



AN AGRICULTURE INDUSTRY ANALYSIS OF THE INLAND EMPIRE

Prepared by:

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Our understanding of your situation

- Highland Fairview is currently working to establish a world class logistics center in the city of Moreno Valley. The World Logistics Center will encompass over 40 million sq. feet of facilities and will be the largest master plan logistics corporate park in the nation. It is estimated that the project will bring in 2,500 permanent jobs and 1,100 construction jobs to the area, and create more than \$194 million in regional economic benefit to the area.
- Currently part of the planned project area houses Skechers' North American Operations Center's 1.82 million sq. ft. distribution center. The rest of the project area is largely undeveloped land. Presently, there are seven single-family homes in various locations in the project area along with associated ranch/farm buildings. Most of the site has and continues to be used for dry farming (drought resistant crops).
- To help inform key policy decision makers about the ramifications of their decision on agriculture and to adhere to the California Environmental Quality Act requirements, Highland Fairview is seeking an analysis of the agriculture industry in the Inland Empire. Specifically, Highland Fairview is seeking an analysis that includes the following:
 - A description of the Inland Empire's agriculture industry
 - An assessment of the economic trends of the Inland Empire's agriculture industry
 - An analysis of the key factors that are driving agriculture industry trends
 - Any other analysis that may shed light into the past, current or future state of the agriculture industry in the Inland Empire
 - An assessment of the state of the agriculture industry in the Inland Empire
- Highland Fairview has retained Andrew Chang & Company to perform this analysis. Andrew Chang & Company will submit a draft of the report on March 16, 2012 for review and will finalize the report by March 23, 2012
- This purpose of this document is to brief Highland Fairview of Andrew Chang & Company's on our preliminary findings

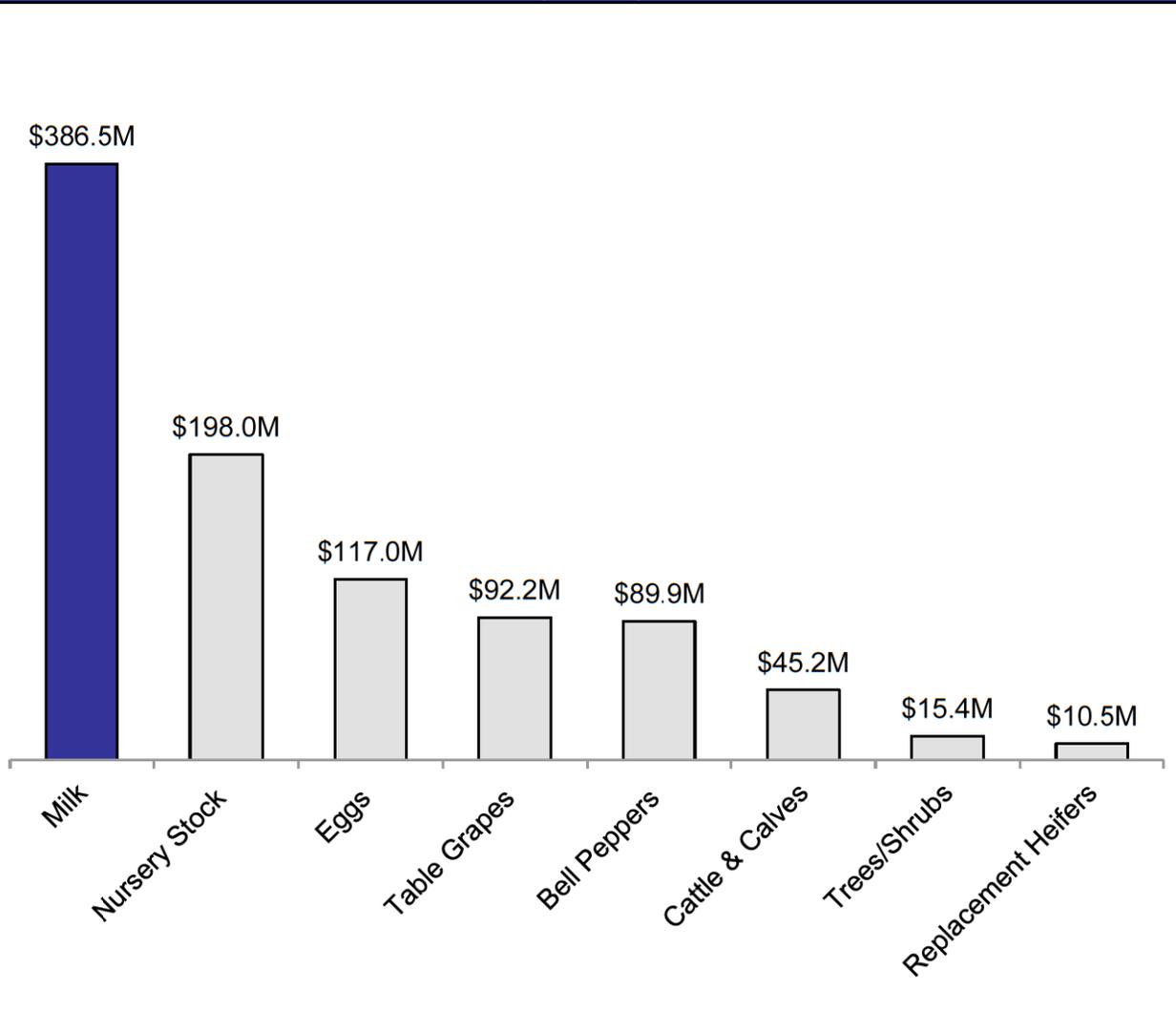
Key Findings

- **The agriculture industry in the Inland Empire is small:** In 2010, agriculture in the Inland Empire made up only 1% of the regional economy and only 4.1% of California's total agriculture industry. In 2010, there was 14,800 workers employed in the agriculture industry in the Inland Empire. This equals less than 1% of all employed persons in the region and 3.9% of total state agriculture employment.
- **The agriculture industry in the Inland Empire is shrinking despite growth in the region:** From 2006 to 2010, over 24,000 acres were removed from agricultural use in the Inland Empire while over 30,000 acres of urban land was gained in the region. As of 2010, agriculture production levels in the Inland Empire were 28% lower than in 2004. Overall employment in the Inland Empire increased by 14% from 2001-2010, but over the same time frame agriculture employment decreased by 31%
- **There is consensus in recent studies agriculture is in decline in the Inland Empire**
- **are 3 key structural issues that are driving the decline of agriculture in the Inland Empire:**
 - Housing affordability in the region
 - Competition from other regions
 - Lower water allocations

The agriculture industry will continue to decline in the Inland Empire, regardless of whether the World Logistics Center is developed or not

While the Inland Empire produces a diverse set of agriculture products, dairy production is the largest in terms of production value

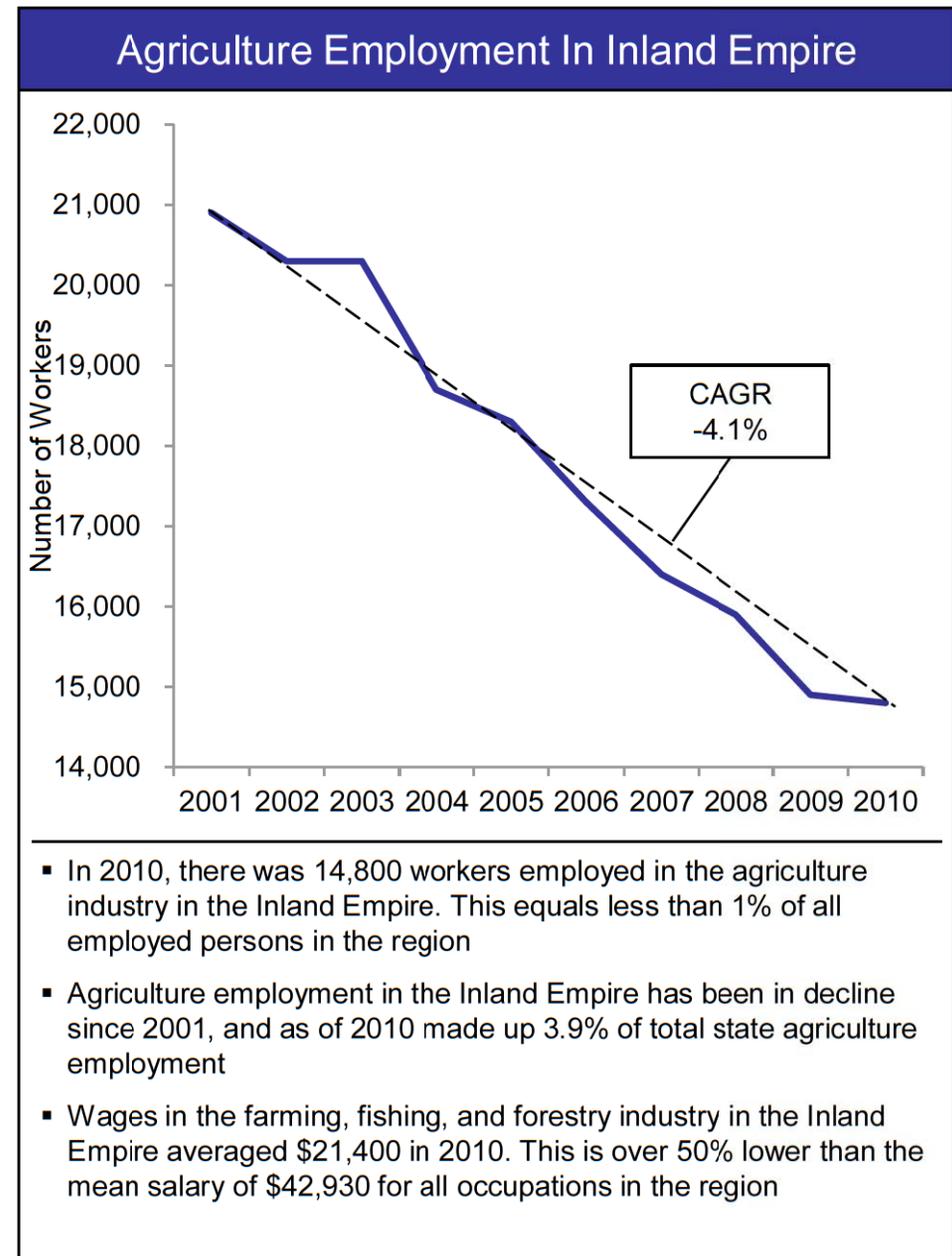
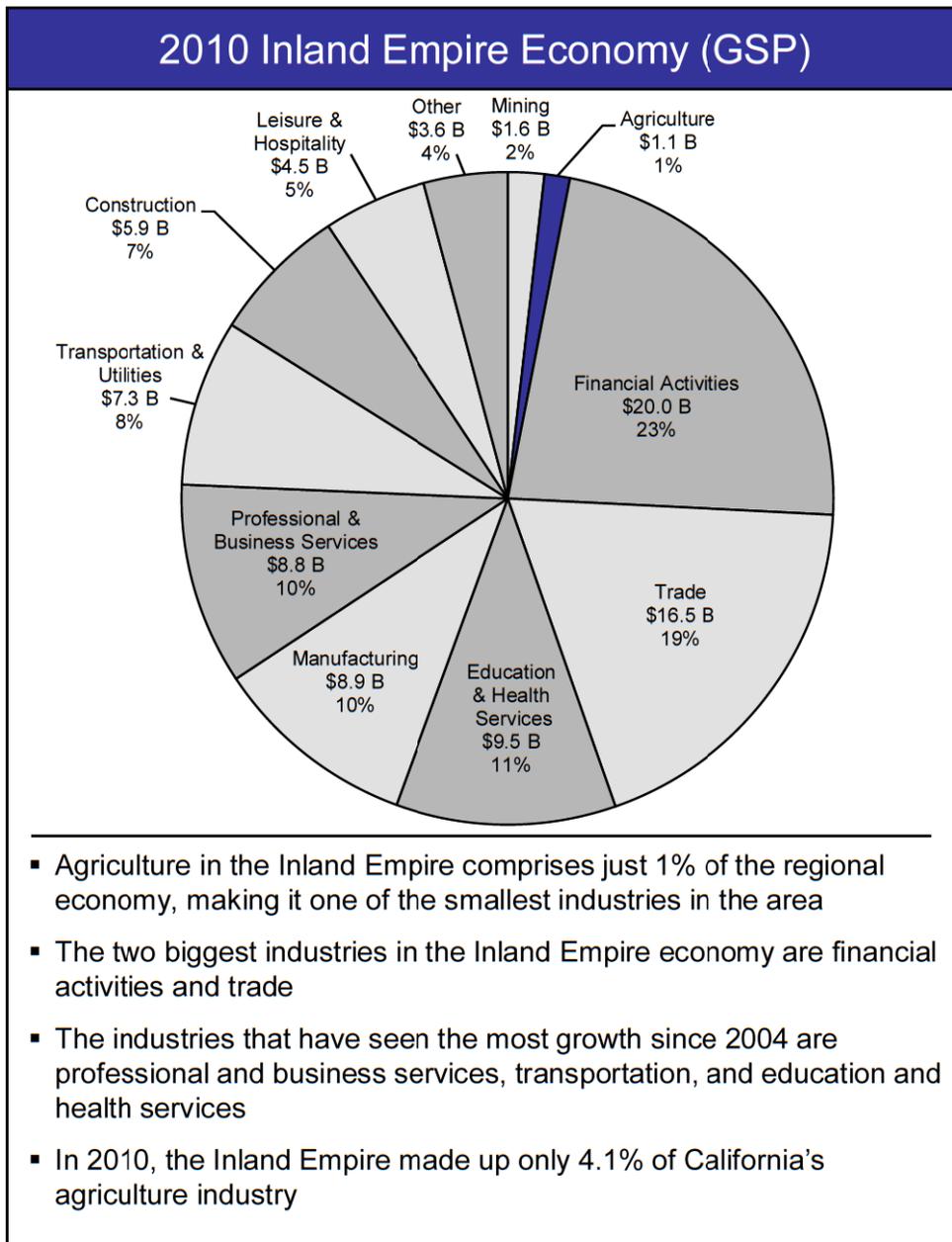
Inland Empire Leading Agricultural Products Value (2010)



Key Observations

- Milk, nursery stock, eggs, table grapes, bell peppers, cattle and calves, trees/shrubs, and replacement heifers are the top agriculture products in the Inland Empire
- The combined value of the top 8 crops equals 69.6% of the total value of all crop production in the Inland Empire
- Dairy production in the Inland Empire totaled \$442.1 million in 2010, 32.2% of the total value of all crop production
- Milk production is the largest product in terms of value, but has decreased 8% in value since 2006
- From 2006-2010, 6 of the 8 top agriculture products (milk, nursery stock, table grapes, cattle and calves, trees/shrubs and replacement heifers) declined in value
- Replacement heifers and trees/shrubs saw the biggest decreases at 59% and 44% respectively since 2006

Agriculture in the Inland Empire makes up only a small portion of total GDP and employment in the area

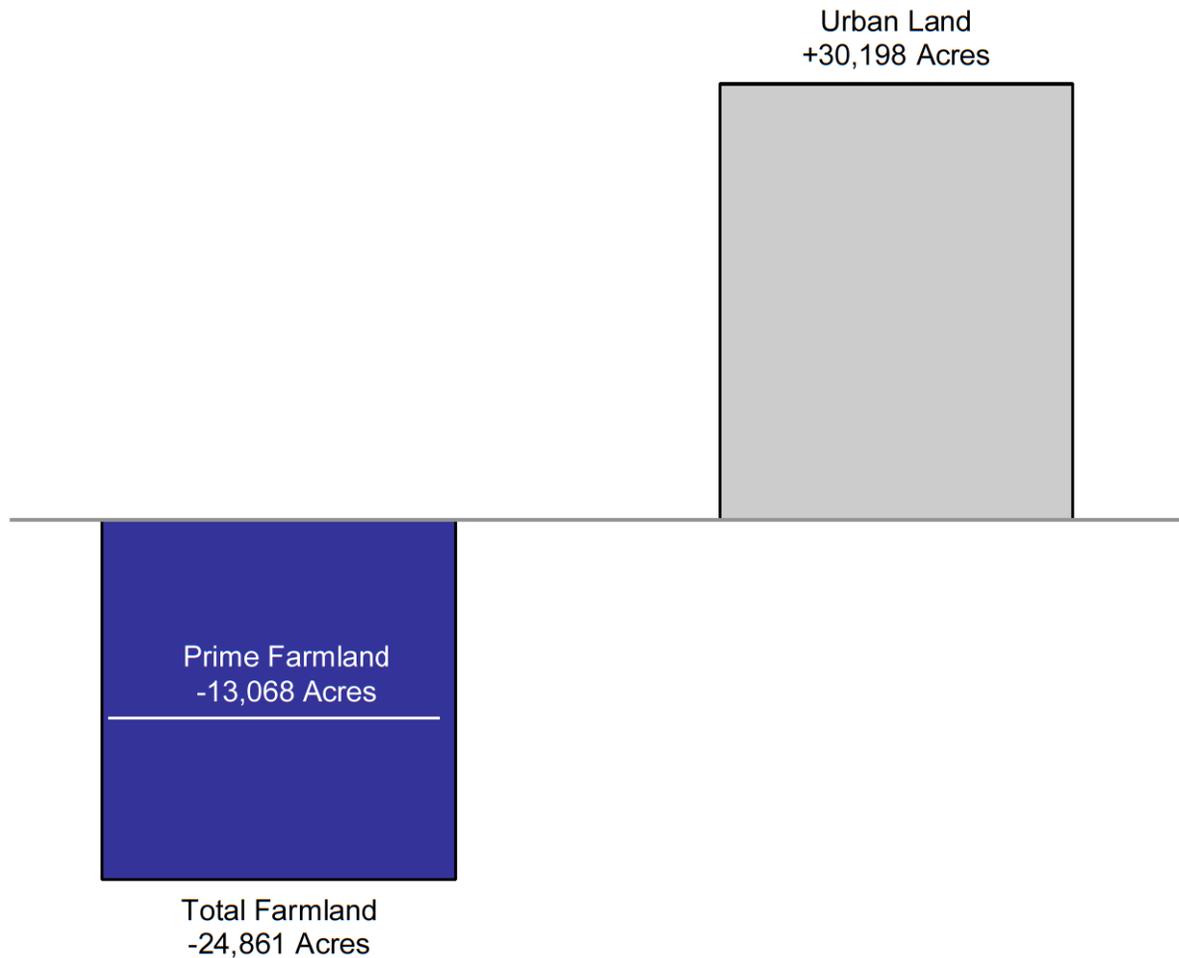


There is consensus that agriculture is declining in the Inland Empire

Title	Scope	Findings
CB Richard Ellis, "Economic Viability of Agriculture in the West Inland Empire," January 2009	<ul style="list-style-type: none"> ▪ Examined economic and market trends affecting agriculture in the Western Inland Empire ▪ Focus on Chino/Ontario basin and dairy industry 	<ul style="list-style-type: none"> ▪ Found that there are many factors demonstrating the infeasibility of agriculture production in the Inland Empire particular to the dairy industry: <ul style="list-style-type: none"> - Urbanization in Inland Empire results in increase in land prices - Higher water costs - Stringent environmental regulations - Competition from Kern County and Central Valley
County of San Bernardino, "2007 General Plan," 2007	<ul style="list-style-type: none"> ▪ City plan that outlines the policies and programs to make decisions on land use 	<ul style="list-style-type: none"> ▪ Briefly mentions the fact that urban expansion in San Bernardino is both driving farmers away from the area and making it difficult to expand farmland in the region
Riverside County Farm Bureau, "The Disappearance of Farmland in the Inland Empire," July 2004	<ul style="list-style-type: none"> ▪ Looks into why Inland Empire farmers and ranchers are selling their land for development 	<ul style="list-style-type: none"> ▪ Increased number of laws, regulations, and taxes for farmers and ranchers makes it difficult for them to profit ▪ Rapid population increases result in high demand for urban development and increase the value of the land
Paul Shigley & William Fulton, <i>California Journal</i> , "From Cow Pens to Palaces," June 2001	<ul style="list-style-type: none"> ▪ Examines the dairy industry's move from the Chino and Ontario to the San Joaquin Valley 	<ul style="list-style-type: none"> ▪ Agriculture in the Inland Empire is giving way to houses, shopping centers and industrial parks to meet the population growth in the region ▪ Los Angeles and Orange counties have become built out, and the Inland Empire has provided a relief valve for growth pressures ▪ However while housing developments have shifted into the Inland Empire, jobs have remained closer to the coast. Thus, San Bernardino and Riverside counties increasingly provide affordable housing for people who work 40 miles to the west
Albert Medvitz & Alvin Sokolow, <i>California Agriculture</i> , "Can we stop farmland losses? Population growth threatens agriculture, open space," 1995	<ul style="list-style-type: none"> ▪ Article that looks at the estimated population growth in California and how it will effect farmland in the state 	<ul style="list-style-type: none"> ▪ California's population is projected to double to 63 million by 2040 ▪ The population increase will result in urban acreage replacing farmland. California agriculture will lose nearly 5 million acres 17% of the total farmland base in 1995 ▪ There is in longer much land to convert to agriculture due to limited cultivable land and water

Demand for urban development continues to grow and more farmland is being converted to urban use

Land Conversion in Inland Empire Net Acre Change (2006-2010)

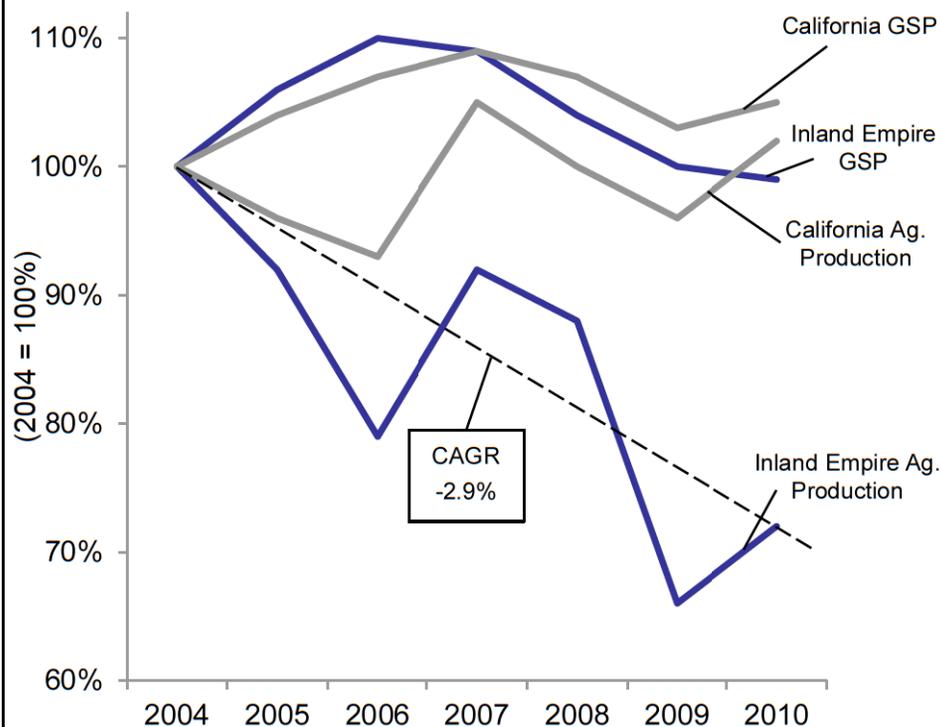


Key Observations

- Over 24,000 acres were removed from agricultural use in the Inland Empire from 2006 to 2010
- Over the same time period, over 30,000 acres of urban land was gained in the region
- Because the majority of agriculture development is located in areas with relatively level terrain and stable soil, it is desirable for urban development
- Furthermore, as urban expansion encroaches into agricultural land, it is difficult for farmers and ranchers to expand

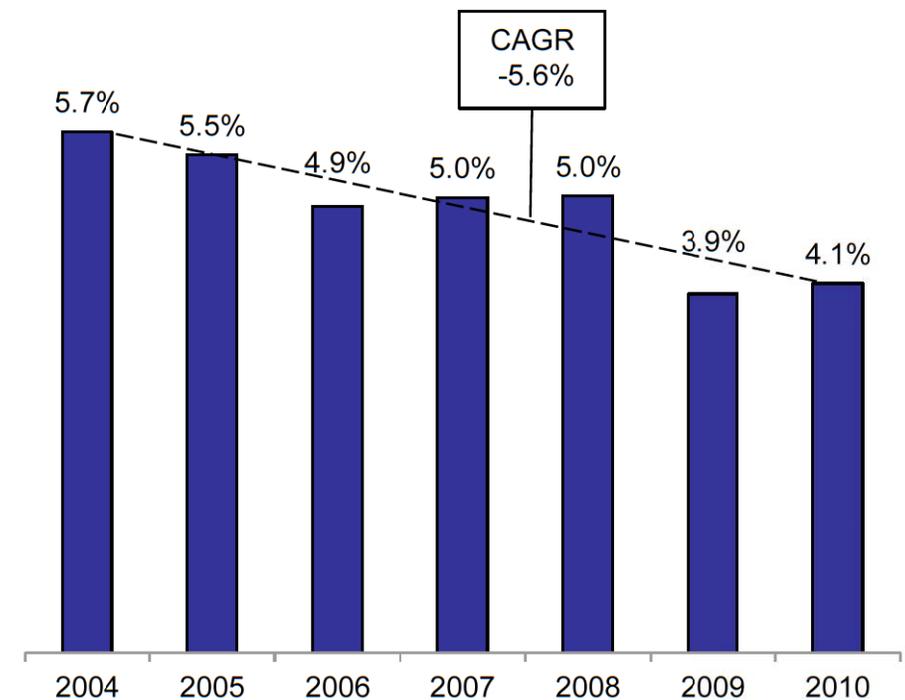
Agriculture production in the Inland Empire has been unsteady and in decline since 2004, whereas statewide agriculture production has been on the rise

Agriculture Production Inland Empire & California (2004-2010)



- Where agriculture production statewide has increased slightly since 2004, production in the Inland Empire has seen a substantial decrease
- As of 2010, agriculture production levels in the Inland Empire were 28% lower than in 2004. This is a significant drop, especially when GSP (adjusted for inflation) in the Inland Empire over the same time period remained relatively stable
- California GSP has increased by 5% since 2004 and state agriculture production has also realized a growth of 2%

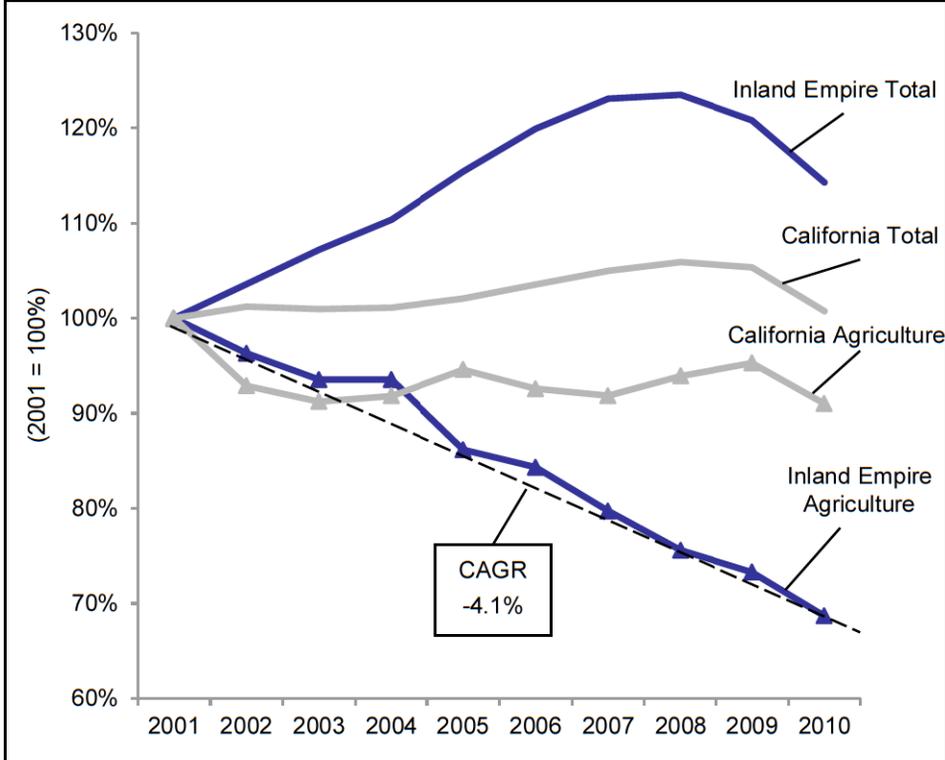
Percentage of State Agriculture Production by Inland Empire (2004-2010)



- The amount of total state agriculture production that the Inland Empire supplies has been in decline since 2004.
- In 2004, the Inland Empire was responsible for 5.7% of California's agriculture production, but as of 2010 the number was down to 4.1%
- Agriculture production equated to just 1.4% of total production (GSP) for the Inland Empire region in 2010

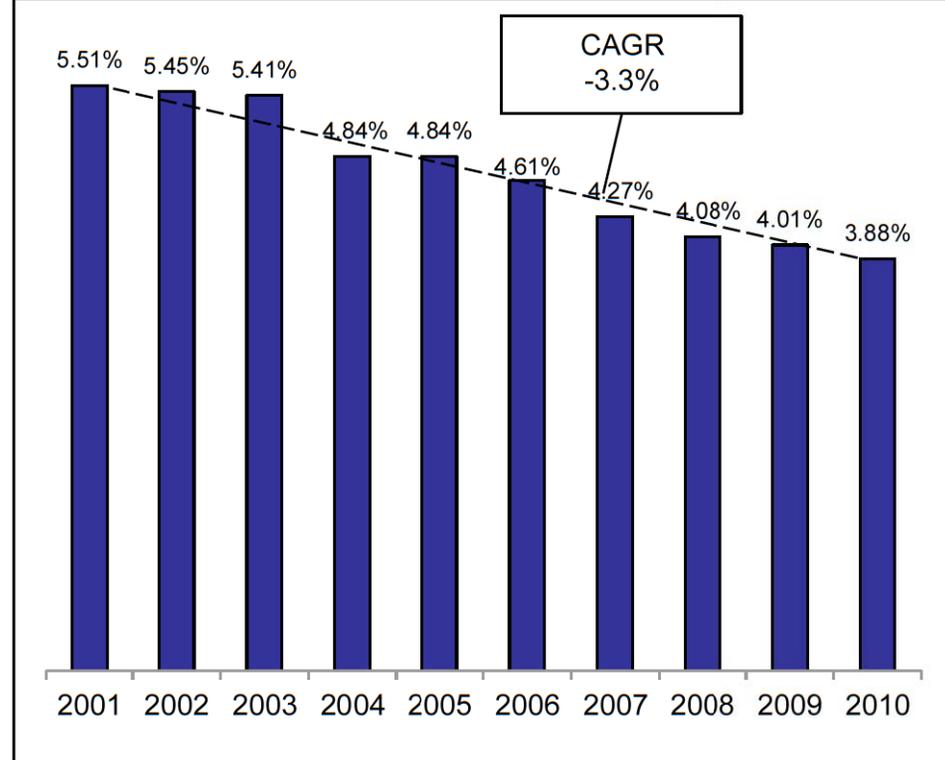
While overall employment grew in the Inland Empire since 2000, employment in agriculture steadily declined

Agriculture Employment Inland Empire & California (2001-2010)



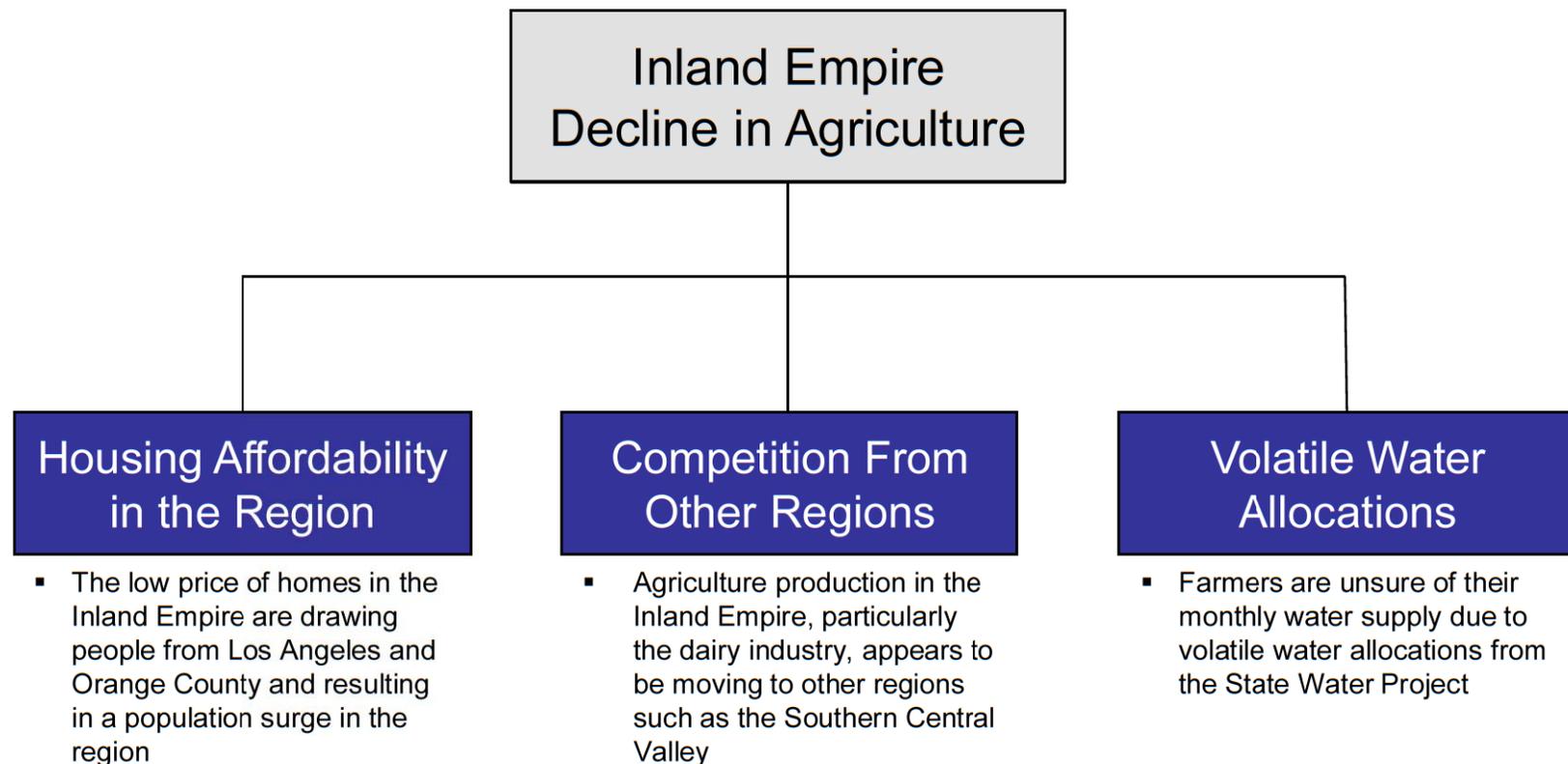
- Overall employment in the Inland Empire increased by 14% from 2001-2010, but over the same time frame agriculture employment decreased by 31%
- Agriculture employment throughout the state decreased over the same time frame, but not at the rate seen in the Inland Empire
- In 2010, agriculture employment equated to less than 1% of total employment in the Inland Empire, down from 1.6% in 2000
- Even when total employment was increasing in the Inland Empire, agriculture continued to decline

Percentage of State Agriculture Employment by Inland Empire (2001-2010)

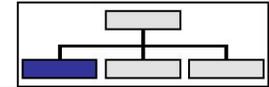


- The Inland Empire's contribution to the state agriculture workforce declined by 1.63% from 2001-10
- While the total number of workers in all industries increased from 2000 to 2010, the number of agriculture workers decreased from 21,700 in 2000 to 14,800 in 2010

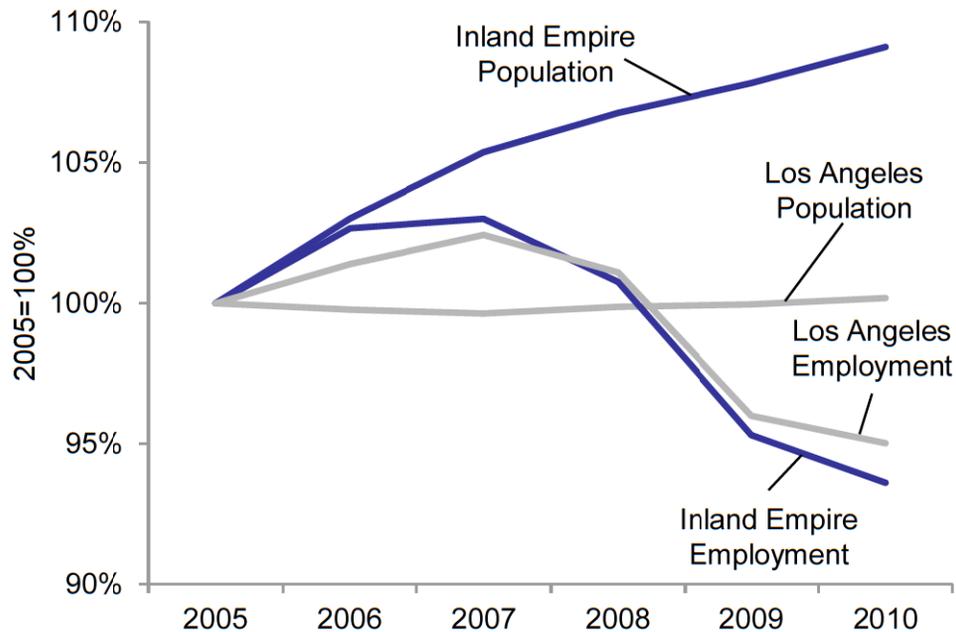
There are 3 key factors that attribute to the decline of agriculture in the Inland Empire



In part to competitive housing prices, the population in the Inland Empire has been increasing

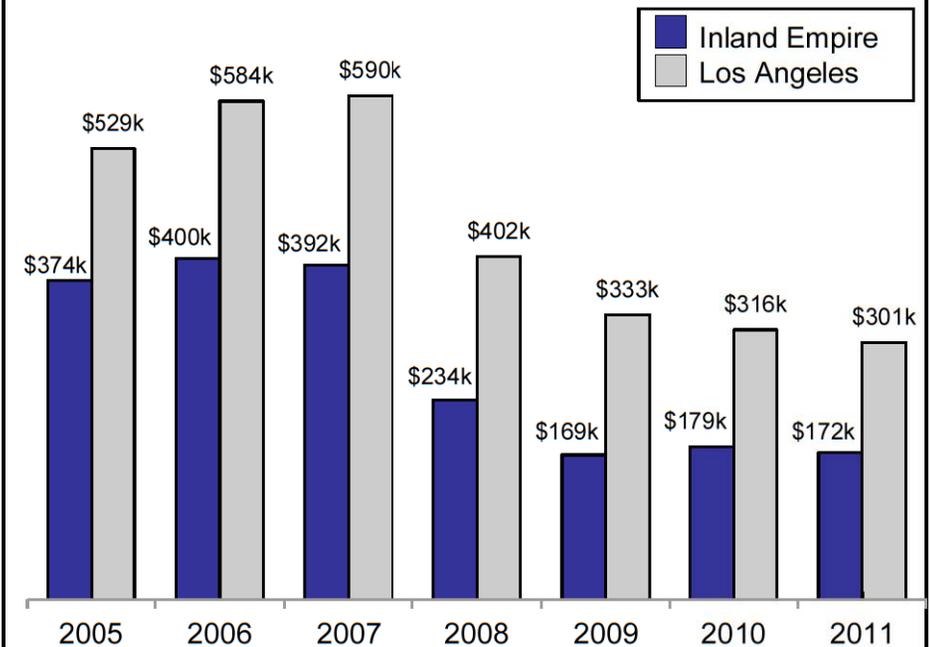


Population Growth Since 2005



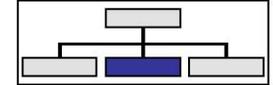
- The population of the Inland Empire grew 9% from 2005-2010, while the population of Los Angeles remained stable with a slight growth of 0.2%
- However, total employment in both Los Angeles and the Inland Empire decreased by 5% and 6.4% respectively
- The employment decrease is unusual in the Inland Empire due to its strong population growth

Median Home Sale Price (2005-11)

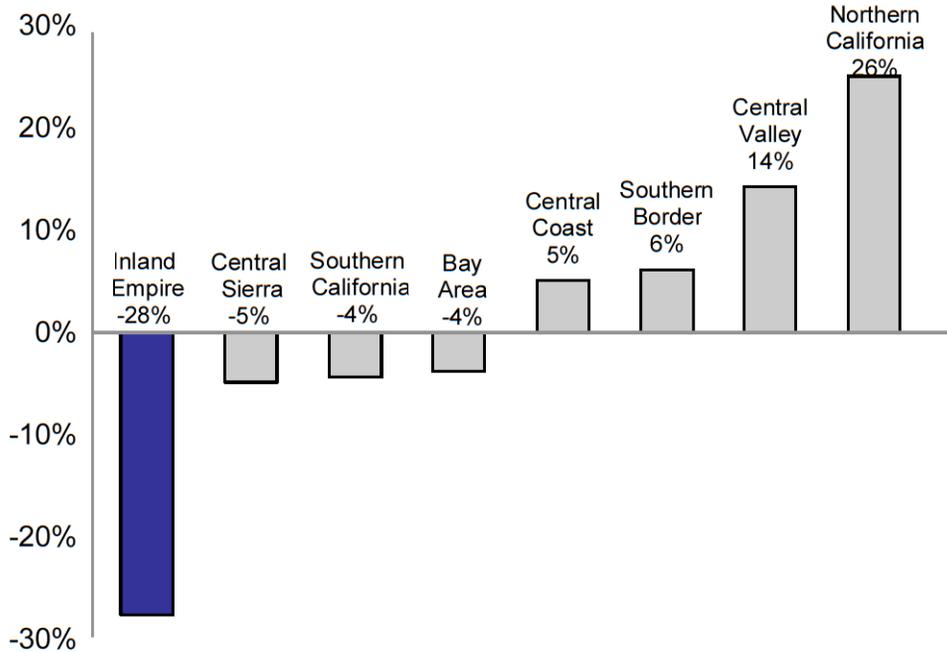


- One factor that contributes to the differing population growths in the two regions is home prices. While the median home price in Los Angeles was \$301k in 2011, prices in the Inland Empire were 57% cheaper at a median of 172k

Agriculture production in the Inland Empire has been shifting to other regions

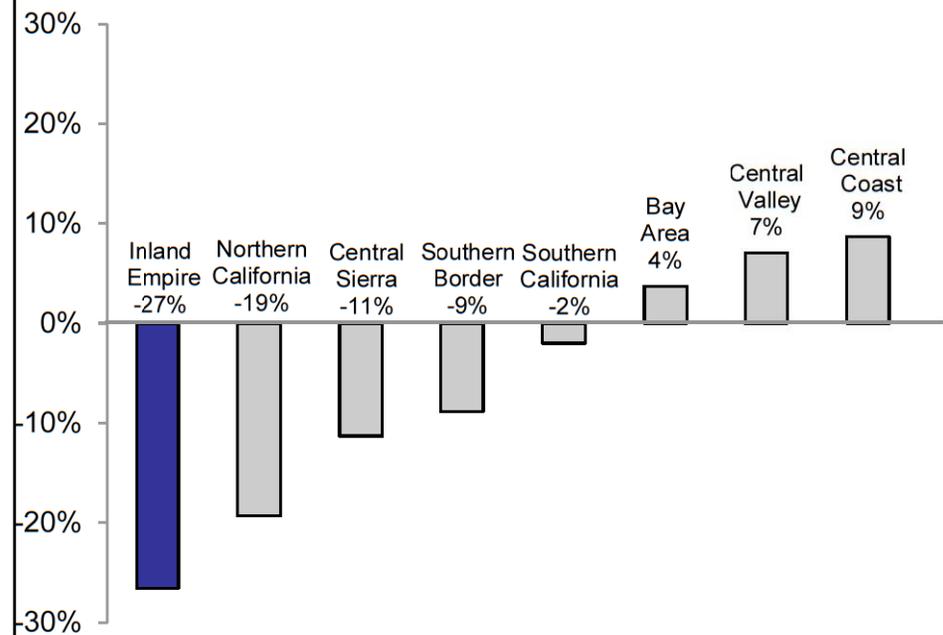


Regional Agriculture Production Growth from 2004-2010



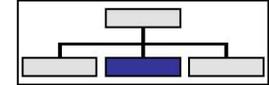
- The decrease in agriculture production in the Inland Empire is 7 times greater than any other district in California
- While other districts have seen a decrease in production (Central Sierra, Southern California, and the Bay Area), none have decreased by more than 4%
- The districts of Northern California, Central Valley, Southern Border, and Central Coast have all seen increases in production

Regional Agriculture Employment Growth from 2004-2010

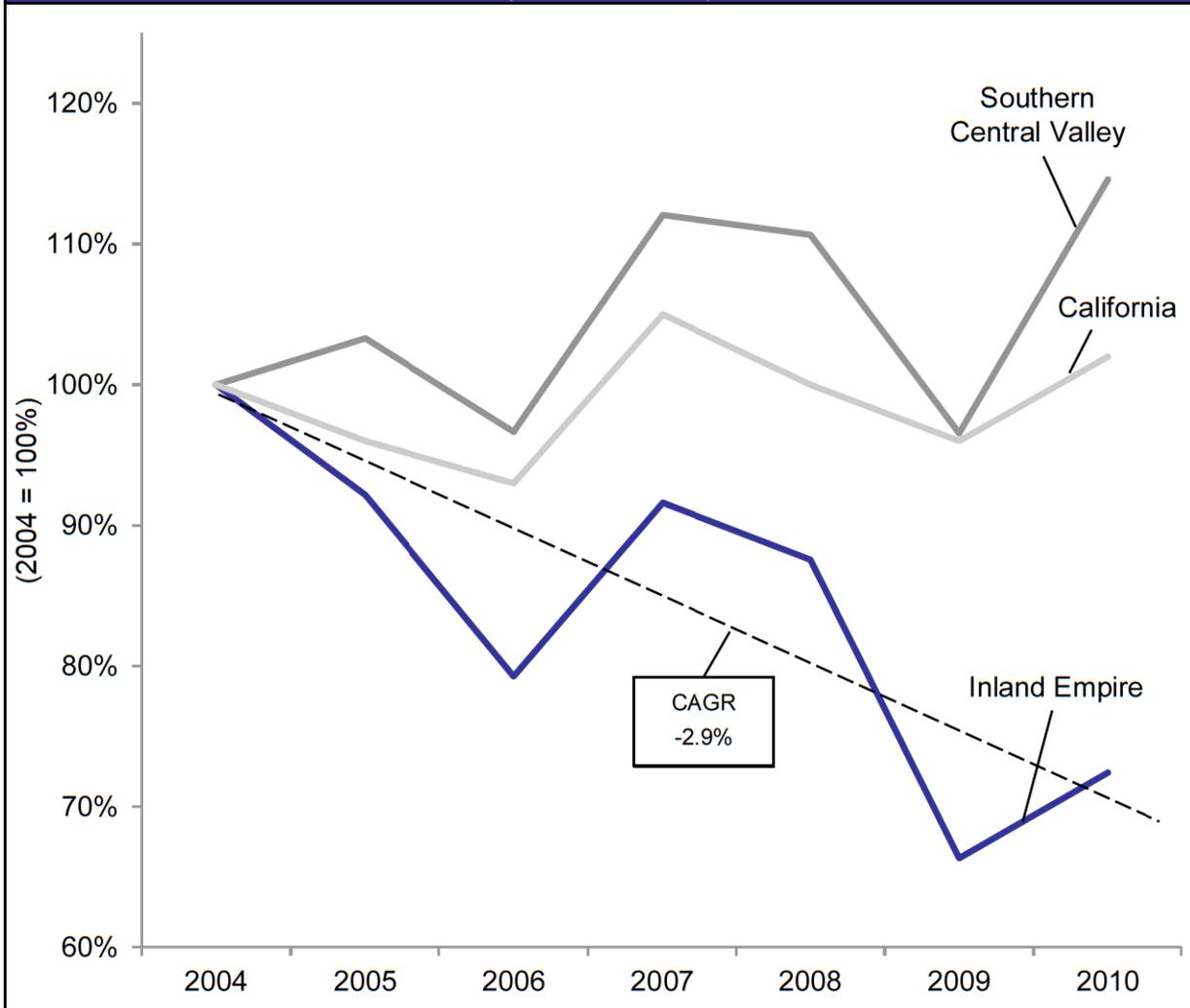


- From 2004-10, agriculture employment in the Inland Empire declined by 27%, by far the greatest decrease of any region in the state
- Agriculture employment in the competing Central Valley has the second highest growth rate among California regions at 7%
- Furthermore, the Central Valley saw the greatest increase in total number of jobs with 13,670
- The Inland Empire lost 5,400 jobs, equal to half the total number of jobs gained in the transportation industry from 2004-2010

Agriculture production in the Southern Central Valley, which has a similar agriculture industry to the Inland Empire, has increased by 14% since 2004



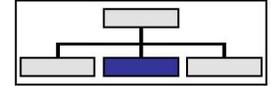
Agriculture Production Inland Empire & Southern Central Valley (2004-2010)



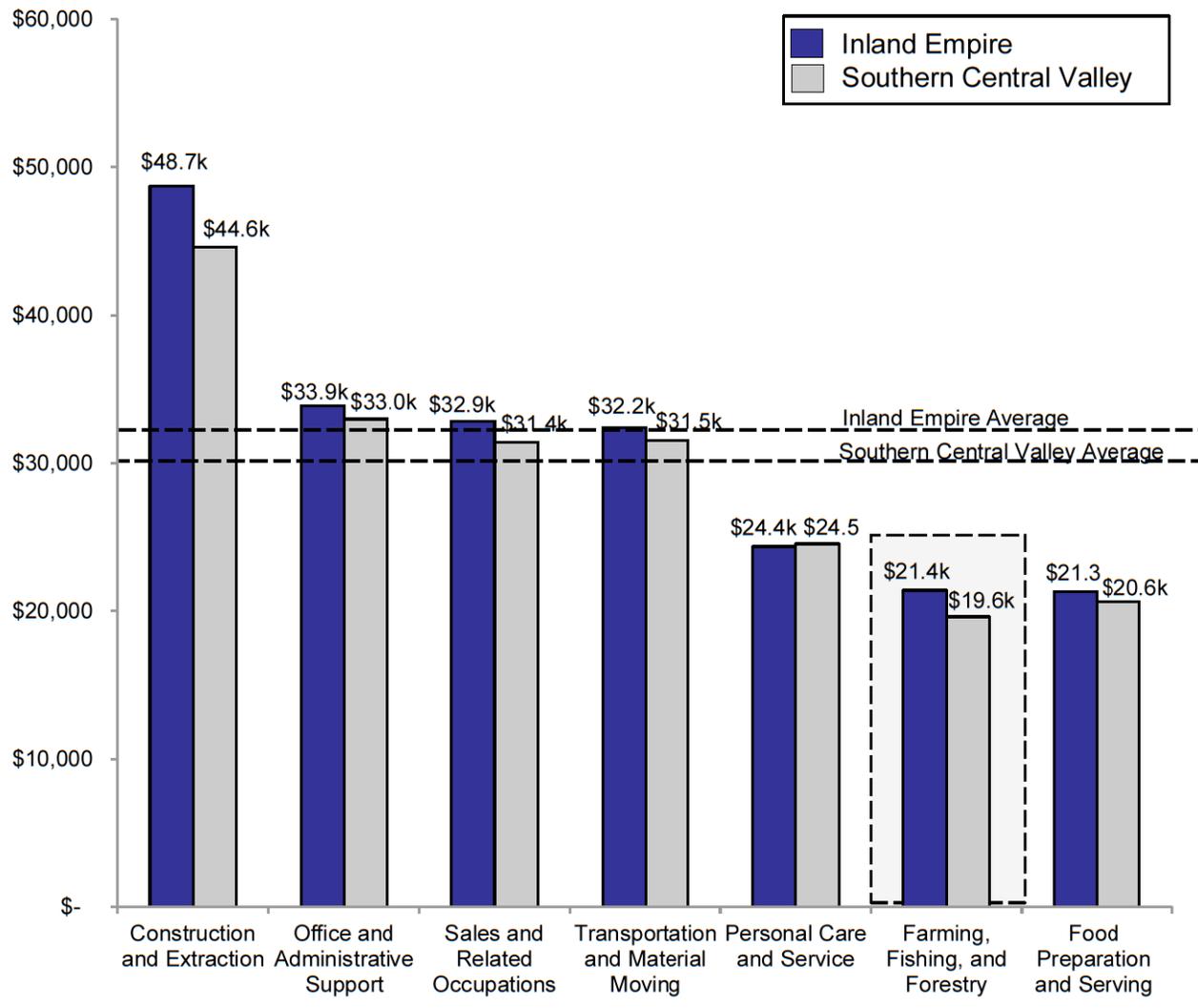
Key Observations

- Agriculture production in the Inland Empire and the Southern Central Valley followed the same statewide trends between 2004-10
- However, while the Southern Central Valley has seen an overall increase in production since 2004, the Inland Empire has seen a significant decline in production
- The Inland Empire went from producing \$1.8 billion in agriculture products in 2004 to producing \$1.5 billion in agriculture products in 2010
- Whereas, the Southern Central Valley went from producing \$ 13.0 in agriculture products in 2004 to producing \$17.3 billion in agriculture products in 2010
- The Southern Central Valley has similar agriculture products to the Inland Empire, especially in the dairy industry

Agriculture in the Inland Empire has to compete with local higher-paying industries as well as cheaper agriculture labor from places like the Southern Central Valley



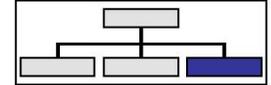
Inland Empire & Southern Central Valley Mean Salary For Selected Sectors 2010



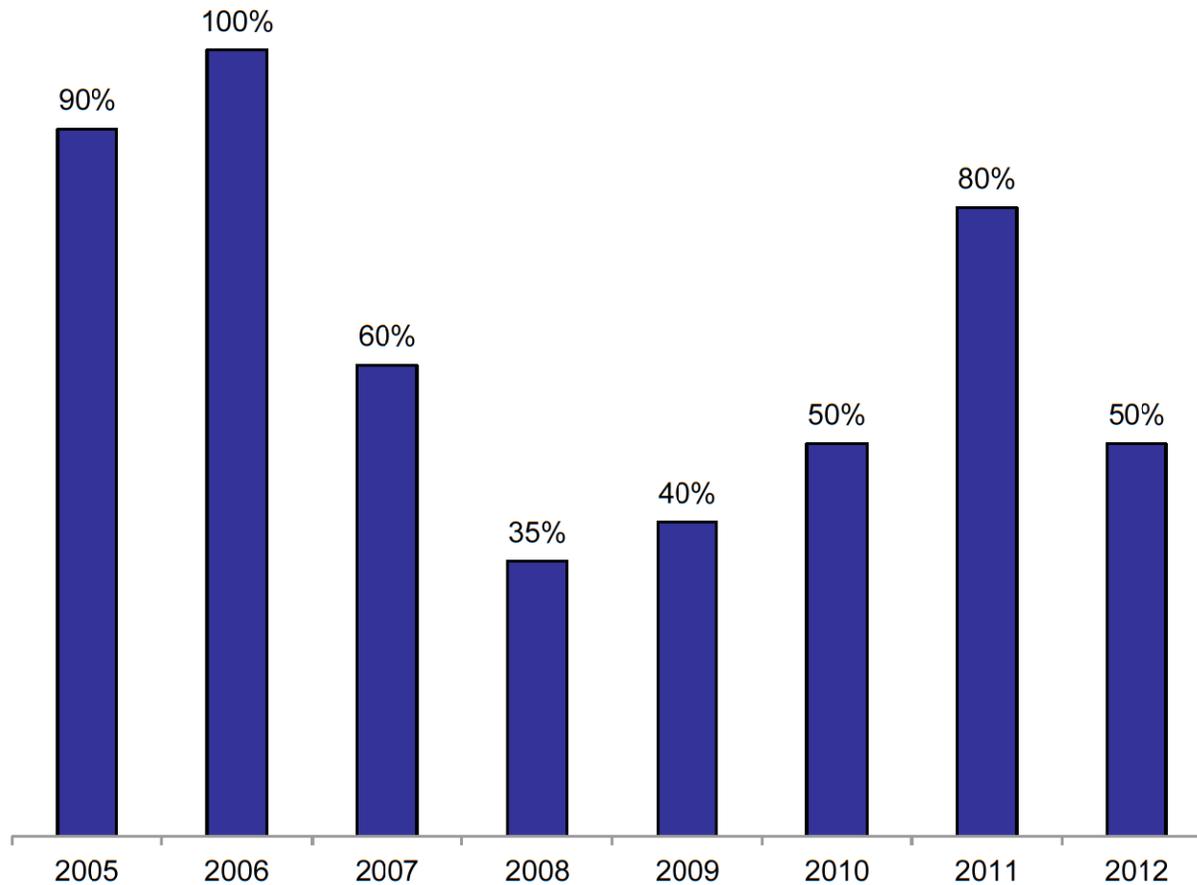
Key Observations

- Compared to other skilled and semi-skilled employment, agricultural salaries lag behind most of their counterparts across the region
- While family labor and other non-paid employment does occur in the region, it is increasingly difficult to sustain as the agriculture industry continues to decline and paid employment becomes more readily available in the growing industries
- Agriculture salaries in the Southern Central Valley are the lowest of the skilled and semi-skilled industries, and face competition with these higher payer industries
- However, because the agricultural labor force is cheaper in the Southern Central Valley, farm and ranch owners have an incentive to operate in this area rather than the more labor expensive Inland Empire

The volatile water allocation from the State Water Project has made it difficult for farmers in the Inland Empire to remain competitive



State Water Project Allocations to Inland Empire Water Districts



Key Observations

- The State Water Project (SWP) was constructed to provide most of California with a stable statewide water resource to augment local sources
- Currently, the Project provides supplemental water to approximately 25 million Californians and about 750,000 acres of irrigated farmland
- Each year, its contracting water agencies make water allocation requests and the state Department of Water Resources plans the initial allocation percentage
- Agriculture is disproportionately affected by reduced allocation. Priority is given to urban areas and human consumption, forcing farmers and ranchers to adapt their own agricultural water usage

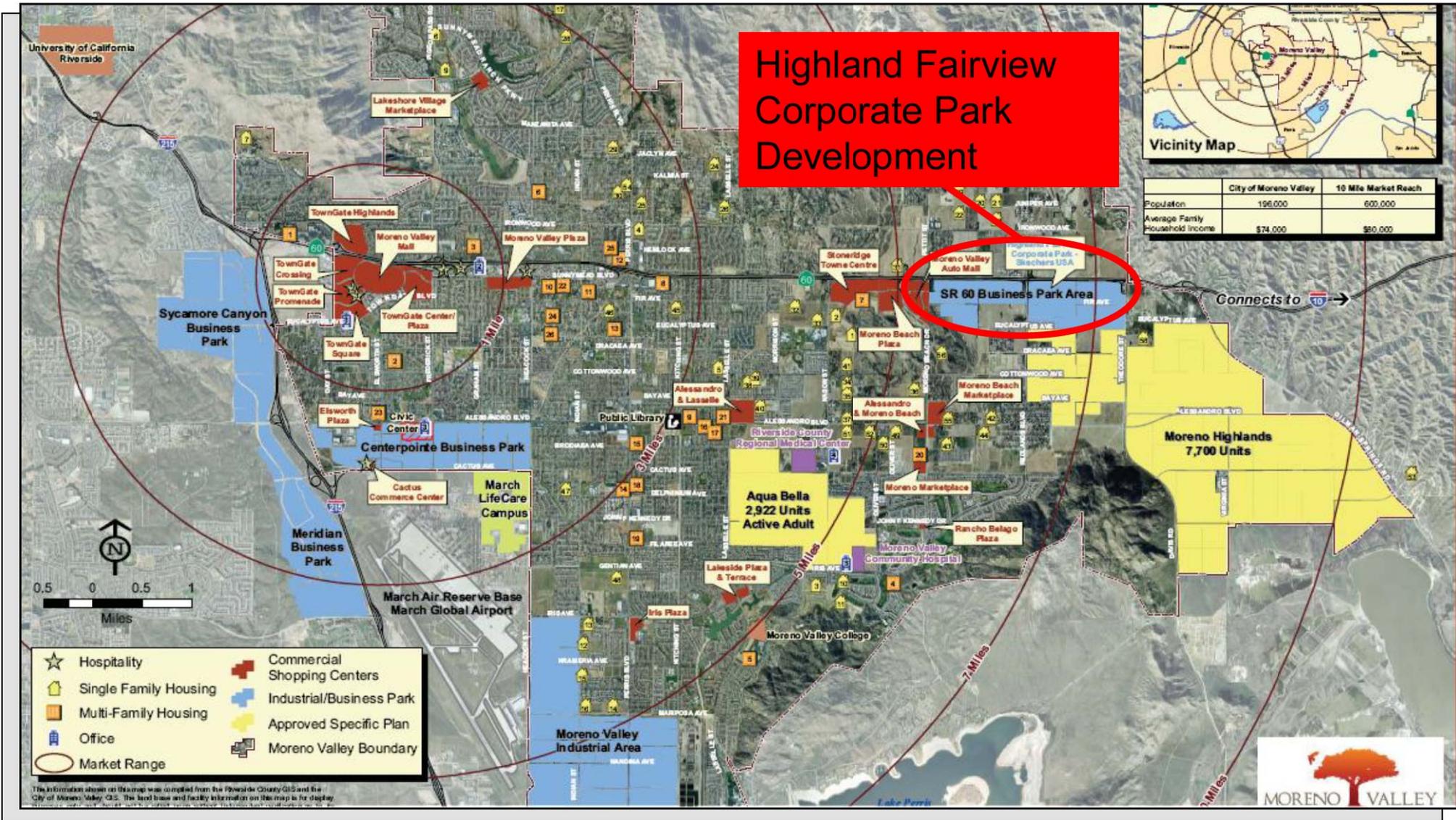
Conclusion

- Though it is small by comparison, the agriculture industry in the Inland Empire region is shrinking at a considerable rate. The decline of the agriculture industry region is occurring despite the fact that there is growth in the region as a whole and within the industry as a whole
- The low price of homes in the Inland Empire are drawing people from Los Angeles and Orange County and transforming the region into a bedroom community
- In addition, the agriculture industry in the region is experiencing competition for labor within the region. Other jobs in the region afford higher wages. This same force that is driving the cost of agriculture labor up in the region is simultaneously working to make other regions more attractive and competitive. For example, the relatively cheaper cost of agriculture labor in the Central Valley provides that region with a relative competitive advantage over the Inland Empire.
- Moreover, volatile water allocations from the State Water Project has made it more difficult for regional farmers to remain competitive
- The agriculture industry in the Inland Empire will become less competitive and continue to decline regardless of whether the World Logistics Center is developed or not

Appendix

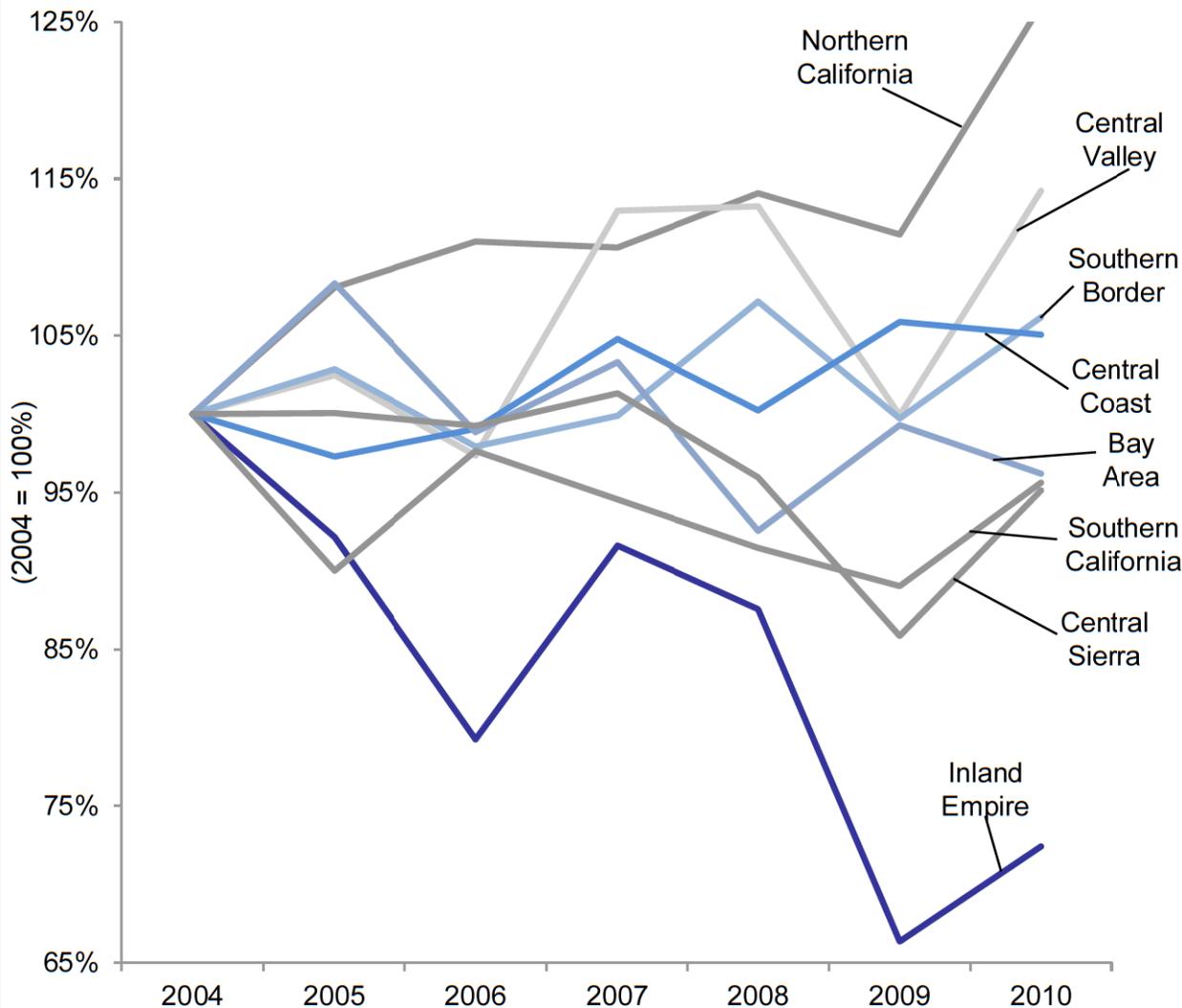
- Appendix A: Map of Highland Fairview Development
- Appendix B: Regional Agriculture Production 2004-10
- Appendix C: Leading agriculture products in Inland Empire 2006-10
- Appendix D: 2004 & 2010 GDP Breakdown
- Appendix E: Dairy Production in Inland Empire
- Appendix F: California Regional Commodities
- Appendix G: Inland Empire Population

Appendix A: Map of Highland Fairview Development



Appendix B: Regional Agriculture Production 2004-10

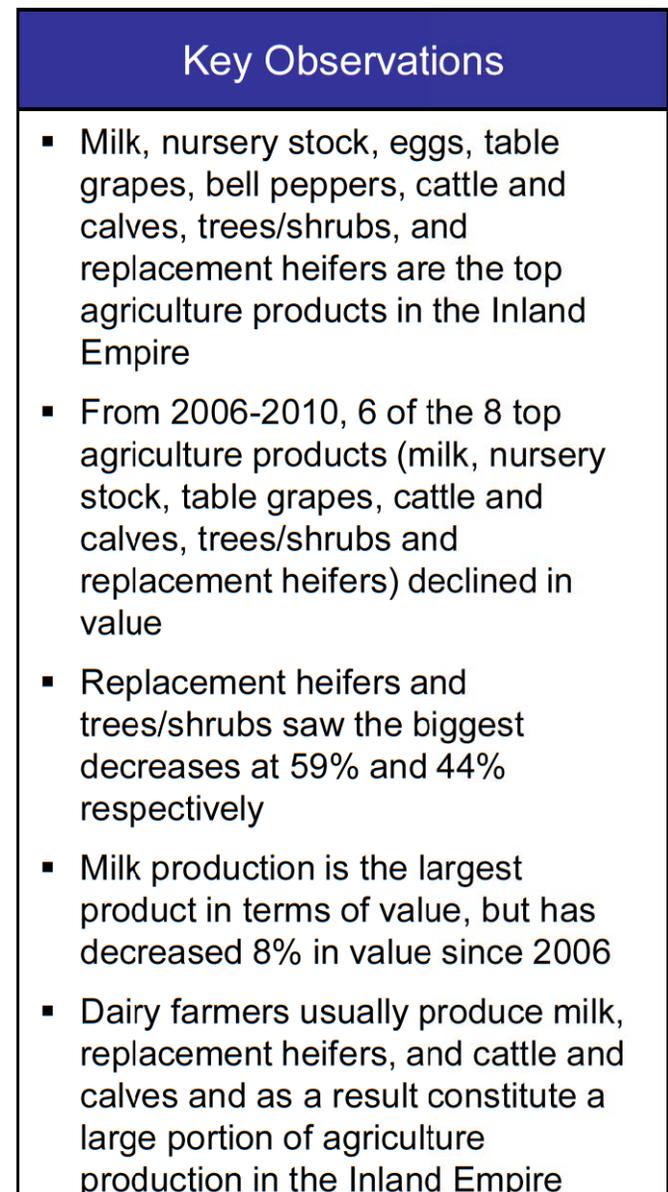
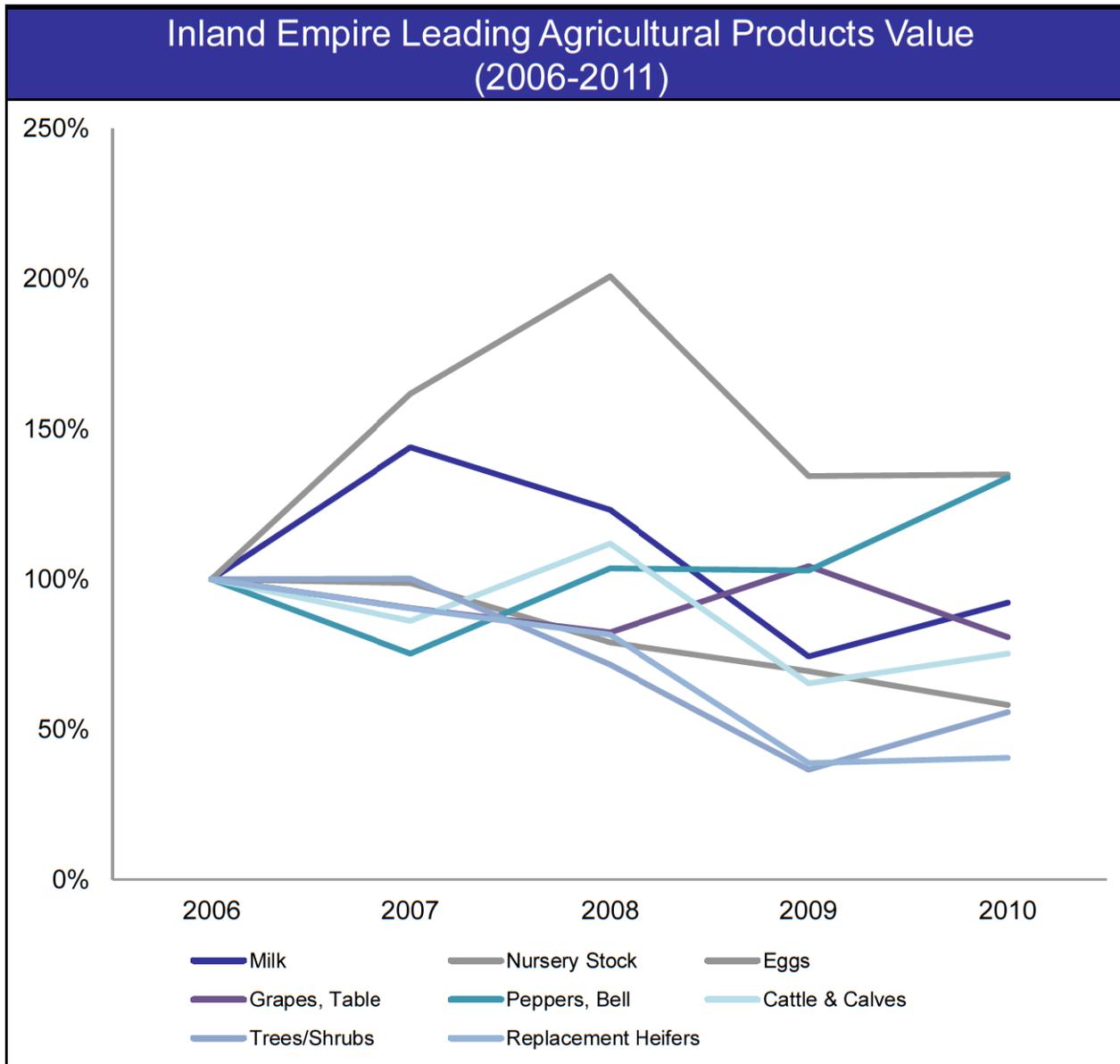
Agriculture Production by District (2004-10)*



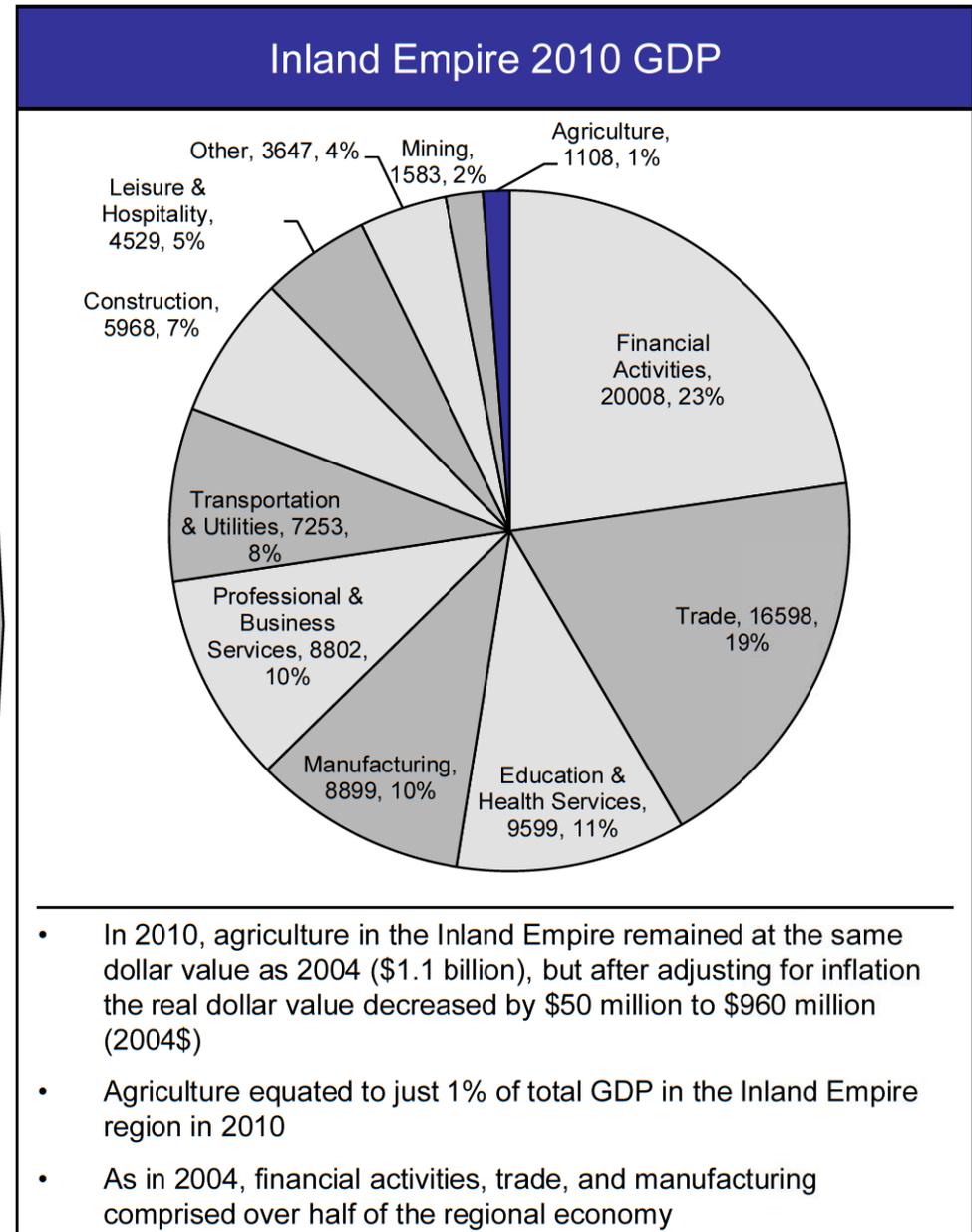
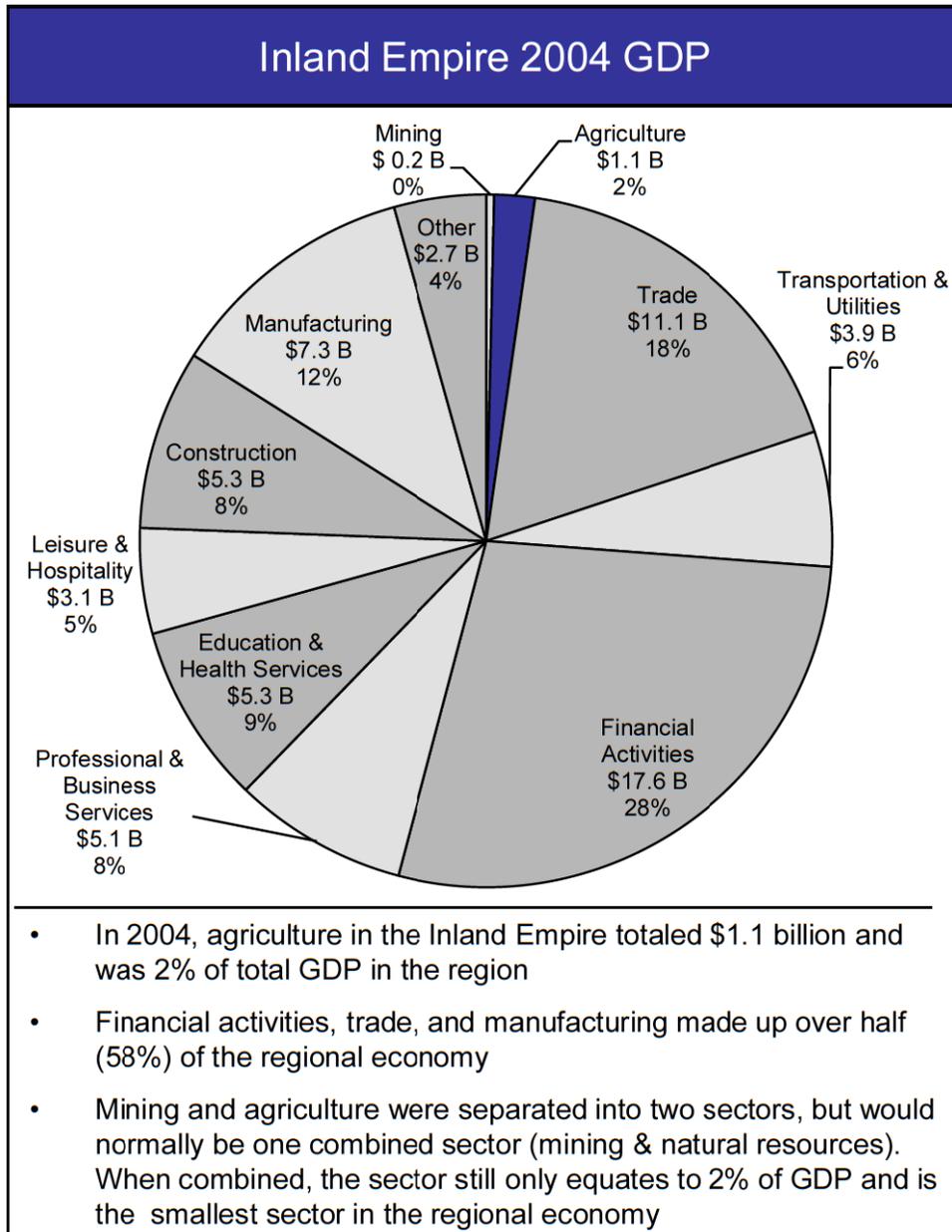
Key Observations

- The decrease in agriculture production in the Inland Empire is 7 times greater than any other district in California
- While other districts have seen a decrease in production (Central Sierra, Southern California, and the Bay Area), none have decreased by more than 4%
- The districts of Northern California, Central Valley, Southern Border, and Central Coast have all seen increases in production

Appendix C: Leading agriculture products in Inland Empire 2006-10



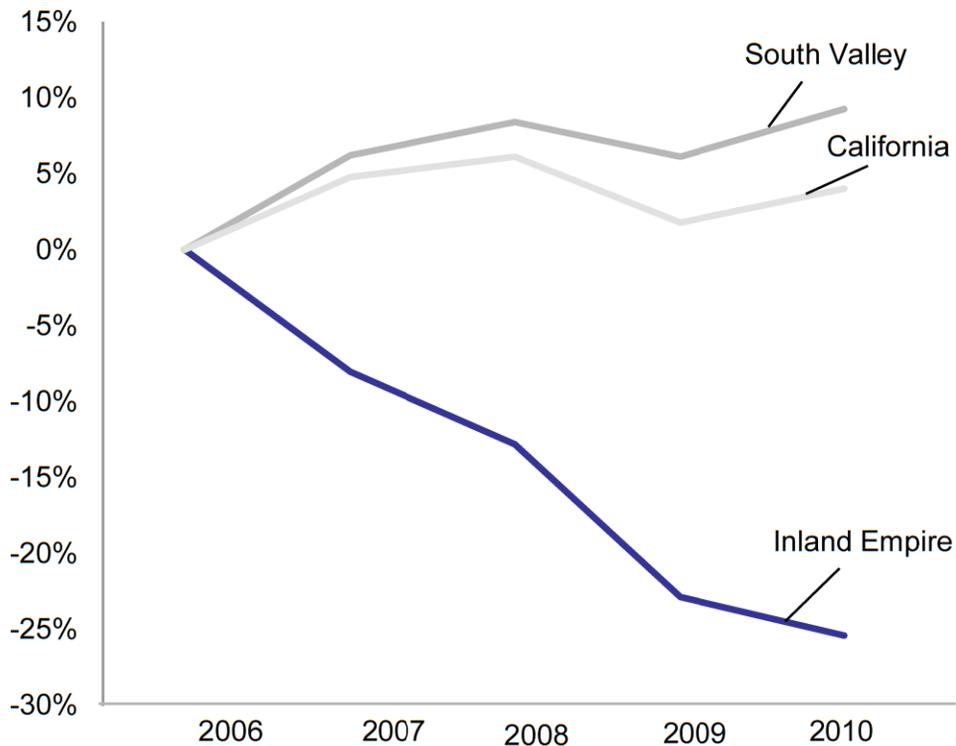
Appendix D: 2004 & 2010 GDP Breakdown



SOURCE: Bureau of Economic Analysis, U.S. Department of Commerce, "Gross Domestic Product by Metropolitan Statistical Area, Riverside-San Bernardino-Ontario 2004 & 2010," accessed March 2012 (<http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=2>)

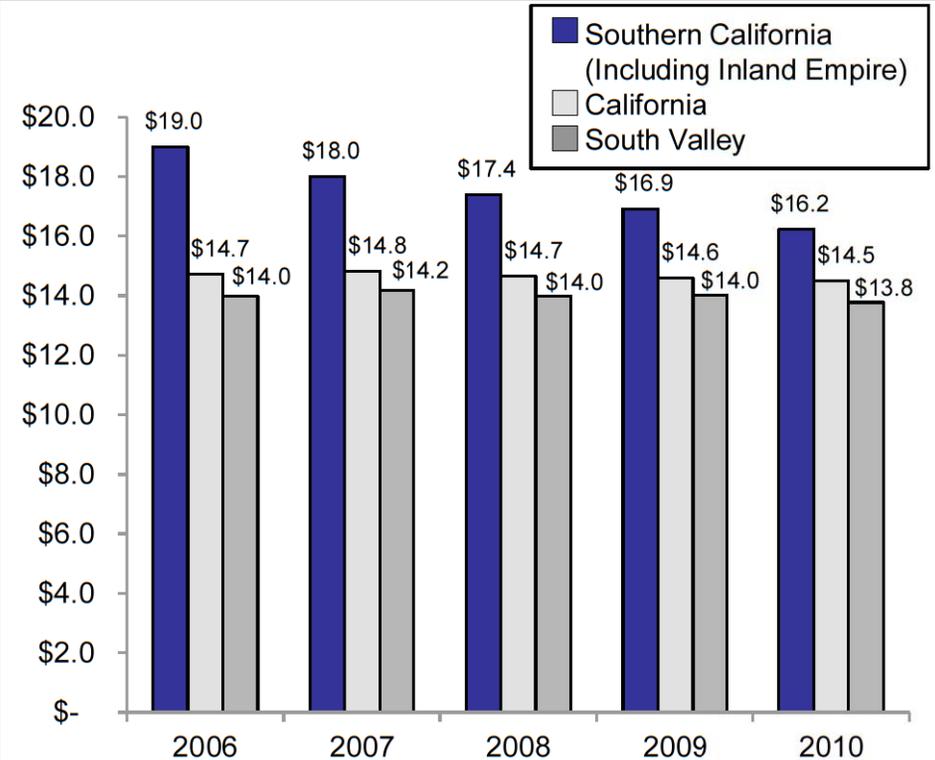
Appendix E: Dairy in Inland Empire

Milk Production Growth Since 2006



- Since 2006, milk production has increased statewide by 4% and by 9% in the South Valley (encompassing Kern, Fresno, Tulare, and Kings counties)
- However, in the Inland Empire milk production has decreased by 25% over the same time period
- The cities of Chino and Ontario have historically been two of the biggest milk producers in the state, but it appears production is now shifting to the Southern Valley

Dairy Hourly Wages For Employees (Real\$)



- While slowly decreasing, dairy wages in Southern California have been continually higher than both the state average and the competing South Valley
- Dairy farmers are moving from the labor expensive Inland Empire to the relatively labor cheap South Valley
- Furthermore, with the rapid urban development that is occurring in the Inland Empire, dairy farmers are able to sell their land to developers at much higher prices than they originally paid

Appendix F: California Regional Commodities

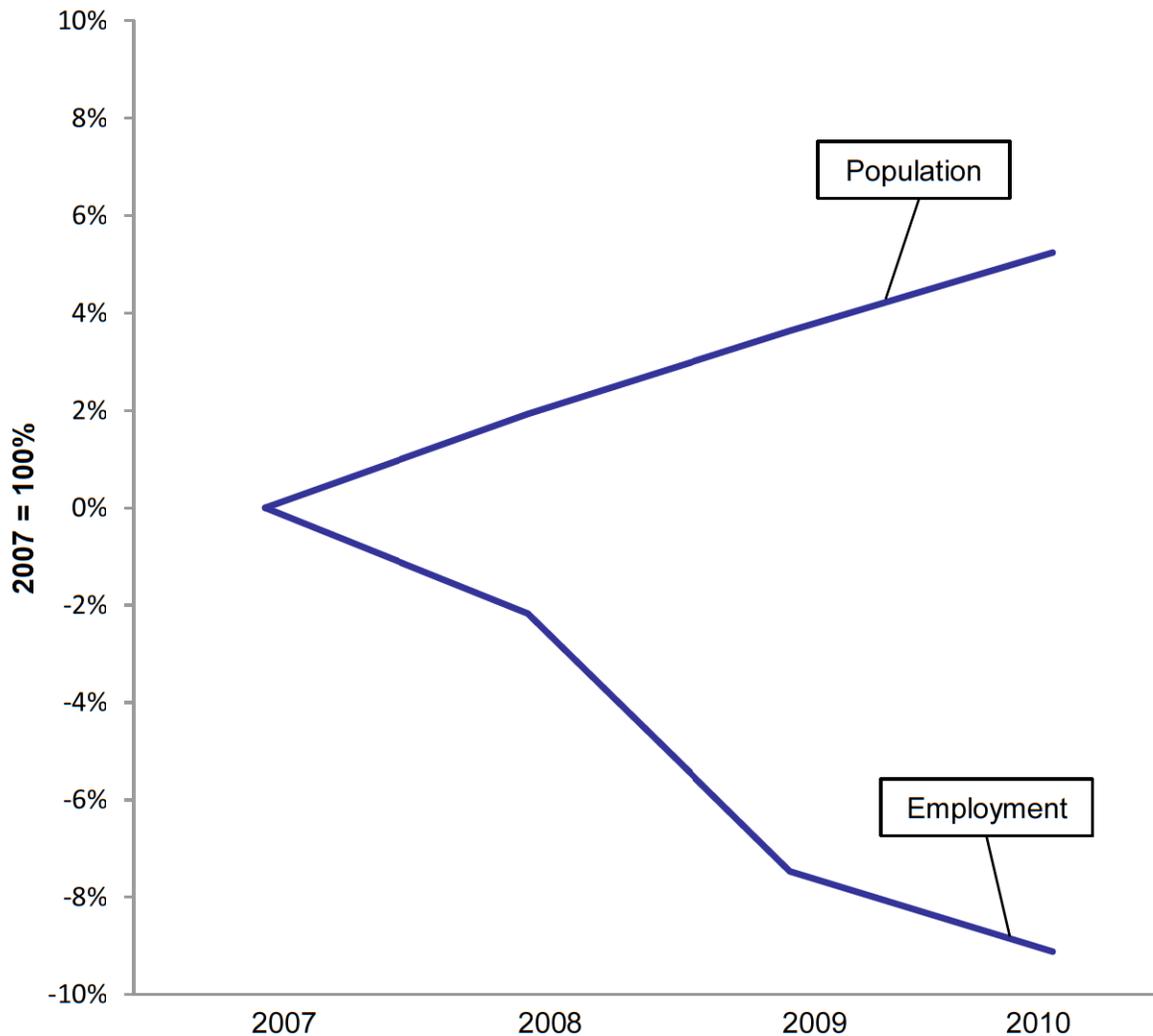
Leading Agriculture Commodities by Region (2009)	
Region	Leading Commodities
Northern California	Hay, Alfalfa, Strawberries, Grapes, Cattle & Calves
Central Valley	Milk, Cattle & Calves, Grapes, Almonds, Vegetables
Inland Empire	Milk, Cattle & Calves, Eggs, Grapes, Nursery Stock
Southern Border	Nursery Plants, Flowers, Cattle, Lettuce, Avocados
Southern California	Berries, Nursery, Celery, Lemons, Tomatoes
Central Coast	Berries, Lettuce, Grapes, Broccoli, Vegetables
Bay Area	Grapes, Milk, Nursery, Berries,
Central Sierra	Grapes, Hay, Cattle & Calves, Pasture, Poultry

Key Observations
<ul style="list-style-type: none"> ▪ The dairy industry (milk, cattle and calves, and replacement heifers) is the leading agriculture industry in the Inland Empire producing \$441 million in dairy production in 2010 ▪ The region in which the Inland Empire has the most competition in the dairy industry is the Central Valley ▪ The counties of Kings and Tulare, within the Central Valley, are major producers of both milk and cattle and calves. The two counties combined to produce \$1.6 billion in milk production and \$545.7 million in cattle and calve production in 2010

SOURCE: Analysis by Andrew Chang & Company based off California Department of Food and Agriculture, "County Rank by Gross Value of Agricultural Production, 2008–2009," California Agricultural Resource Directory 2010-2011

Appendix G: Although the population is increasing in the Inland Empire, employment has been declining since 2007

Population and Employment in Inland Empire (2007-2010)



Key Observations

- While the population of the Inland Empire has increase by 5% since 2007, employment in the area has decrease by 9% over the same time period
- One possible explanation as to why the population is increasing while employment is decreasing, is the fact that while people are moving to the Inland Empire, their jobs remain in Los Angeles and Orange County
- Another explanation could be that the region is just following the statewide employment trend which has been on the decline since 2007