas, and even to the Lake Tahoe/Reno region to the east. Because of the concentration of economic, governmental and cultural resources in the San Francisco Bay Area and Sacramento, those areas and their land uses are also described below.

One of the most fundamental facts regarding the connection of land use and transportation decisions is that local governments have the statutory authority for land use decisions within their jurisdiction, subject to the requirements of state law. This is established in both the fundamental state land use laws regarding general plans, zoning and subdivision maps, as well as issue-specific legislation such as SB 375.



This fundamental principle is recognized in the Solano CTP Goal #4:

- The Solano CTP will identify a transportation system that supports the existing and planned land uses of Solano County's seven cities and the County of Solano.
 - The Solano CTP recognizes that land use decisions are the responsibility of the local agencies.

- Recognize the interaction between land use and transportation plans, with neither taking precedence over the other.
- The CTP will help identify regional and state land use initiatives linked to transportation, and support local land use plans and projects that seek to take advantage of those programs.

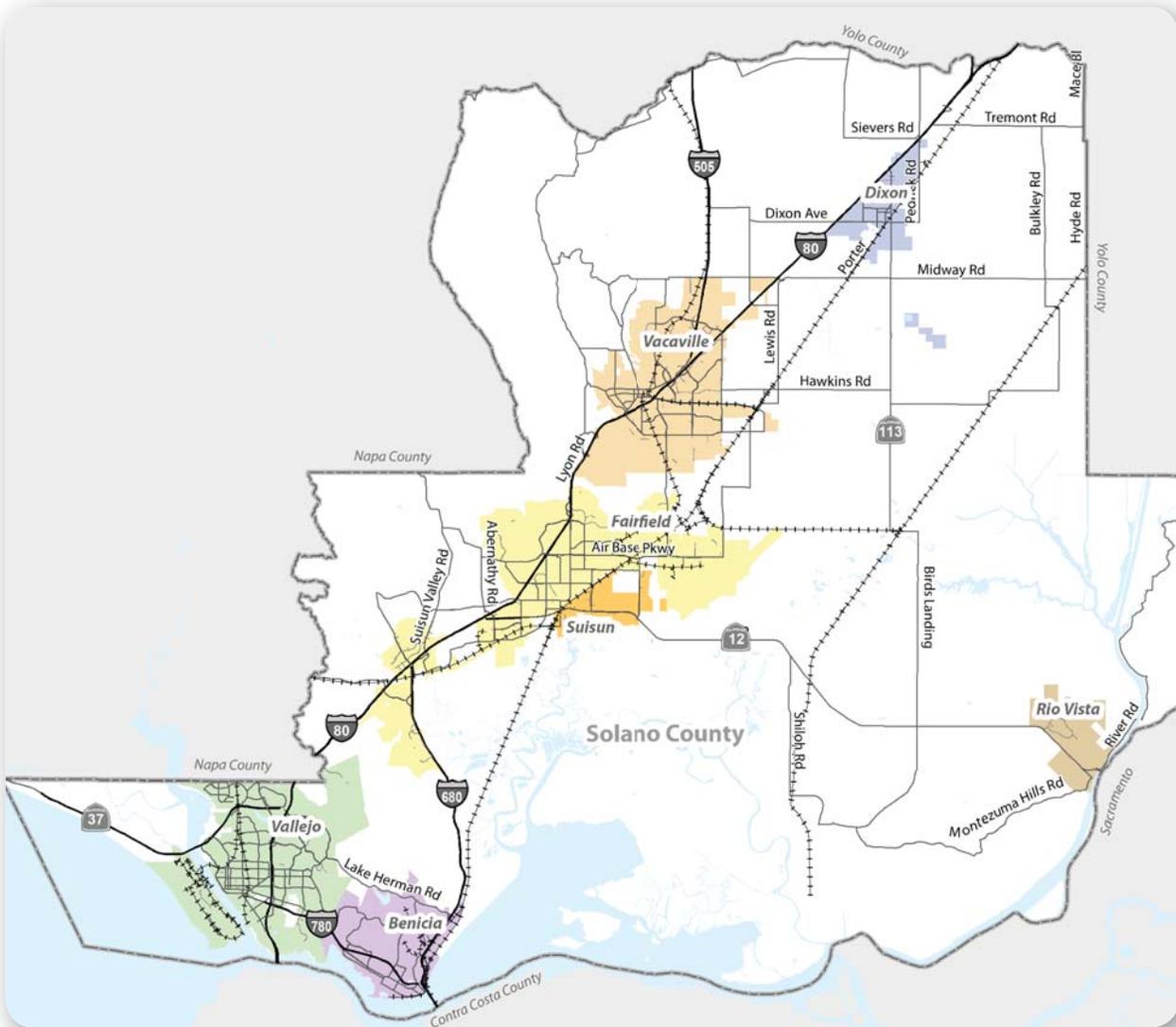


Figure 1 - STA Member Agencies



SOLANO COUNTY AND THE 7 CITIES

Finance annual population estimate for 2010. Figure 2 shows Solano population and trends from 1990 to 2010.

The 2010 US Census provides slightly different population numbers than the California Department of Finance (DoF). The comparison is shown in Table 1. The proportional distribution of the county's population does not change significantly between the two different data sources. Whichever set of statistics is used, the overall population pattern is essentially the same.

POPULATION

Population information contained in this section is taken from the decennial census for 1990 and 2000, and from the California Department of

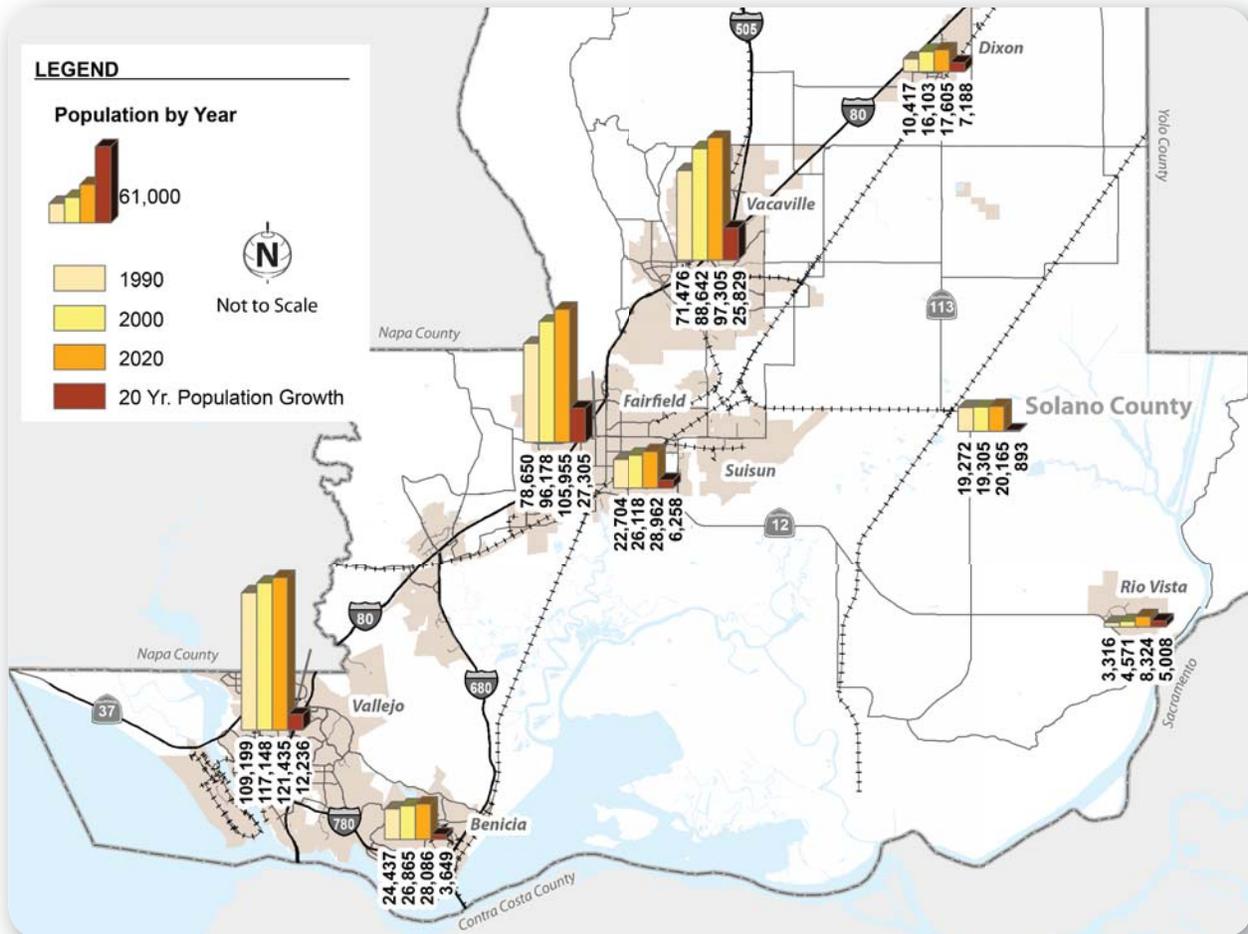


Figure 2 - Historic Population Trends



Vallejo is the largest city in the county, with 28.4% of the 2010 population. Benicia and Vallejo, which share a three and a half mile common border, account for 35% of the county total, while Fairfield (the County seat), Suisun City and Vacaville, all located in the center of the county, account for 54.3% of the county population. *“More than 89% of the County population is located on one of two urban clusters in the southwest and central portions of the county.”*

The low population figure for the unincorporated County is largely a result of the Solano Orderly Growth Initiative (aka Proposition A), approved by the voters in 1984 and subsequently renewed in 2008. The Solano Orderly Growth Initiative assigns urban growth almost exclusively to the incorporated cities, and severely limits rezoning of agricultural lands in the unincorporated County. Figure 3 illustrates concentration of growth in the seven cities.

The two smallest communities in the county – Dixon and Rio Vista – are also not ‘clustered’ with other communities. Dixon is located on I-80, approximately half-way between Vacaville and Davis. Rio Vista is located on SR 12, approximately 20 miles east of Fairfield/Suisun City, and adjacent to the Sacramento River. Dixon’s access to I-80 provides it with good regional mobility, but Rio Vista’s almost complete reliance on SR 12 significantly restricts access to and from (as well as within) the city. In addition, year-round agricultural and interregional goods movement traffic on SR 12, and summer-season recreational traffic accessing the Delta, further impact SR 12 and access to Rio Vista. Dixon’s growth since 1990 has in part been limited by local ordinance, and by a City decision to not allow urban development on the north side of I-80. Rio Vista has entitled an additional approximately 4,300 single and multiple family residential units, but has not seen significant development outside of the Trilogy

Table 1 - Solano Population

Jurisdiction	Dept. of Finance 2010	% of Total Population	Census 2010	% of Total Population
Benicia	28,086	6.5%	26,997	6.5%
Dixon	17,605	4.1%	18,351	4.4%
Fairfield	105,955	24.8%	105,321	25.5%
Rio Vista	8,324	1.9%	7,360	1.8%
Suisun City	28,962	6.8%	28,111	6.8%
Vacaville	97,305	22.7%	92,428	22.4%
Vallejo	121,435	28.4%	115,942	28.0%
Balance Of County	20,165	4.7%	18,834	4.6%
TOTAL	427,837		413,344	



senior subdivision. An additional approximately 2,600 proposed residential units are envisioned in the Rio Vista General Plan, and the City supports their development, along with an expected expansion of the supporting base of commercial land uses.

The county's demographic characteristics also have an impact on the transportation pattern, albeit not as significant an impact as does the overall physical location of residences and jobs. As of the 2010 census, 27.4% of the county population was 19 years of age or younger. The Solano percentage of seniors age 60 or older is very similar to that of the State – 17% in Solano County and 16.3% for California. Information from the 2010 census regarding household income and poverty, which is an indicator of transit-dependent residents, is not yet available.

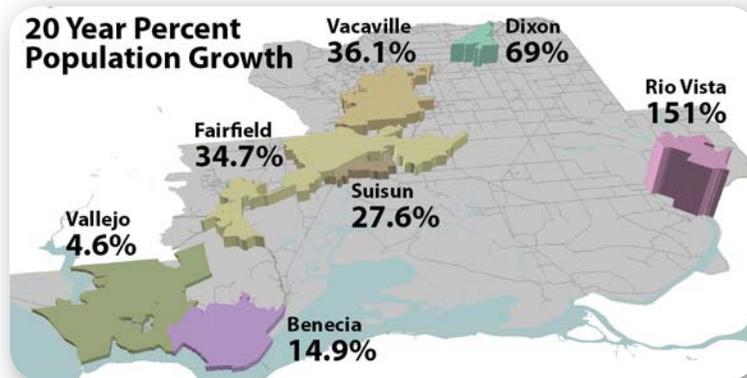


Figure 3 - Population Growth in the Seven Cities (1990 - 2010)



EMPLOYMENT

Until the mid-1990s, Vallejo and Fairfield were the employment centers of the county, even though Vallejo was the population center. As seen in Figure 4, Vallejo accounted for 30% (38,550) of the county's jobs in 1990, while Fairfield accounted for 31% (40,700).

In 1996, the Mare Island Naval Ship Yard in Vallejo was closed, and approximately 6,300 shipyard and supporting service jobs disappeared. With

this closure, the county employment center shifted from a balance between Vallejo and Fairfield to just Fairfield, with almost one-third of the county-wide jobs located in Fairfield in 2000. Fairfield remained the county employment center in 2010, but with a reduced share (32.2%). Vallejo and Benicia combined account for 32.8% of the county's 2010 jobs, while Fairfield, Suisun City and Vacaville account for 55.3% of the jobs.

Although small, Dixon is well balanced between county wide population and employment, with

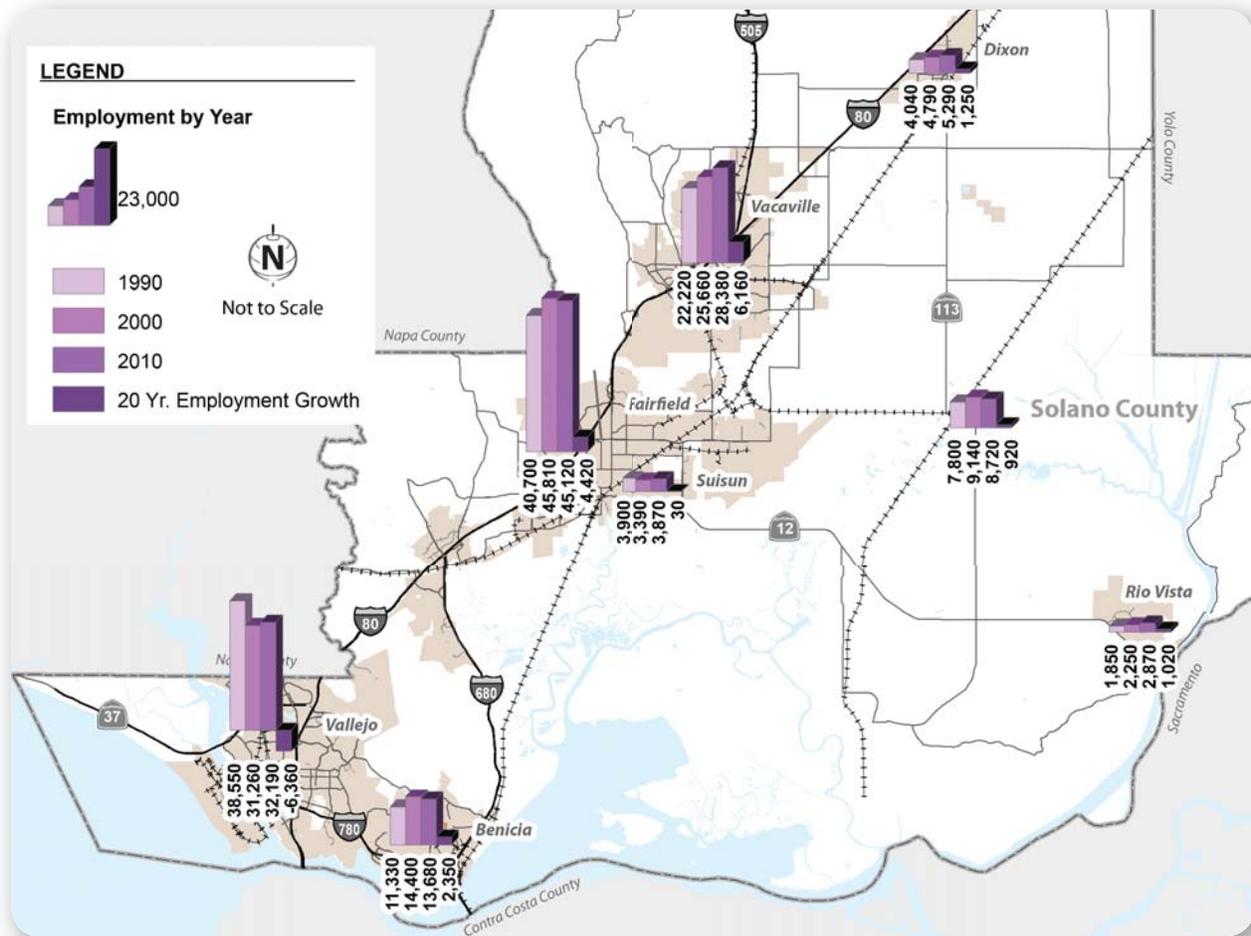


Figure 4 - Historic Employment Trends



4.1% of the county population and 3.8% of the county jobs. Rio Vista has 1.9% of the county population and 2% of the county jobs. While Rio Vista lacks any regional job centers, Dixon has regionally-important retail and employers such as Genentech and Gymboree.

PROJECTED CHANGES

There are two views of future development for Solano County and the 7 cities; those in each jurisdiction’s general plans, and those of the Association of Bay Area Governments (ABAG). Since 2007, ABAG has changed its Projections series of documents to reflect a policy choice giving preference to household and job creation in the inner Bay Area, in communities served by high-capacity, high frequency public transit. Figures 5 and 6 show each Solano jurisdiction’s projected 2035 population and employment, based upon ABAG’s Projections 2009. While the projections are not the certain result of 25 years of development and change by each jurisdiction, they do provide a reasonably-possible future image of Solano County and the 7 cities.

The projected 2035 distribution of population and employment is not significantly different from the existing conditions. Vallejo will remain the largest city in terms of population at 27.4%, and Fairfield will have the largest number of jobs at 33.3%. Population and jobs will be centered in the two city clusters of Benicia-Vallejo and Fairfield-

Suisun City-Vacaville. Figures 5 and 6 provide the projected concentration of total population and employment in 2035.

As with population, Dixon and Rio Vista are stand-alone communities with job growth prospects influenced by their access to the larger region. Dixon, with its close proximity to Davis and the University of California campus there, and its easy access by rail and freeway, has significant job growth potential. Rio Vista, however, has significant employment growth challenges because of its relative isolation. Because of the low base from which it starts, however, Rio Vista’s relative growth is substantial.

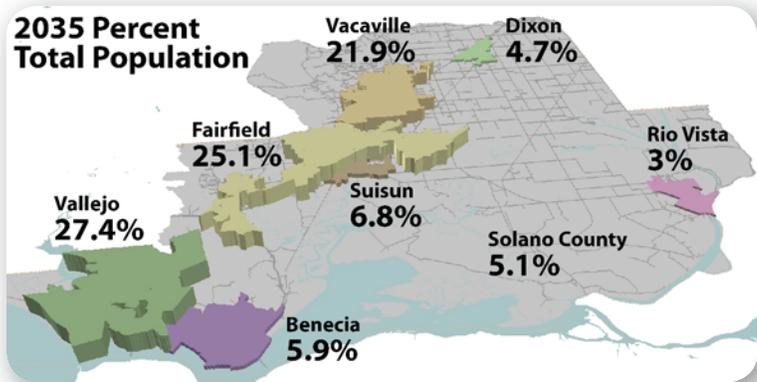


Figure 5 - Projected Population Composition

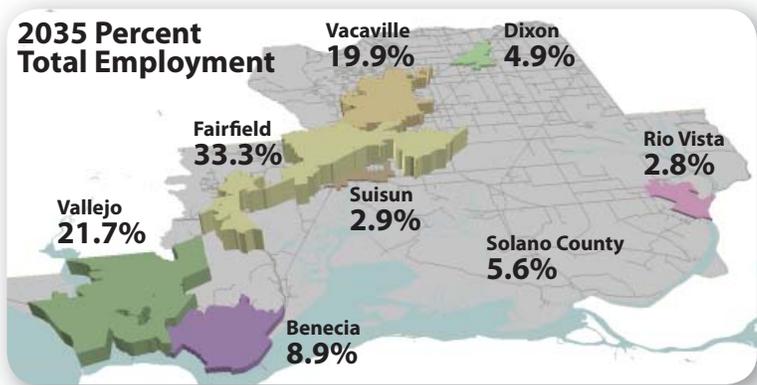


Figure 6 - Projected Employment Composition



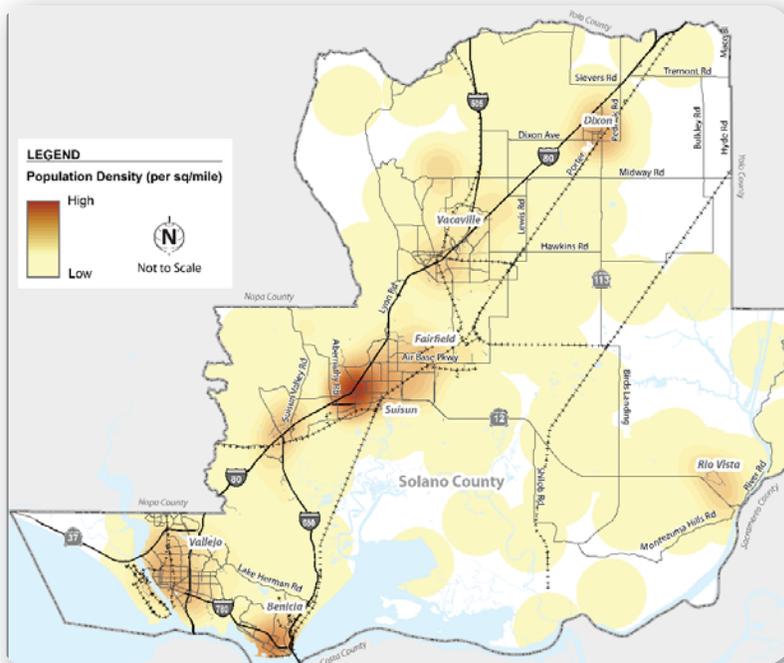


Figure 7 - 2010 Population Density

Figures 7 through 10 show population and employment density for current and projected conditions.

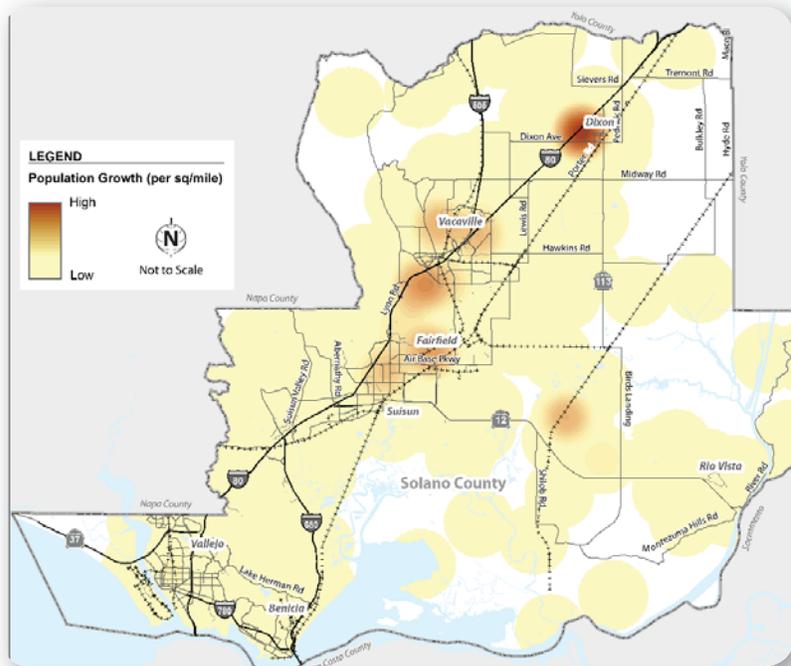


Figure 8 - 2035 Population Growth



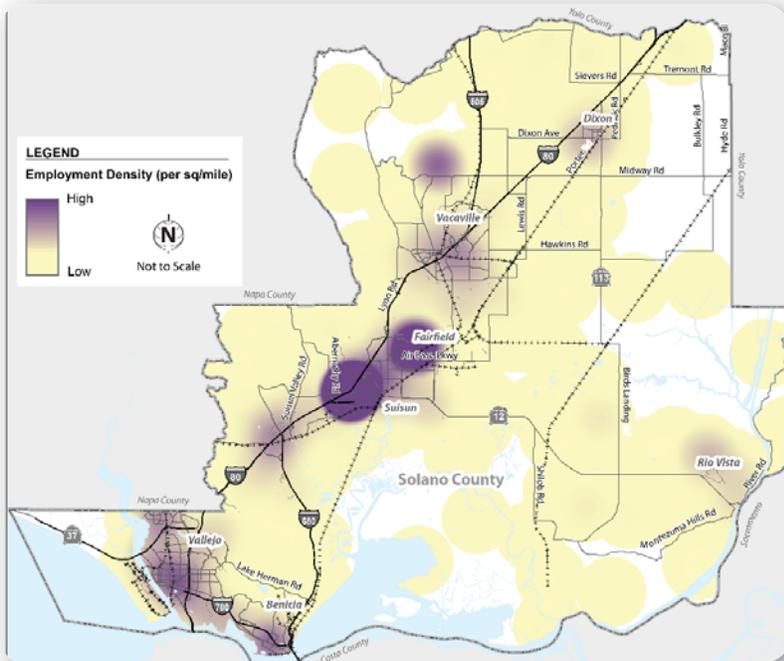


Figure 9 - 2010 Employment Density

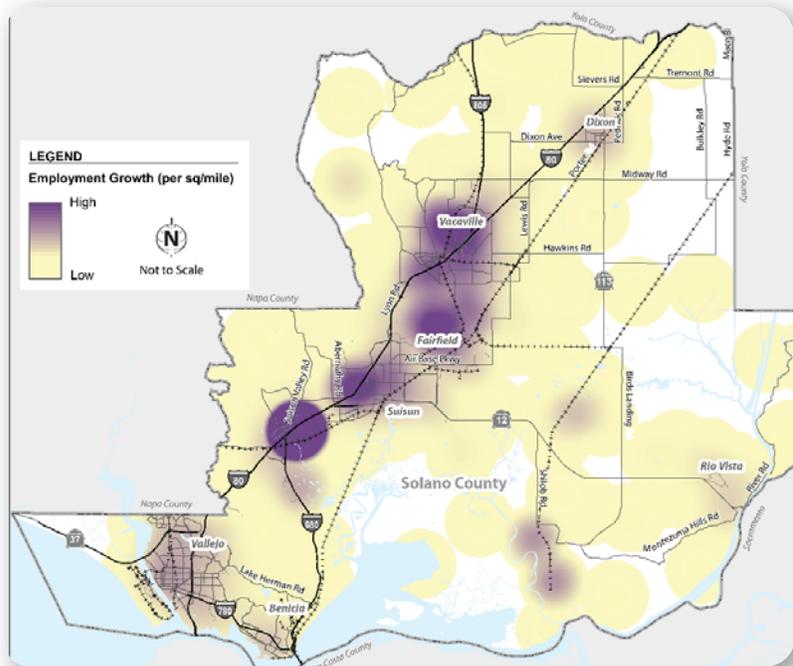


Figure 10 - 2035 Employment Growth



PRIORITY DEVELOPMENT AREAS

Even though the general location and proportion of residential and employment development are not expected to change over the next 25 years, the type of development may change. This is especially true of residential development. The primary reason for this is the current emphasis from MTC, ABAG and even national agencies on transit-oriented development (TOD). TOD is more than just housing near transit; it is communities designed to emphasize transit use over single-occupant auto trips. Typical features of TOD are higher density residential developments, easy access to public transit and to bicycle and pedestrian networks, and reductions in parking requirements (often upper limits on the number of parking spaces rather than lower limits.)

In the Bay Area, MTC and ABAG support TOD projects through the FOCUS program's Priority Development Area (PDAs) designation, Transportation for Livable Communities (TLC) planning and capital grants, and Station Area Plan grants.

There are nine PDAs designated in Solano County. Each PDA is described in more detail in the Alternative Modes element of the Solano CTP, and in the Solano TLC Plan, a separate document that is being updated in 2011. The Solano TLC Plan focuses on the existing and potential PDAs, but will also recognize that there are areas in the County and cities that can accommodate development that supports transit and bicycle and pedestrian use, but that do not qualify for PDA designation.

The PDA statistics and projections that follow were developed by ABAG. They represent ABAG's projections of what could be accommodated in the 9 Solano PDAs; the cities do not necessarily have zoning or identified infrastructure in place or planned that would support the jobs and housing projected by ABAG. There is also no assurance that the market will actually develop the potential that ABAG has identified.

The nine PDAs have the potential to account for almost 35% of the projected 25-year growth in Solano County and the 7 cities, as shown in Table 2. More important than the county-wide figure is the PDA proportion in 4 of the 5 cities that have

Table 2 - Solano Priority Development Areas, Population and Employment Growth, 2010 to 2035

Jurisdiction	2010 Population	2035 Population	25 Yr. Growth	PDA 25 Yr. Growth	PDA % of 25 Yr. Growth
Benicia	28,086	30,100	2,014	226	11.2%
Dixon	17,605	23,900	6,295	0	0.0%
Fairfield	105,955	127,000	21,045	11,397	54.2%
Rio Vista	8,324	15,300	6,976	0	0.0%
Suisun City	28,962	34,300	5,338	3,419	64.1%
Vacaville	97,305	111,100	13,795	3,668	26.6%
Vallejo	121,435	138,900	17,465	8,610	49.3%
Balance Of County	20,165	25,900	5,735	0	0.0%
TOTAL	427,837	506,500	78,663	27,320	34.7%



PDA: Fairfield, 54.2% of potential growth, Suisun City 64.1% of potential growth, Vacaville 26.6% of potential growth and Vallejo 49.3% of potential growth.

Most of these PDAs are centered around existing transit centers. The Fairfield Downtown and Suisun City Downtown and Waterfront District PDAs are immediately adjacent to the Suisun City Capitol Corridor train station. The Fairfield West Texas Gateway PDA includes the Fairfield Transportation Center. The Downtown Vacaville PDA is a quarter mile from the Davis Street park-and-ride lot, while the Vacaville Allison Area PDA includes the Vacaville Transit Center. The Vallejo Downtown and Waterfront PDA includes the WETA ferry terminal and the Vallejo Station parking garage. Finally, the Fairfield-Vacaville Train Station PDA is centered around a planned transit center that includes a Capitol Corridor train stop, bus connections and a park-and-ride lot.

This means that about one-third of the projected 2010 to 2035 residential growth can be accommodated in areas that provide immediate access to transit. Figure 11 provides population and employment projections in Solano PDA's. By giving funding priority to projects in or directly supporting PDAs, STA has the opportunity to support those decisions that help create a more efficient use of the transportation system.

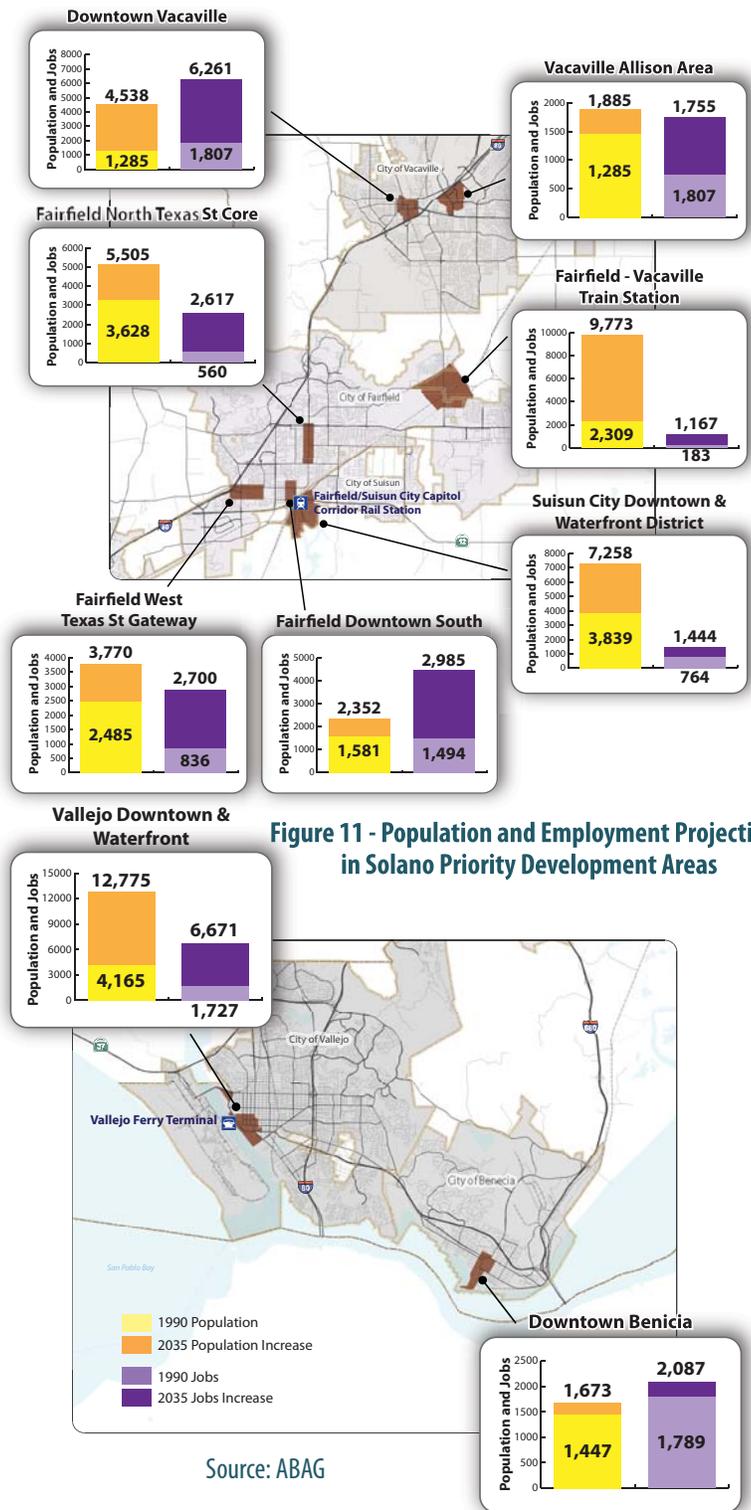


Figure 11 - Population and Employment Projections in Solano Priority Development Areas



REGION

Solano County is part of the nine county San Francisco Bay Area. The other counties are Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara and Sonoma. The eastern segment of Solano County is also functionally a part of the Central Valley, with close connections to the Sacramento and San Joaquin metropolitan areas and the Sacramento/San Joaquin Delta.

SAN FRANCISCO BAY AREA

As of the beginning of 2010, the Bay Area population was 7.3 million, with 5.1 million of those residents in Santa Clara, Alameda and Contra Costa counties and the city of San Francisco. The region's employment is similarly concentrated in those areas, with 2.6 million of the region's 3.5 million jobs in those four locations.

The Bay Area's demographics and transportation are in large part shaped by geology. The mountain ranges of the Coast Range run north-south. The San Francisco Bay has both north-south and east-west portions. The result is a series of barriers that focus traffic on a few choke points, such as toll bridges and passes or tunnels through mountains. When the combination of concentrated jobs and traffic choke points is brought together, the Bay Area produces severe gridlock in some areas, especially those approaching the jobs centers in San Francisco and San Jose.

AMBAG projects an 80% growth in the Bay Area's population from 2010 to 2035, and a 74% increase in employment. The rate of population growth in two of the core Bay Area cities – Oakland and San Francisco – will be less than that in outlying areas such as Solano County, but the total number of both new residents and new jobs in these areas will still be greater than the comparable aggregate total for all eight Solano jurisdictions. The concentration of jobs in the inner Bay Area, and inability to create new, high-capacity means of transporting workers in to those jobs, means that existing in-commute and resultant congestion will only get worse.

As noted above, ABAG and MTC are working on a program to concentrate growth in identified nodes that are served by frequent, high-density transit. This program, if carried out to its full potential, would substantially decrease the growth of in-commuting to the inner Bay Area



and the related production of greenhouse gasses. However, many PDAs in the inner Bay Area are either at risk from projected sea level rise or are in areas with a high concentration of small particulate air pollution (PM 2.5), primarily related to diesel engines. In addition, there are a number of non-transportation infrastructure deficiencies that impact these PDAs, as well as potential local political opposition. It appears unlikely that the Bay Area PDAs will be developed to their full potential.

CENTRAL VALLEY

The Sacramento metropolitan area is the largest urban concentration in the northern Central Valley, with Stockton and its environs being a distant second. Solano County's association with the Sacramento area is in some ways as strong as that with the Bay Area.



The Sacramento Area Council of Governments (SACOG) covers the counties of El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba. SACOG projects the region's population will grow from a 2005 total of just over 2 million to a 2035 total of 3.4 million. Sacramento County has the largest number of residents, both at the current time and in the 2035 projections. Unlike many Bay Area communities, however, much of Sacramento County's population lives in the unincorporated county (527,790 of 1,283,234 in 2005). By 2035, the proportion of residents in the unincorporated county will have fallen from 41% to 38%, but will still be larger than any of the incorporated cities.

Sacramento holds a similar preponderance of regional jobs similar to its housing concentration. In 2005, Sacramento County was home to 678,503 out of the regions 1,000,157 total jobs (68%). In 2035, the proportion is projected to be 63% (967,986 out of 1,536,097).

The SACOG area does not have the same physical constrictions of transportation routes as does the Bay Area. Although the Sacramento and American rivers transverse the area, they are much easier to cross than is the San Francisco bay. None of the bridges require a toll. In addition, the region is not divided by the steep hills that characterize the Bay Area.

One result of this lack of obstacles has been a lower density urban development pattern, with a higher proportion of single family homes and a lower density downtown business core. This lower density makes it harder for public transportation to function effectively. In addition,



the Sacramento Area is served by a limited number of freeways: Interstates 80 and 5, State Highways 99 and 50 and the Capitol City Freeway. Sacramento’s freeway congestion is generally not considered as bad as that of the Bay Area, but the region does experience significant commute-hour delays, as well as non-commute delays from seasonal recreational traffic traveling to and from the Lake Tahoe region.

San Joaquin County is projected to grow from a 2010 population of 681,600 to a 2035 population of 1,000,200, with Stockton and Lodi remaining the two largest communities in the county. Employment for San Joaquin County is expected to grow from a 2010 total of 214,000 to a 2035 figure of 293,400.

San Joaquin County faces geographical, population density and transportation issues similar to those of Sacramento. Few Solano residents commute to San Joaquin County for employment. However, important recreational and agricultural traffic travels to and through both Solano and San Joaquin Counties on Highway 12.



LOCAL AND REGIONAL PROJECTION DIFFERENCES

Projections for growth are a frequent source of tension between local and regional governments, and the Solano County relationship with ABAG is no exception. Many communities seek to emphasize retail and industrial expansion and minimize residential growth for a number of reasons, with impact to the local tax base being a common concern.

In the 1990s and early 2000’s most Solano County communities objected to ABAG’s projections for residential growth as being too high, essentially forcing suburban Solano County to accept residential growth that the inner Bay Area communities were unwilling to accept. *“Residential growth projections are especially important because they form the basis of the Regional Housing Needs Allocation (RHNA) process required by the State, and the subsequent development of local General Plan Housing Elements that must be in conformance with the RHNA numbers.”* At the same time, ABAG job projections were typically lower than local communities desired. This lower employment projection lacks the impact of the housing projections because there is no requirement or obstacle placed in the way of retail and industrial growth to match the RHNA and Housing Element requirements.



Since ABAG's Projections 2007, the situation has begun to reverse itself. ABAG is now projecting significantly lower population growth in Solano County as a matter of policy, and has revised its employment projections to a) reflect a lower expected rate of employment growth and b) concentrate more of that growth in the inner Bay Area. Figure 12 provides land use designations consistent with local General Plans.



Figure 12 - Existing Land Use
Source: Solano County



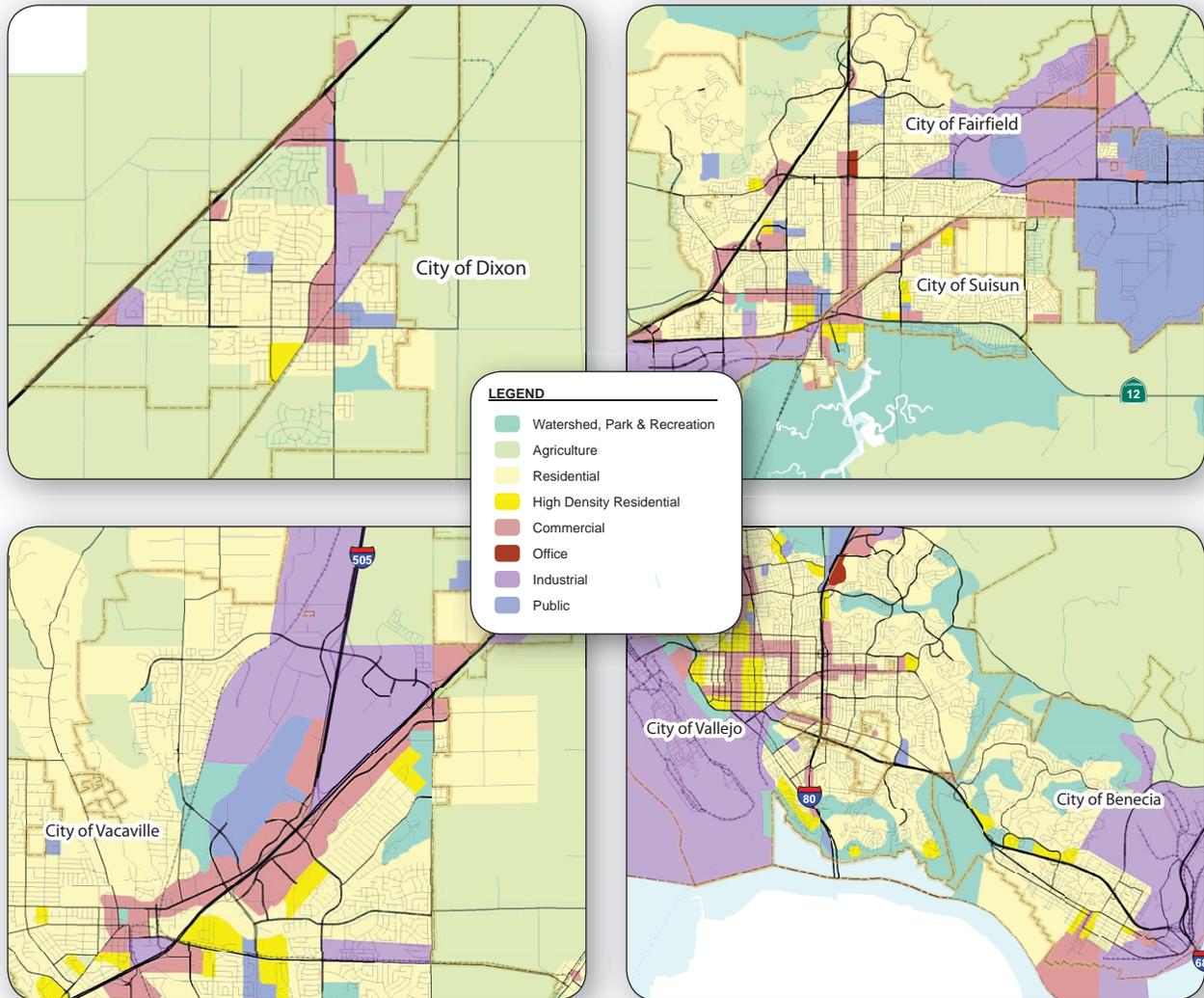


Figure 13 - Existing Local Land Use
Source: Solano County

One result of these differences in growth projections is that the local general plans have different projected population and employment numbers than do the ABAG projections. In the case of retail and industrial growth, local governments (both in Solano County and elsewhere in the Bay Area) typically aggressively seek out new development. Figure 13 above reflects projected land use for local jurisdictions.



CONCLUSION

No matter which projections are used, Solano County will see continued residential, retail and industrial growth from 2010 to 2035. The location and type of this growth will be important, but will probably not change the fundamental traffic patterns that exist today. This is because the projected 25-year growth of population is about 18% above the current numbers - meaning that 82% of the population producing trips on local and regional roads already resides in Solano County. New land use development can change the type and volume of traffic growth, but is unlikely to substantially change that patterns that exist.

There are two possible exceptions to this conclusion. First, ABAG's growth projections could lead to a re-ordering of regional transportation investments, with more money going into the inner Bay Area communities projected to take on more residential growth. If the actual growth continues to happen in suburban communities such as Solano County – as has been the pattern for more than 20 years – but the transportation investments change to reflect ABAG's projections, then the impact of actual growth on Solano's transportation system will be worse, because the county and local jurisdictions will lack resources to improve the system.

The other potential change is a significant increase in the rate of employment growth in

Solano County. Local residents drive to Bay Area and Sacramento jobs because that is where the major employment centers are located; and, in the case of many inner Bay Area jobs, that is where the high salary jobs are. *"If Solano County and the seven cities are successful in attracting new, good-paying jobs at a faster rate than ABAG projects, the need for Solano residents to commute on I-80 to the inner Bay or to Sacramento will be reduced."* The potential to improve both the local and regional transportation pattern, as well as to provide other economic and sociological benefits to local jurisdictions, is significant.

