

“Paving Paradise” in California: Farmland Conversion in Two Bay Area Counties

I. California’s Bay Area: Contra Costa and Santa Clara Counties

My choice of California is largely based on a personal interest, because a large portion of my extended family lives in the state, from San Diego in the south to Redding in the north. I chose two counties in the San Francisco Bay Area, in particular, because that is where I am planning to live after finishing my education at the University of Michigan. Once I had decided on the Bay Area, I focused on fairly urbanized counties that also boasted significant tracts of farmland. My goal was to explore how different counties in the same region—based on different geography and demographics—might be led to similar land use outcomes. This quickly led me to Contra Costa and Santa Clara counties, as these are the two counties in the Bay Area that best fit my profile.

Contra Costa County sits at the northeast end of the Bay, and its settled areas (nearly all suburbs) are mostly extensions of the San Francisco metropolitan area, linked to it by the highway system and public transit. Santa Clara County sits at the southern end of the Bay, and is the heart of the famous concentration of high-tech industry giants known as Silicon Valley. Though it is also part of the San Francisco metro region, it is dominated by the city of San Jose, which is technically the largest city within the Bay Area. Thus, while Contra Costa is highly decentralized, Santa Clara is centered around San Jose.

II. Agricultural Overview

California's economy is massive, and even though it is the leading agricultural state in the Union (with market sales of over \$25 billion in 2002, equivalent to 13% of all U.S. agricultural production), only about 2% of its GDP now comes from agriculture.

Although the industry was historically the most important economic anchor in the state, it now forms only a small part of the state's diverse economic and social fabric.

California's farmlands produce the greatest variety of products in the U.S., and the state's Central Valley is widely known as one of the most fertile regions on the planet. The most important products are milk and other dairy products, fruits, nuts, berries, melons, vegetables, potatoes, sweet potatoes, cattle, nursery plants and flowers. The average California farm covered an area of 346 acres in 2002 (median size, however, was between 10 and 49 acres) and produced about \$323,000 in market value, and both average farm area and value produced have steadily increased for decades. There were about 79,600 farms in 2002, with 50% of agricultural land in pasture and 39% in crops. It is also interesting to note that 51% of all U.S. organic food production occurs in California.

In Contra Costa County, average farm size in 2002 was 213 acres and declining (median was between 10 and 49 acres), with average production of \$152,000; the main products were fruits, nuts, berries, vegetables, potatoes, nursery plants and flowers, and some livestock. 592 farms devoted 65% of land to pasture and 29% to crops. This suggests both less centralized farm ownership and lower productivity per acre than the state average, although it should be mentioned again that the state contains some of the most productive farmland in the world. Declining farm size and number of farms may be due partially to farmland conversion. In Santa Clara County, average farm size in 2002

was 313 acres (median again between 10 and 49), with average production of \$203,000; the main products were approximately the same as Contra Costa County. 1,026 farms devoted 81% of land to pasture and 10% to crops. Santa Clara is closer to the state averages in farm size and production, but it also cannot compete with the world-class Central Valley. One last point is that the average net income of a Santa Clara farm (\$75,000) is almost twice that of a Contra Costa farm (\$42,000); and while Santa Clara lost only 2% of its farmland between 1997 and 2002, Contra Costa lost about 25%.

III. Natural Features Overview

The two counties, despite their physical proximity, differ in their topography and microclimates. Contra Costa County's western edge (West County) is an alluvial plain on San Francisco Bay; moving eastward one encounters the Oakland Hills, a long valley stretching from Martinez to San Ramon (Central County), Mount Diablo, and at the eastern end of the county more alluvial plain near the mouth of the San Joaquin and Sacramento Rivers (East County). The entire Bay Area, including both Contra Costa and Santa Clara, experiences a Mediterranean-type climate, with marked wet and dry seasons. But given the diverse topography, several microclimates exist within the county that vary from the Mediterranean-like average: along the Bay coast the weather tends to be cool, with fair amounts of rain and fog; inland in Central and East County the climate is hot and dry by comparison. Significant amounts of high-quality farmland lie in East County, but since West and Central County areas have been mostly developed, this is exactly where most of the new development in the county is happening. 32% of land in the

county is classified as urban, 27.4% agricultural, and the rest is either mountainous or uninhabited.

Santa Clara County is oriented quite differently. The northern end of the county covers a broad alluvial plain along the southern edge of the Bay, called the Santa Clara Valley. This plain is where San Jose is located. Southeast of the city, the Santa Clara Valley narrows and continues to Gilroy, surrounded by mountains. This segment of the valley has been largely urbanized, but the portion of the Valley south of Gilroy remains largely agricultural and rural. The majority of Santa Clara County, like the majority of Contra Costa, is inland and therefore is not as cool as the Bay coast. In fact, it is close to semi-arid with a mean annual rainfall of about 14.4 inches, though the soil is very fertile and significant irrigation allows productive farming, as in Contra Costa. 22.7% of the county is classified as urban, 38.8% agricultural, and the rest is either mountainous or uninhabited.

IV. Demographics

After the 1906 San Francisco earthquake, development across the Bay in Contra Costa County began on a large scale. The western and northern coasts of the county became home to a large amount of heavy industrial activity in the years from 1906 through World War II. After the war, suburban development quickly spread from the Bay coast into the once-agricultural central part of Contra Costa, and more recently into the East County area. This was partially due to “white flight” from more heavily urban areas, but also because of low housing prices and well-regarded schools. West County is

the most ethnically diverse part of the county, while Central and East County are less diverse and show higher per capita income levels.

The Santa Clara Valley was once known as extremely fertile agricultural land, but the rapid postwar development (the county's population more than doubled during the 1950s) of San Jose and its suburbs has swallowed up a large portion of the high-quality farmland in the Valley. The region has experienced intense growth in the last few decades with the rise of Silicon Valley as a major economic hub for the high-tech industries. Some agricultural land, however, does remain between San Jose and Gilroy, and the Valley south of Gilroy largely maintains its long-standing rural character, as mentioned above. Because of the San Jose metro area, the county today is fairly diverse—about 50% of its population is White, 25% Asian, and 24% Hispanic/Latino.

V. Drivers of Farmland Conversion, and Preservation Policies

The fundamental driver of farmland conversion in these two counties, as in many cases, is the availability of farmland near major urban areas for suburban development. In the case of Contra Costa County and Santa Clara County, rapid population growth since World War II has led to land use conflicts, and the demand for development has generally outweighed that for farmland preservation. And this expansion of development depends not only on population growth, but on inefficient (i.e. low-density) use of converted land. A recent report by the American Farmland Trust on California farmland conversion, "Paving Paradise," highlights this fact, along with the pressing issue that development in many places displaces extremely valuable, high-quality farmland.

In Contra Costa, as mentioned above, the pattern has been to continually develop farmland rather than to increase density in developed land. This has resulted in a low density—6.7 residents per urban acre—and the quick disappearance of farmland. Currently, the only “empty” land left to develop in the county is the farmland in East County (besides some marginal lands around already-developed areas in Central County). Despite the institution of an urban boundary line in the county and significant effort by the Greenbelt Alliance and other environmental and conservation groups, developers have continually pushed to expand into rural land. However, the trend since 1990 has been toward denser development. In fact, new developments have an average density of 11.4 people per urban acre, and this may indicate that the sprawl-reduction efforts of planners, especially the Metropolitan Transportation Commission (which is responsible for coordinating planning throughout the Bay Area), are having some success.

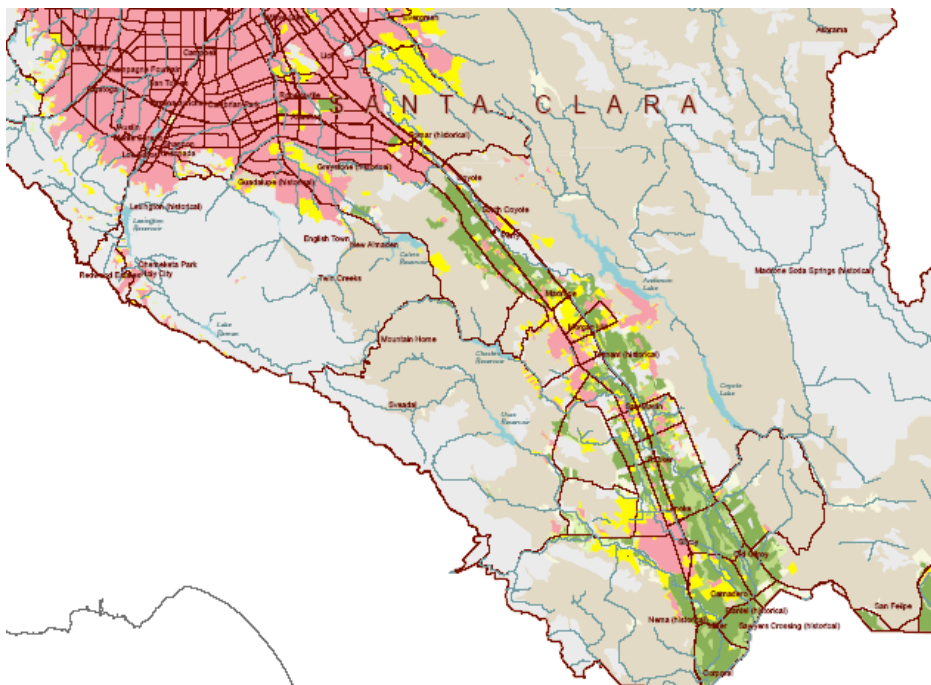
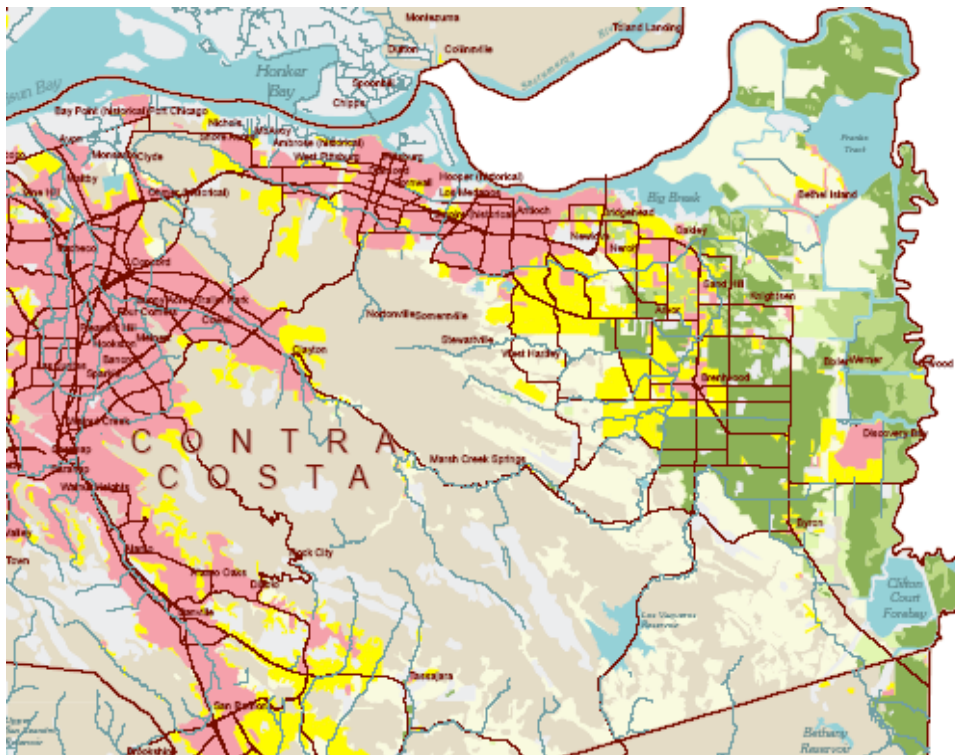
Despite its different geography and the fact that it is “centered” around a particular urban core, Santa Clara County manifests the same basic pattern as Contra Costa. San Jose arose in the midst of extremely fertile land, and so its growth necessarily displaced valuable farmland. This has continued up to the present, and it is evident in the statistic that, although only 4% of the county is deemed “high-quality” farmland, 43% of new development in the county since 1990 displaced this high-quality farmland. On a positive note, despite the large displacement of farmland the existing density in Santa Clara is significantly higher than in Contra Costa: 8.9 people per urban acre. This is likely because the growth has been centered around San Jose rather than decentralized as in Contra Costa. Santa Clara has also instituted an urban boundary line, and this, along

with other efforts, appears to be having an effect, as the density in new developments built between 1990 and 2004 is up to 13.4 people per urban acre.

VI. Conclusion

The difficulties in curbing farmland conversion mirror the troubles of communities throughout California and the United States. The profitability to landowners of selling agricultural land to developers is a complicated force to overcome, as is demonstrated by the fact that much more farmland was converted in Contra Costa—where farms produce significantly less net income—than in Santa Clara. In addition, the demand for more and cheaper housing in the Bay Area has been nearly incessant in the last few decades, and powerful enough to override the demand for farmland preservation in many cases. However, increasing awareness of the effects of farmland displacement and of the impacts of farmland conversion and sprawl are contributing to a formidable movement for denser urban development, a trend that is visible in the statistics from Contra Costa and Santa Clara counties, and which appears will be sustained into the future.

Maps of Urban Development in Contra Costa and Santa Clara Counties



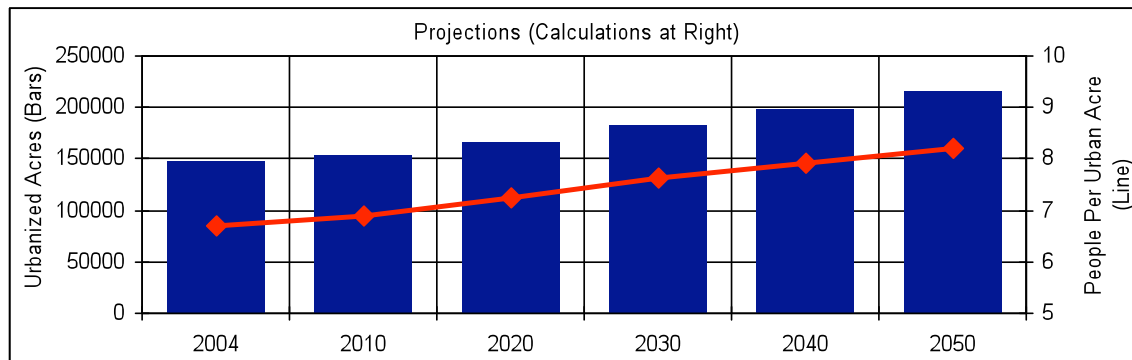
(Source: American Farmland Trust)

Data on Farmland Conversion in Contra Costa and Santa Clara Counties, 1990-2004 (Source: American Farmland Trust)

Contra Costa County

Summary

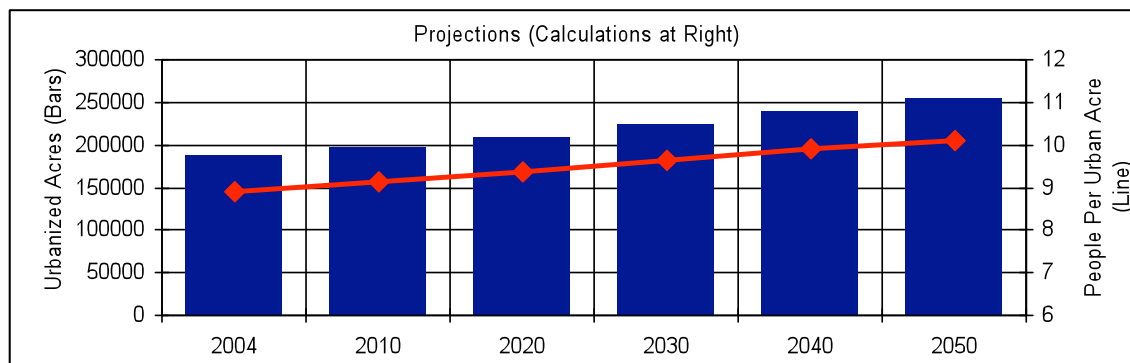
Total Land Urbanized 1990-2004	18,052
Quality of Land Urbanized	
Percentage of New Urbanized Land That Was High Quality Farmland	25%
Compare to Percentage of County That Was High Quality Farmland in 2000	11%
Efficiency of Development	
People Per New Urbanized Acre 1990-2004 ("Current Efficiency")	11.4
People Per Urbanized Acre in 2004	6.7
Projected Population in 2050 (DOF)	1,812,242
Projected Urbanization of Farmland 2004-2050 at Current Efficiency	69,016
As Percentage of Existing Urban Land	47%



Santa Clara County

Summary

Total Land Urbanized 1990-2004	14,337
Quality of Land Urbanized	
Percentage of New Urbanized Land That Was High Quality Farmland	43%
Compare to Percentage of County That Was High Quality Farmland in 2000	4%
Efficiency of Development	
People Per New Urbanized Acre 1990-2004 ("Current Efficiency")	13.4
People Per Urbanized Acre in 2004	8.9
Projected Population in 2050 (DOF)	2,624,670
Projected Urbanization of Farmland 2004-2050 at Current Efficiency	68,993
As Percentage of Existing Urban Land	37%



Sources

Thompson Jr., Edward. "Paving Paradise: A New Perspective on California Farmland Conversion." American Farmland Trust, November 2007.
http://www.farmland.org/programs/states/ca/Feature%20Stories/documents/PavingParadise_AmericanFarmlandTrust_Nov07.pdf.

U.S. Census Quickfacts, 2000. www.quickfacts.census.gov/.

USDA Agricultural Census of California, 2002.
http://www.agcensus.usda.gov/Publications/2002/County_Profiles/California/cp99006.PDF.

Vorderbrueggen, Lisa. "State rapidly using up agricultural land." Oakland Tribune, February 21, 2008. http://findarticles.com/p/articles/mi_qn4176/is_ai_n24316105.