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SCAG Economic Conference Preparation Report
Inland Empire
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I. Economic Recovery

A. Forecast & Justification

It is unlikely that the Inland Empire will return to normal until at least the 2016-2017 period that has been previously estimated as part of the SCAG economic forecasting process. During the Great Recession from 2008-2010, the inland area lost 146,425 jobs. In 2011, a slight recovery occurred with 4,663 jobs added back. In 2012, another 23,026 were added, bringing the total to 27,489. As a result, this year began with only 18.8% of the jobs lost in the deep recession having been recovered.

This economist's forecast for 2013 was that the economy would add 28,300 jobs taking the recovery to 38.1% of the lost jobs. From January-August of this year, the California Employment Development Department (*EDD*) has estimated that an average of just 15,363 jobs have been recovered. However, their estimate appears to be wildly inaccurate. There are three reasons for saying this:

- Throughout this year, EDD has estimated that construction employment is in decline with the average drop for the last three months averaging -4,900 jobs. That is highly unlikely given that the number of permits for new homes was up 55.5% in the first six months of this year versus last, and the total value of all construction permits was up 27.6%. Also, 2013 began with a very low new home inventory, yet through the first three quarters of the year, sales were up 33.9%. It is likely that the revisions will show growing, not shrinking, construction employment.
- To date in 2013, EDD has also estimated that employment agency job levels have fallen. This includes the last three months with the agency indicating the sector was off -3,267 jobs from last year. Again, it would be unprecedented for these agencies to see their activity shrinking when the economy is at the beginning of its turnaround phase. Again, it is likely the revisions will show employment agency jobs have been growing not shrinking.
- Importantly, the U.S. Bureau of Labor Statistics (*BLS*) indicates that as of March 2013, the Inland Empire's wage and salary employment was up 33,673 jobs or 2.9% over that period of 2011. At that time, EDD showed the area up 21,513 jobs or 1.9%. Since EDD must ultimately revise their job levels to meet the BLS figures, this underscores the likelihood that EDD's methodology is severely underestimating the behavior of the inland economy.

As a result, this analyst's instinct is that the forecasted 28,300 job gain is probable. This is the case due to the apparent inaccuracy of EDD's monthly estimates, the very high estimates for early 2013 from BLS and the fact that job growth has probably slowed from BLS's early figures as the year has progressed.

If this scenario occurs, it would take the addition of an average of 30,212 jobs per year in 2014, 2015 and 2016 for the area to gain back the full 146,425 jobs lost to the Great Recession. That appears quite possible. It would take 22,659 a year in 2014-2017 to have it regain the lost jobs by 2017. At the moment, that would appear to be an awfully weak performance.

If the return to normalcy is defined to include the need to make up for the fact that the Inland Empire's labor force and thus its need for jobs has grown since 2010, the 2017 date appears to represent a realistic recovery date.

B. Economic Challenges To Full Recovery

For the Inland Empire, the key to a recovery will be the continued expansion of its traditional economic base. Here, the sectors that must grow include logistics, health care and construction. It would be helpful if manufacturing could join this group, but that is less likely due the high energy costs and heavy regulatory burden faced by that sector in California and Southern California.

These sectors are crucial as each one brings money from the outside world into the local market. The logistics and manufacturing sectors do so because their customers are largely located throughout the state, the country and the world. Health care brings in funds because the sector is largely funded through federal or state programs or by medical insurance companies. Construction does to because projects are funded either by governmental grants or loanable funds flowing to local contractors and workers from the national mortgage market.

Each of these four sectors faces issues:

1. **Logistics** has been the Inland Empire's fastest growing sector and has strong basics. However, the South Coast Air Quality Management District together with local activists wants to stop its growth. A major fight is therefore brewing that could halt the sector's continued expansion.

2. **Health Care** is the one sector that grew throughout the recession. There is a huge need in the inland area given that each local health care worker handles 35% more people than the state average. Also, the sector could see a major need to expand given the 20.5% of the local population without health insurance. The opening of the UCR Medical School will help. That said, the major issue facing the sector is the lack of local training capacity for the host of skilled and semi-skilled workers who would constitute the sector's new hires.

3. **<u>Construction</u>** is the sector that must return to something near to normal for the Inland Empire's economy to regain its past vigor. There are host of reasons why this should happen, beginning with the lack of housing affordability in the coastal counties that is already pricing thousands of families out of those markets. As in the past, this will ultimately send people inland to find homes they can afford. The speed at which this will occur however could be blunted by lack of available financing, an anticipated increase in interest rates and the low level of consumer confidence that continues to plague markets.

4. **<u>Manufacturing</u>** should be a major growing sector in the Inland Empire as both space and labor costs in the market are below other Southern California areas. This is particularly true given the recent resurgence in manufacturing employment nationally. However, local firms are tending to increase efficiency rather than to hire workers because California's regulatory policies have pushed energy levels far beyond what competitors pay in other states. That fact, plus regulatory costs and delays means firms must save on labor to maintain their profitability.

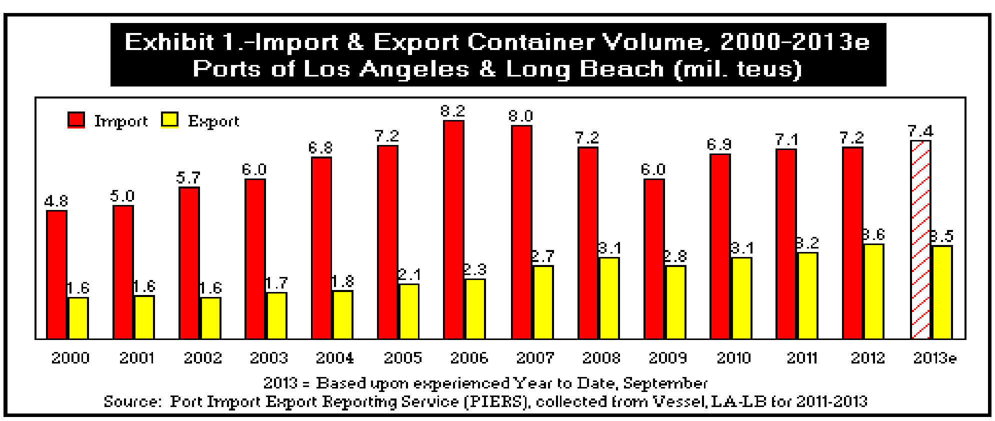
These challenges will make a return to normal more difficult than it otherwise should be. However, this economist believes enough of them will be overcome to allow the region to regain the jobs lost to the recession by 2016, and allow sufficient expansion to make up for its growing labor force by 2017.

II. Key Growth Industries More Thoroughly Discussed

A. Key Existing Industries

1. **Logistics.** The Inland Empire's logistics industry is driven by two major factors:

- **International Trade.** The volume of international trade moving through the ports of Los Angeles and Long Beach has been the traditional driver of the sector (*Exhibit 1*). On the import side, loaded containers entering the U.S. soared to 8.2 million twenty foot container units (*teus*) in 2006. The volume declined roughly 25% to 6.0 million teus in 2009 due to the Great Recession. It has subsequently recovered and is on track as of September 2013 to reach 7.4 million teus for the year. That would be the third highest volume.

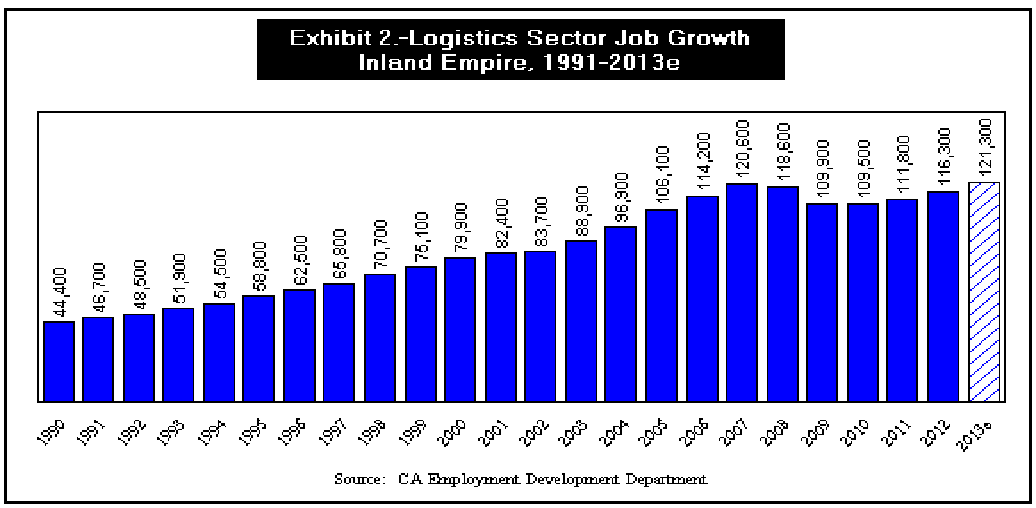


Exported load containers are less of a driver for the Inland Empire. However, they reached a record 3.6 million teus in 2012 and are on track to be just below that level at 3.5 million in 2013. This activity could represent a future role for the region as immigrant manufacturers choose to locate near the ports and because of the importance of the Coachella Valley's farmers to exports.

The facilities for handling this type of activity for international supply chain work are getting larger and larger due to the technology. The number of square feet per job is thus running between 3,000 and 3,500 square feet.

- **Fulfillment Centers.** The newest phenomenon impacting the Inland Empire's logistics sector is the entry into California of fulfillment centers. Seven of 17 firms looking for inland space in first quarter 2013 were for this use. These facilities are being developed for retailers so they can respond to the increasing use of the internet by consumers. The goal is 24-hour delivery. They are generally 500,000 to over 1,000,000 square feet in size and use from 1,000 to 1,250 square feet per job as the work is labor intensive. That is close to the land use ratios found with manufacturing.

  Another aspect of fulfillment centers is their retail sales tax potential for the cities where they locate. A one million square foot facility, conservatively assuming 50% of sales are to non-Californians, will generate about $5 million a year to a municipal government. That assumes the firm's sales per square foot are 75% of the Amazon.com average.



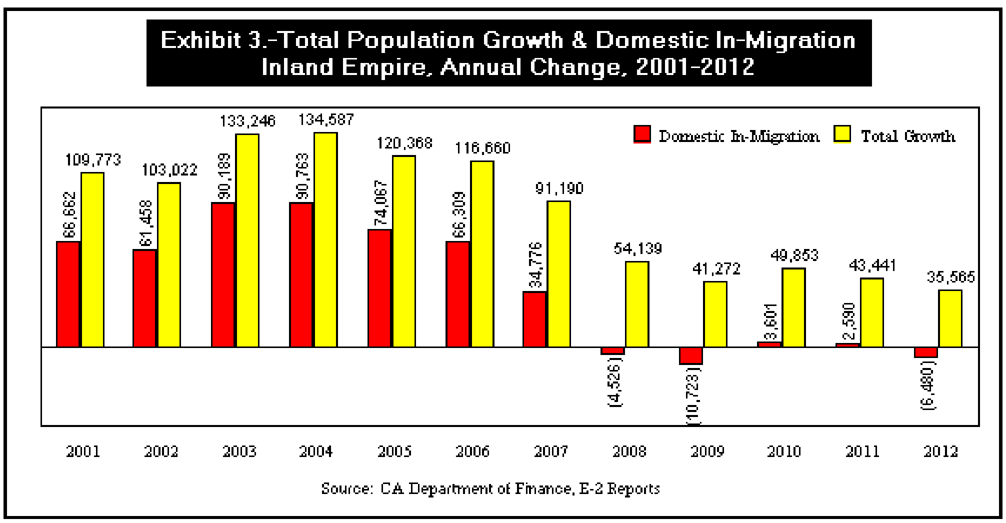
- **Forecast.** Based upon growth through the first eight months of 2013 (*4.3%*), the logistics sector will add 5,000 for the full year. However, this is a conservative figure as it does not include the holiday rush when both trade and fulfillment employment tends to accelerate. There is good reason to believe that the combination of these two activities will cause the sector to add 5,000-7,500 jobs per year for the next several years.

- **Cautions.** This forecast could be hurt since the South Coast Air Quality Management District has targeted logistics to slow its growth. Also, the opening of the Panama Canal will impact volumes to an indeterminate degree.

2. **Health Care.** Three factors will drive the demand for health care in the Inland Empire and the resulting employment level:

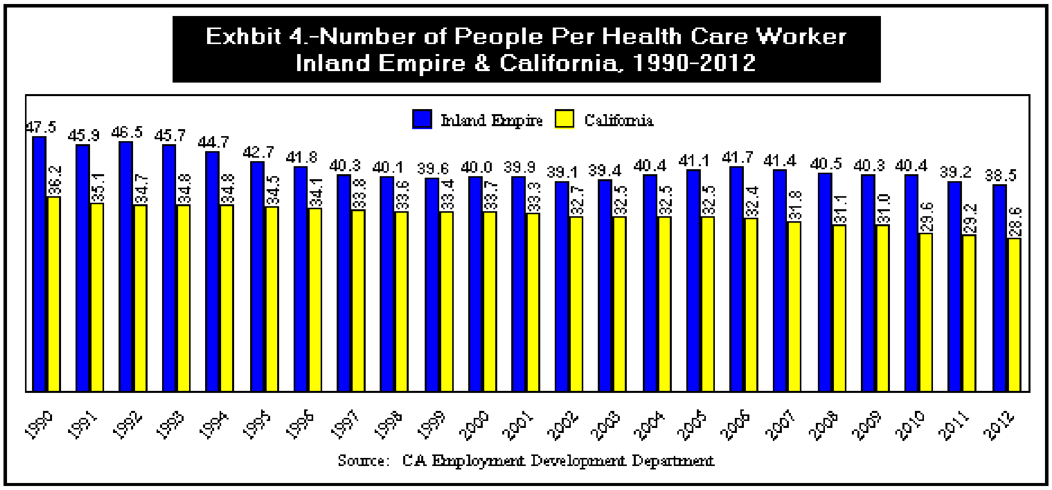
   - **Population Growth.** For the past few years, the recession has restrained residential development and therefore population growth in the inland area (*Exhibit 3*). From 2000-2001 through 2005-2006, the inland counties added over 100,000 people a year with domestic in-migration responsible for over 60,000 new residents. First soaring home prices and then the Great Recession changed this picture dramatically. Annual growth fell to an average of around 40,000, with domestic net migration essentially at zero. This is poised to change with the slow recovery of Southern California's economy, and the fact that the share of families in Orange (*32%*), San Diego (*32%*) and Los Angeles (*37%*) counties who can afford a local home has already fallen to 32% to 37% in contrast to 56% in the Inland Empire.

     As more aggressive population in the Inland Empire resumes, the demand for health professionals will rise.

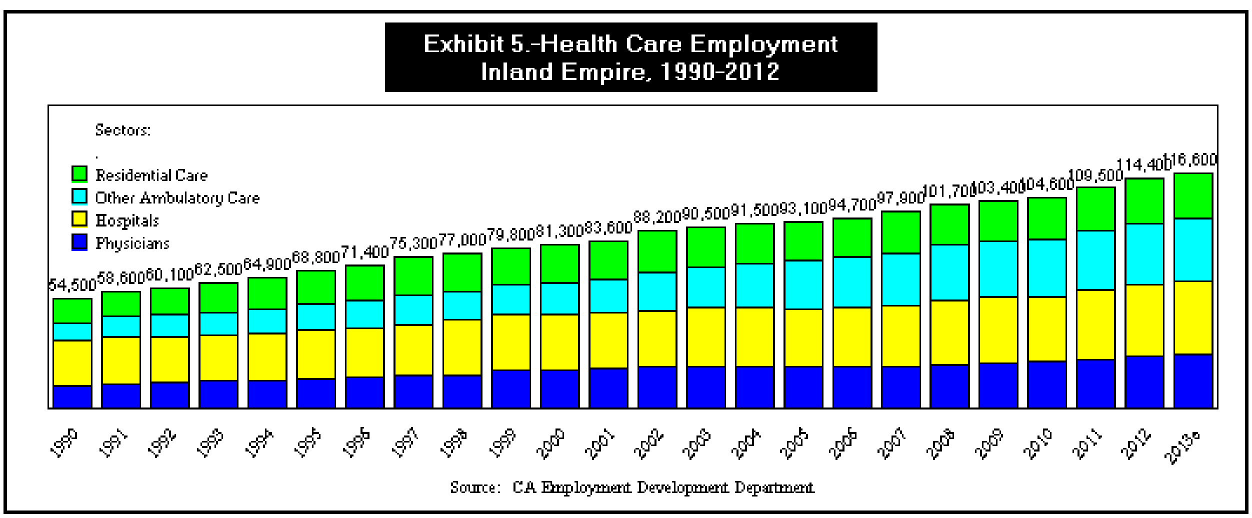


   - **Obamacare.** In 2012, the American Community Survey found that 20.5% of the Inland Empire's residents had no health insurance. If the program is successful, this fact means there will be a significant increase in the demand for health care professionals and semi-professionals. Interviews with executives at local clinics and hospitals indicates that they are gearing up for this to occur. In particular, they anticipate that ambulatory care facilities (*out-patient*) will see the bulk of the increased demand.

   - **Health Care Workers Per Capita.** While demand for health care will undoubtedly rise in the inland counties, it is a fact that the region is already underserved. In 2012, there were 28.6 people for each health care worker in California (*Exhibit 4*). In the Inland Empire, it was 38.5. The region thus had 34.5% more people for each health care worker. Even without population growth or Obamacare, the area already has more potential demand for care than workers supplying it. That alone will be a source of increase demand for workers going forward as seen in that the ratio has been slowly declining.



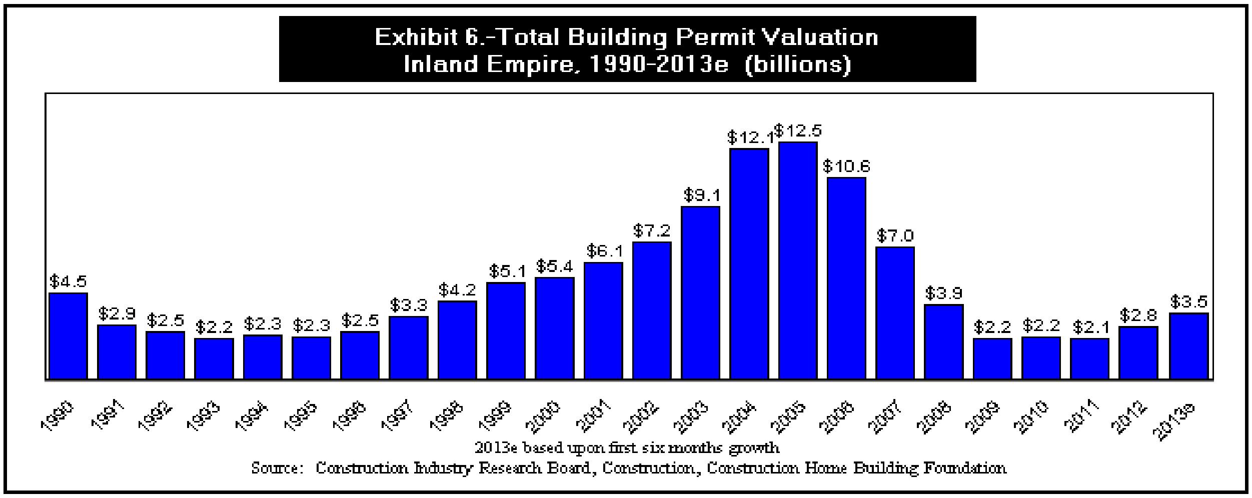
- **Forecast.** Starting in 2007, the Inland Empire's health care sector has grown at an average of roughly 3,000 jobs per year except in 2009 in reaction to the severe downturn and in 2013 as the sector has been thinking through how to respond to the Affordable Health Care Act. Given the discussion above, that could well be a lower estimate of its near term growth.



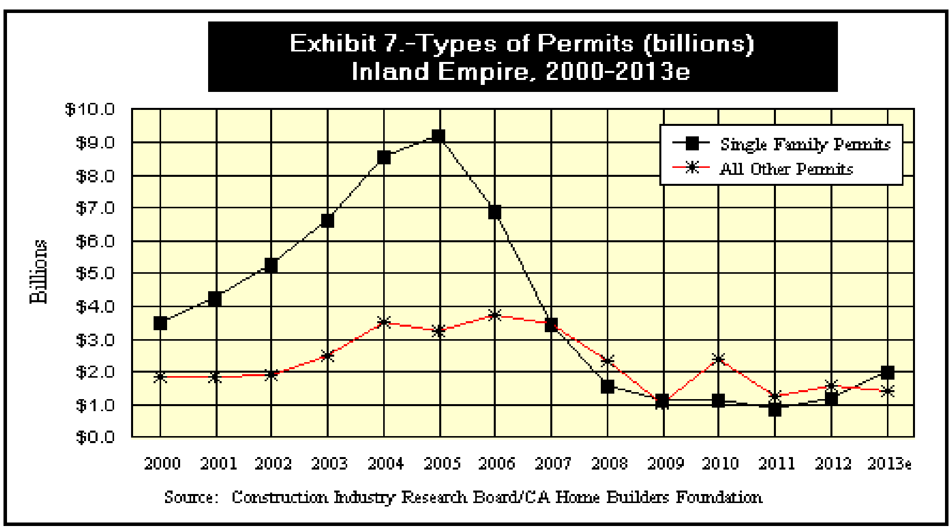
- **Caution.** The key worry for health care providers is the lack of training infrastructure to give them the semi-professionals they will need to keep up with the potential for rocketing demand. UCR Medical School will help with doctors, but it is the need for all levels of nurses and technicians that will inhibit the ability of the sector to expand its employment to meet demand.

3. **Construction.** For the Inland Empire, the missing link in the recovery to date has been its construction sector. Including the job growth in 2011 and 2012, the wage and salary economy was down by -118,200 jobs. Alone, the construction sector was off by -66,300 jobs by then or 56.1% of the difficulty facing the market:

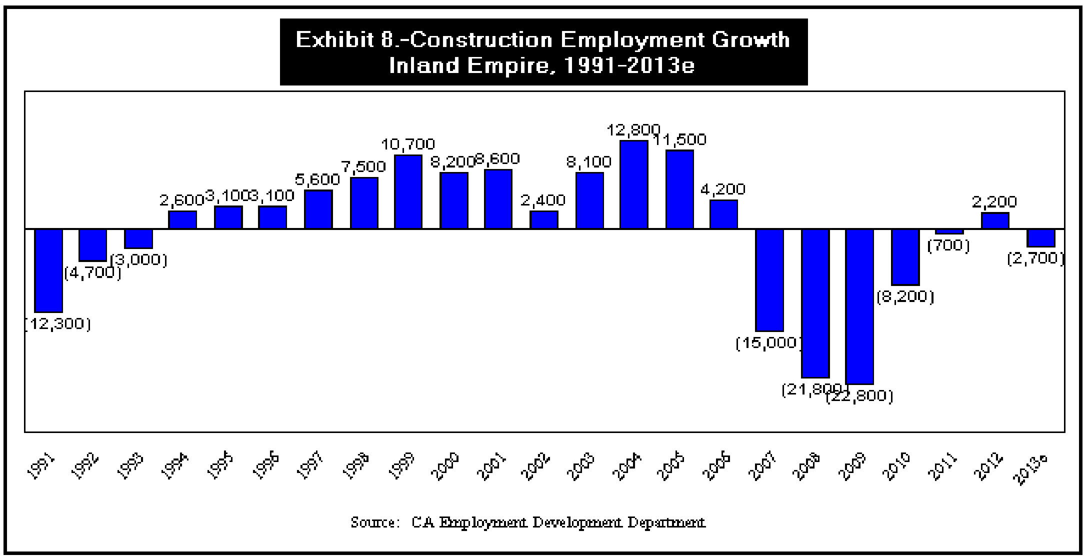
   - **Permits.** The difficulty shows up in looking at the decline the value of construction permits applied for by all types of developers (*Exhibit 6*). These peaked at $12.5 billion in 2005 and were down to $2.1 billion in 2011, off -82.8%. Permit requests have subsequently begun growing. Based upon the first six months of 2013, they should reach $3.5 billion this year. However, that is still off by-71.8%.



   - **Housing.** The major problem for the construction sector has been the decline in residential activity (*Exhibit 7*). The value of single family permits fell from $9.2 billion in 2005 to $0.9 billion in 2011. That was a -90.5% decline. It is only back to an estimated $2.0 billion for 2013, still off -77.9%. Other metrics for this sector are shown in the review of the housing market below.



- **Non-Residential Construction.** Non-residential activity (*including multitenant*) has been an issue but less than for single family housing. Permit volume fell from a peak of $3.5 billion in 2006 to a low of $1.0 billion in 2009, down -72.3%. In 2013, it is estimated at $1.4 billion, still down -62.3%. Here, the issues are seen in the metrics for some of the non-residential sectors:
    - Industrial vacancy of 5.6% v. the historical average of 7.9%. This segment has the highest construction level in the U.S.
    - Office vacancy of 19.4% v. a low of 7.0% in 2003. This segment is showing a little activity but generally is in the doldrums.
    - Retail vacancy of 10.4% v. 8.8% in 2009. This segment is not yet ready for expansion though retail activity has begun to come back.
    - Apartment vacancy rate 5.9% v. 4.3% in 2004. This segment is building again in response to a lack of available homes for sale.



- **Forecast.** Employment data shows the extreme difficulty that the construction sector has endured since 2007 when high prices first began to shut it down. In 2012, the first signs of growth appeared. If EDD is to be believed, it is shrinking again this year. However, given the permit data outlined above, as well as stronger metrics for housing that are shown below plus interviews with executives in the field, the agency's data cannot be accurate.

    It is this economist's view that this sector is likely to increase as much as 3,500 jobs this year. That is based upon the 2,200 job growth in 2012 when the sector was in much weaker shape than it is in 2013. Looking ahead, it is very likely that growth will reach as much as 5,000 jobs a year in the near term as the markets begin to recover.

Two additional facts that run counter to popular wisdom among planners, will also likely drive the Inland Empire's housing markets in years to come. Over a five year period, the Western Riverside Council of Governments twice interviewed commuters driving from that county to Los Angeles, Orange and San Diego. The responses to two questions were quite revealing:

1. As a homeowner, would you prefer to move closer to work if it involved a townhouse or condo? **Answer: 87.5% said NO.**
2. As a renter would you prefer to move closer to work if it involved a townhouse or condo? **Answer: 72.3% said NO.**

Like it or not, when asked, the kind of people who have moved to the Inland Empire have revealed a strong preference for single family detached homes.

- **Caution.** There continues to be a host of issues facing the rejuvenation of the Inland Empire's construction sector. In the residential market, people continue to face difficulties in obtaining financing whether due to higher credit standards, previous foreclosure or short sale issues or low appraisals. They will also hesitate buying homes until convinced that a sustained Southern California recovery is underway. Recovery has started but remains muted. The multitenant market is growing as many families cannot obtain financing for single family homes.

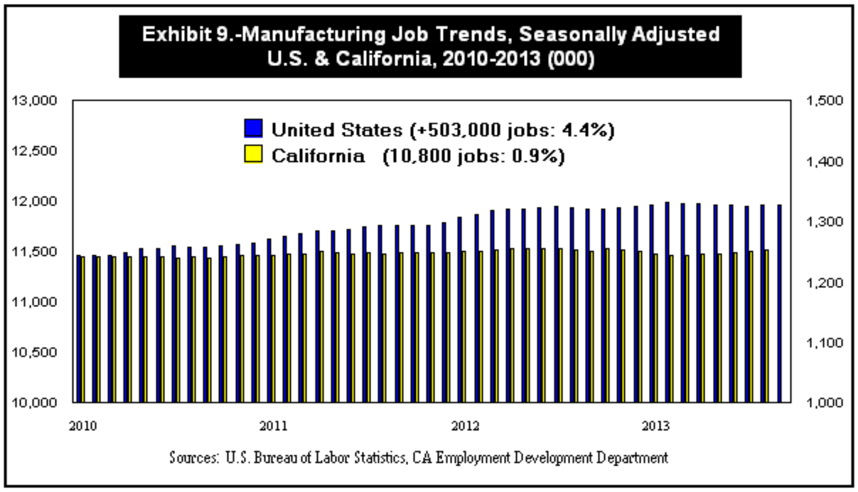
  Industrial construction will remain a force given the demand for facilities because of rising international trade and e-commerce/fulfillment needs. Public construction should remain constant because both inland counties are have passed local sales tax measures for street and road construction.

  Office construction will lag until a resurgence in demand occurs. That will require office based operations that retrenched in the Great Recession are willing to return to the inland area. Retail construction will not start again until inflation adjusted taxable sales volume gets back to its peak. Currently, sales are 12.7% below that level.

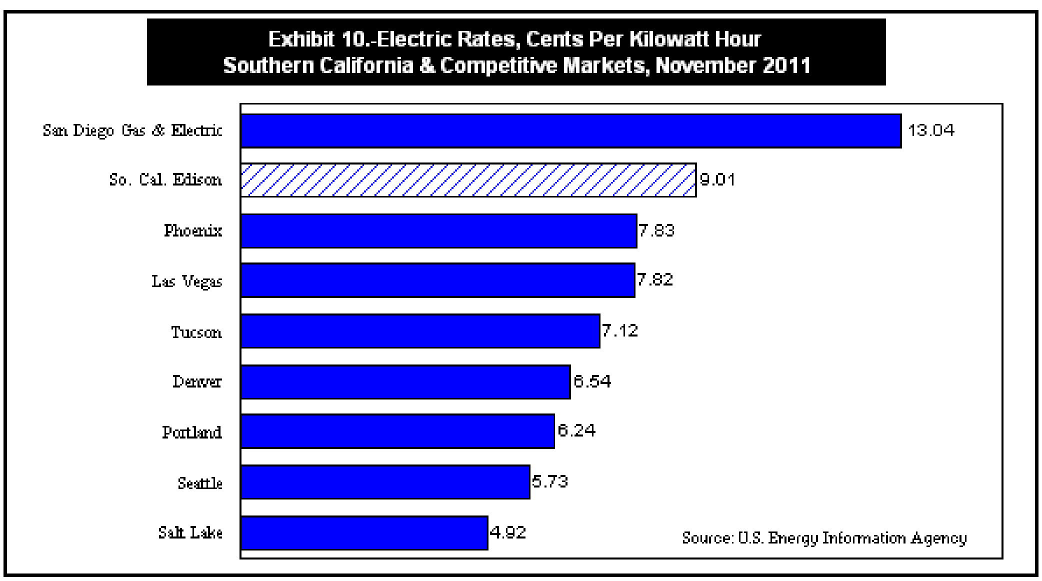
4. **Manufacturing.** For the Inland Empire, the manufacturing sector represents a missed opportunity. There are three reasons for this:

- **National v. State Manufacturing Growth.** While international competition and lower costs in countries like China and India have generally hurt the manufacturing in the U.S., some resurgence is underway. This is occurring as some firms have been hurt because they lost control of the quality of production. Meanwhile, Chinese labor in particular has become more expensive, reducing the incentive to maintain production there.

  Here, the data show that U.S. seasonally adjusted manufacturing employment rose by 503,000 jobs from January 2010 to September 2013 (*Exhibit 9*). That represented a 4.4% growth rate over that period of time. However in that period, California added just 10,800 jobs, a 0.9% growth rate. When asked about these data, the state's economic development group (*Go-Biz*) responded that despite the lack of job growth, the state's manufacturing output grew rapidly. However, this begs the question of why it is good to see output up with minimal benefit to the state's workers.



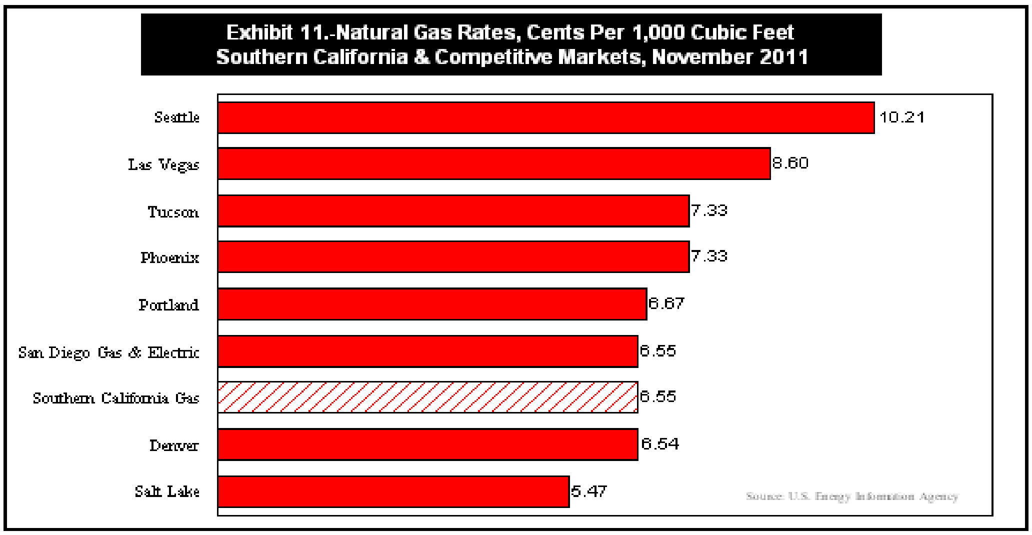
- **Energy Costs.** There is no question that California has put in place strong policies aimed at increasing the state's use of renewable energy. For manufacturers, the problem is that this has sent electrical costs soaring, making them uncompetitive versus nearby states (*Exhibit 10*). Thus, Southern California Edison charged 9.01¢ per kilowatt hour to meet industrial electricity demand in the Inland Empire in 2011. That ranged from 15.1% higher than Phoenix (*7.83¢*) to 83.1% higher than Salt Lake City (*4.92¢*).



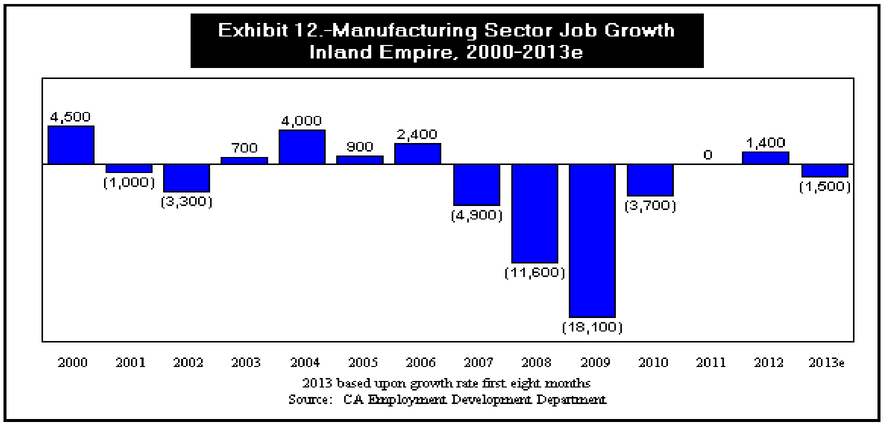
- **Regulatory Climate.** Meanwhile, Southern California's regulatory climate has negatively impacted its manufacturing sector in several ways. First, because the

South Coast Air Quality Management District (*AQMD*) rule making is a non-stop affair. It has made it very difficult for companies in places like the Inland Empire to understand their cost structures in any realistic time horizon. As firms typically invest with looking at least five years ahead, this inhibits local expansions. Second, firms find they are often layered with regulatory costs because they must install new pollution control technologies as soon as the agency requires them to do so. Often, this before they have paid for the last round of required technology.

An example of the uncertainty that AQMD injects into the manufacturing process is seen in the agency's contention that it must "electrify" the basin to meet its air quality mandates. To manufacturers, this means having to consider having to use electricity even when natural gas, for which Southern California has a competitive advantage, is available. In 2011, Southern California Gas was offering natural gas to industrial users at an average of 6.55¢ per 1,000 cubic feet (*Exhibit 11*). That ranged from 35.8% cheaper than Seattle (*10.21¢*) to 1.8% below Portland (*6.67¢*). Only Denver (*6.54¢*) and Salt Lake City (*5.47¢*) were more competitive.

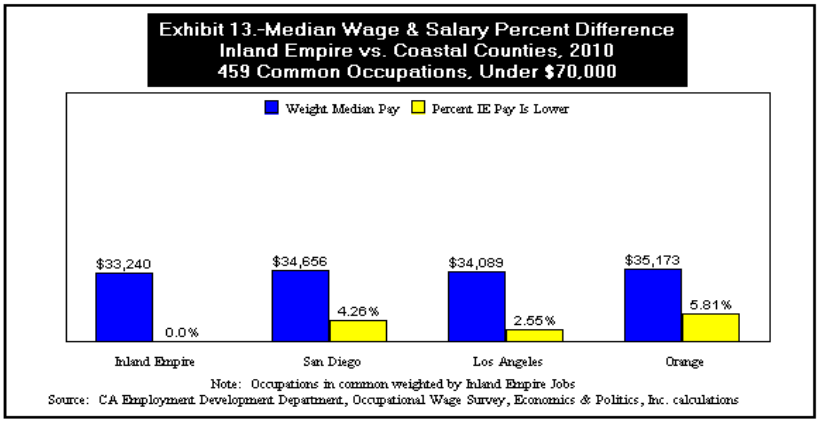


- **Forecast.** Given these facts, the prognosis for manufacturing job growth in the Inland Empire is unfortunately very weak. Since 2000, the sector has had a net loss of -30,200 jobs. With the Great Recession over, the sector has essentially been flat, adding no jobs in 2011, 1,400 in 2012 and losing -1,500 in 2013 (*Exhibit 12*). In talks with manufacturing executives, it is difficult to find a scenario that will improve what should be a strong sector for the Inland Empire. Here, a typical response came from a heavy aerospace manufacturer. Their processes require precision work by machine shops that should be located nearby. Instead, they remain scatter throughout Southern California because the owners are unwilling to move because it would invoke dealing with AQMD.

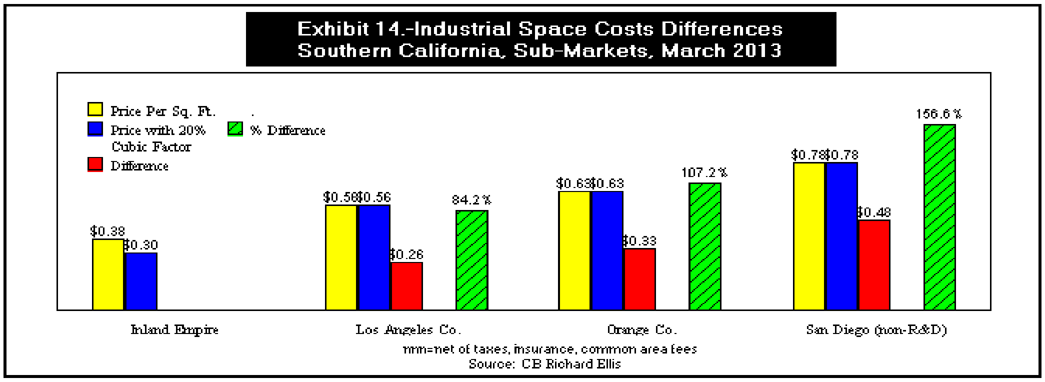


- **Caution.** There is a remote scenario under which the manufacturing sector could expand. This is because of the competitive advantages the sector does have vis-à-vis the balance of Southern California. Two factors illustrate this:

1. **Lower Pay.** For occupations paying under $70,000 a year, inland firms are able to find workers willing to work from 2.55% to 5.81% less than in Los Angeles and Orange counties respectively (*Exhibit 13*). This is logical in that 20.6% of the workforce commutes to the coastal counties and will work for a little less to avoiding having to do so.



2. **Low Space Cost.** Industrial facilities in the coastal counties ranging from 84.2% to 156.6% more expensive than in the Inland Empire (*Exhibit 14*).



That is the case because the $0.38 per square foot a month in the inland area acts like $0.30 because the facilities are newer and taller. There is thus a cubic space premium when compared to the more expensive and older space in the coastal counties: Los Angeles (*$0.56*), Orange (*$0.63*) and San Diego (*$0.78*).

These competitive advantages may still cause some manufacturing growth in the Inland Empire. In any case, it will be subdued.

5. **Other Sectors.** It is difficult to see any other sectors driving the Inland Empire's economic base in a major way because of the educational level of the great mass of the area's labor force. There will ultimately be significant growth in population-serving sectors like retailing and eating and drinking, but that will be a reaction to the funds flowing inland because of the expansion of the sectors discussed above. Also, there will be growth in sectors related to construction once that sector reemerges. That is the case because its growth will impact finance, insurance and real estate activity as well as civil engineering. But again, these are not the portions of the region's economy that are driving its base. They are a reaction growth within it.

III. Occupational & Industry Pay

A. Occupations

1. From 2010-2020, EDD forecasts that 31 Inland Empire occupations will each add 1,500 or more jobs (*Exhibit 15, next page*). To summarize the forecasts for them:
   - Together, they will go from 507,690 jobs in 2010 to 617,900 in 2020, a gain of 110,210 positions or 21.7%.
   - The jobs in these sectors will represent 52.9% of the forecasted total employment gain in the Inland Empire from 2010-2020.
   - The bulk of the jobs in these sectors will pay from $30,000 to $39,999.
   - The largest share of jobs will require less than a high school education.
   - The largest share of occupations will require only short term on-the-job training.
   - While the main sectors responsible for these 31 occupations are quite diverse, the largest group are most often associated with logistics (*7 of 31*) and eating & drinking (*6 of 31*).
2. With the exception of 31st ranked laborers, construction occupations are missing from EDD's prediction of major growing occupations from 2010-2020. This economist believes that is over-predicting the existing economy and that the sector will be a major force for employment in the decade to come.
3. It is not a surprise that manufacturing occupations are completely absent from the list. This is an important negative factor for the Inland Empire's economic future.

Exhibit 15.-Occupations with 1,500 or More Job Growth, Inland Empire, 2010-2020									
SOC Code	**Occupational Title**	**2010**	**2020**	**Growth**	**Median Annual**	**Entry Level Education**	**Work Experience**	**On-the-Job Training**	**Main Sector**
412031	Retail Salespersons	42,760	53,630	10,870	$21,003	Less Than HS	None	ST OJT	Retail
399021	Personal Care Aides	22,760	31,530	8,770	$19,379	Less Than HS	None	ST OJT	Other Service
537062	Laborers and Freight, Stock, and Material Movers, Hand	31,230	39,620	8,390	$24,727	Less Than HS	None	ST OJT	Logistics
353021	Combined Food Preparation and Serving Workers, Including Fast Food	27,850	34,750	6,900	$18,863	Less Than HS	None	ST OJT	Eating & Drinking
412011	Cashiers	32,250	38,770	6,520	$20,134	Less Than HS	None	ST OJT	Retail
533032	Heavy and Tractor-Trailer Truck Drivers	22,530	28,960	6,430	$40,243	High School	1-5 years	ST OJT	Logistics
291141	Registered Nurses	22,160	27,100	4,940	$81,242	Associates	None	None	Health Care
353031	Waiters and Waitresses	18,400	22,390	3,990	$18,623	Less Than HS	None	ST OJT	Eating & Drinking
435081	Stock Clerks and Order Fillers	22,090	25,720	3,630	$22,892	Less Than HS	None	ST OJT	Logistics
439061	Office Clerks, General	24,090	27,700	3,610	$30,368	High School	None	ST OJT	Office Work
373011	Landscaping and Groundskeeping Workers	16,440	19,840	3,400	$23,443	Less Than HS	None	ST OJT	Other Service
352011	Cooks, Fast Food	11,610	14,610	3,000	$18,663	Less Than HS	None	ST OJT	Eating & Drinking
252021	Elementary School Teachers, Except Special Education	21,010	23,890	2,880	$70,241	Bachelors	None	Internship	Education
434051	Customer Service Representatives	15,230	17,930	2,700	$33,569	High School	None	ST OJT	Sales
311011	Home Health Aides	5,000	7,690	2,690	$20,204	Less Than HS	None	ST OJT	Health Care
411011	First-Line Supervisors of Retail Sales Workers	16,780	19,350	2,570	$39,434	High School	1-5 years	None	Retail
339032	Security Guards	12,280	14,740	2,460	$21,754	High School	None	ST OJT	Other Service
431011	First-Line Supervisors of Office and Administrative Support Workers	14,010	16,310	2,300	$50,283	High School	1-5 years	None	Office Work
436013	Medical Secretaries	6,780	8,930	2,150	$29,463	High School	None	MT OJT	Health Care
414012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	9,230	11,310	2,080	$53,024	High School	None	MT OJT	Logistics
351012	First-Line Supervisors of Food Preparation and Serving Workers	8,820	10,840	2,020	$25,629	High School	1-5 years	None	Eating & Drinking
352014	Cooks, Restaurant	9,050	11,060	2,010	$23,325	Less Than HS	<1 year	MT OJT	Eating & Drinking
372011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	17,120	19,110	1,990	$23,831	Less Than HS	None	ST OJT	Other Service
433031	Bookkeeping, Accounting, and Auditing Clerks	13,430	15,360	1,930	$36,933	High School	None	MT OJT	Office Work
537064	Packers and Packagers, Hand	9,970	11,880	1,910	$19,966	Less Than HS	None	ST OJT	Logistics
537051	Industrial Truck and Tractor Operators	7,810	9,660	1,850	$31,269	Less Than HS	<1 year	ST OJT	Logistics
533033	Light Truck or Delivery Services Drivers	9,880	11,670	1,790	$29,961	High School	None	ST OJT	Logistics
311014	Nursing Aides, Orderlies, and Attendants	9,250	10,970	1,720	$24,718	Post Secondary	None	None	Health Care
352021	Food Preparation Workers	9,060	10,660	1,600	$19,226	Less Than HS	None	ST OJT	Eating & Drinking
319092	Medical Assistants	6,940	8,540	1,600	$27,168	High School	None	MT OJT	Health Care
472061	Construction Laborers	11,870	13,380	1,510	$37,239	Less Than HS	None	ST OJT	Construction
	SUMMARY	**507,690**	**617,900**	**110,210**	**$30K<$40K**	**Less Than HS**	**None**	**ST OJT**	**Logistics**

Source: Standard Occupational Code descriptions and forecasts,, CA Employment Development Department

4. A series of arrays provides a more descriptive look at the group of growing occupations that EDD expects to add 1,500 or more jobs:

- Workers in these jobs will need little education with 28 of 31 occupations requiring High School or Less schooling.

Exhibit 15A.-Educational Requirement		
Education	**Number**	**Share**
Bachelors	1	3.2%
Associates	1	3.2%
Post Secondary	1	3.2%
Some College	0	0.0%
High School	12	38.7%
Less Than HS	16	51.6%
Total	**31**	**100.0%**

- Workers in the jobs will require need little experience with 25 of 31 occupations requiring no experience.

Exhibit 15B.-Work Experience Requirement		
Education	**Number**	**Share**
None	25	80.6%
<1 year	2	6.5%
1-5 years	4	12.9%
Total	**31**	**100.0%**

- Employees in these occupations will generally need to access to some on-the-job training with 20 of 31 having a short term OJT requirement.

Exhibit 15C.-On-The-Job Training Requirement		
Education	**Number**	**Share**
None	5	16.1%
Short Term OJT	20	64.5%
Medium Term OJT	5	16.1%
Long Term OJT	0	0.0%
Apprenticeship	0	0.0%
Internship Residency	1	3.2%
Total	**31**	**100.0%**

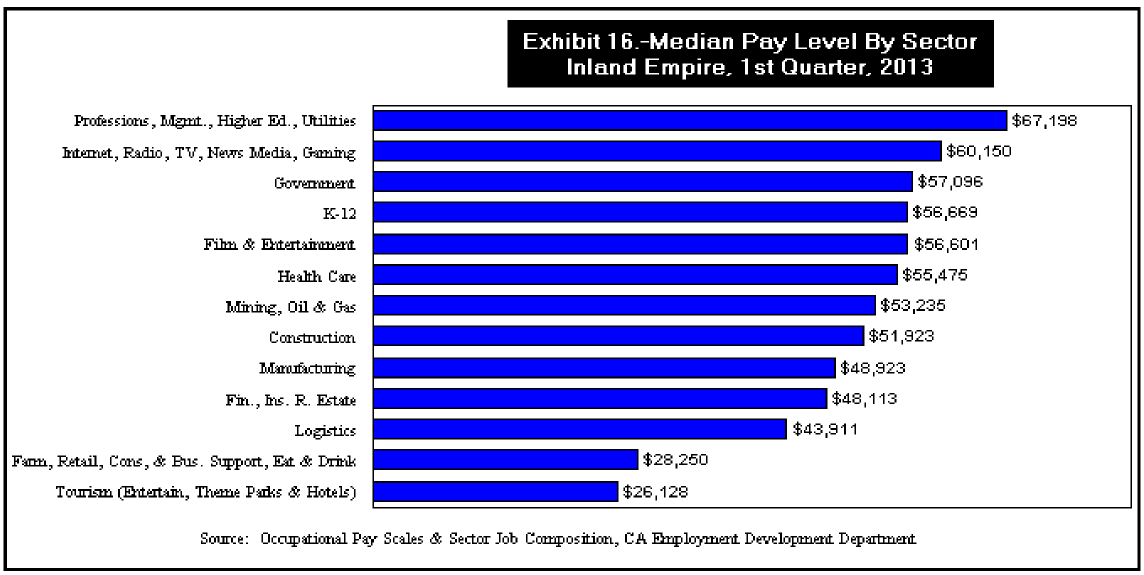
- The largest share of the high growth occupations (*15 of 31; 48.4%*) will pay $30,000-$39,999 per year. Eight will be above that bracket and six below it.

Exhibit 15D.-Income Levels		
Education	**Number**	**Share**
Under $20,000	3	9.7%
$20000-29,999	3	9.7%
$30,000-$39,999	15	48.4%
$40,000-$49,999	5	16.1%
$50,000-$59,999	1	3.2%
$60,000-$69,999	2	6.5%
Total	**31**	**100.0%**

- The sectors in which these 31 high growth occupations are found is very diverse. The leader is logistics with seven occupations, followed by eating & drinking with six and health care with five. The other 13 occupations are scattered across five sectors.

Exhibit 15E.-Main Sectors		
Education	**Number**	**Share**
Logistics	7	22.6%
Eating & Drinking	6	19.4%
Health Care	5	16.1%
Other Service	4	12.9%
Retail	3	9.7%
Office Workers	3	9.7%
Sales	1	3.2%
Construction	1	3.2%
Manufacturing	0	0.0%
Total	**31**	**100.0%**

B. Median Pay by Sector



1. To determine median pay by sector, a three step process was necessary.

- Median pay by standard occupational code for the Inland Empire in first quarter 2013 was downloaded from EDD.
- The group of occupational codes in each sector for California was downloaded from EDD together with employment in each occupation for each sector. These data were not publically available for sectors within the state's various jurisdictions.
- The occupational array and the Inland Empire's median pay levels were combined to show the weighted array of jobs and their median pay by sector in first quarter 2013 in the inland area (*Exhibit 16*).

2. The results from this array are as follows:

   - **High Paying Sectors (*27.1% of jobs*).** The five highest paying categories had median pay levels from $56,669 to $67,199. These included three private sector groups with a combined share of Inland Empire jobs in 2012 of 86,370 or 7.4%. It also included government and education which combined for 229,713 jobs or 19.7%.

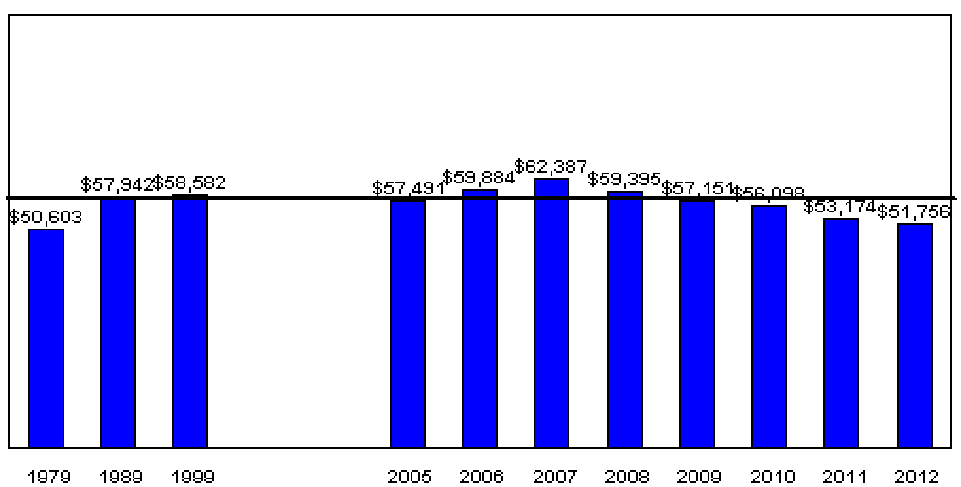
   - **Median Paying Sectors (*41.2% of jobs*).** The six sectors in the mid-range had median pay levels from $43,911 to $55,475. They included the four essentially blue collar sector with 326,257 jobs in 2012 or 28.0% of the Inland Empire total. There was also two office based groups (*health care; finance, insurance & real estate*). They were responsible for 154,986 jobs or 13.3% of the total.

   - **Lower Paying Sectors (*37.5% of jobs*).** The lower paying sectors had median pay levels ranging from $26,128 to $28,250 They included those in tourism (*29,770 jobs; 2.6%*) plus a variety of lower paying groups in such sectors as agriculture, retail, food & drink and consumer services (*408,110 jobs; 35.0%*).

IV. Income & Poverty Trends

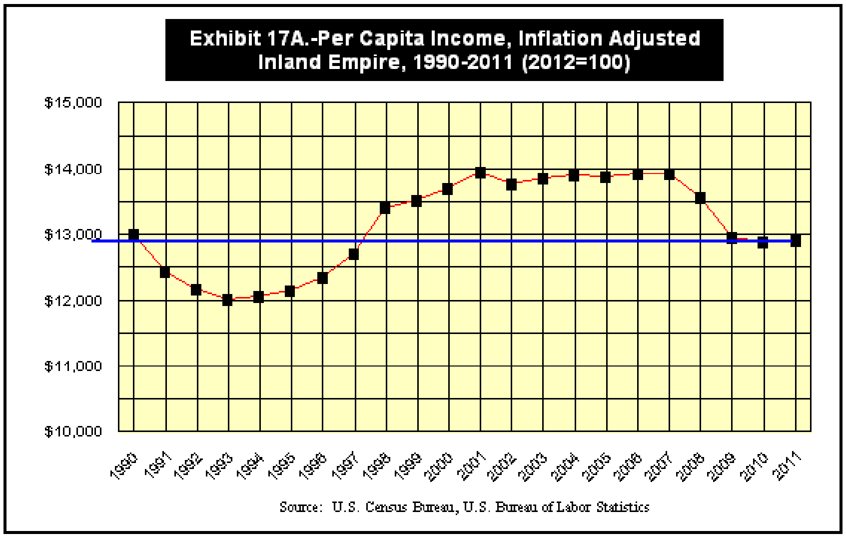
A. Median Income. Using 1989 household median incomes as a base (*$57,942*), inflation adjusted to 2012 levels, the trend for the Inland Empire has not been a good one. By 1999 and 2005, median income was essentially stationary. During the boom in 2007, median income (*$62,387*) did rise to 7.7% over the 1989 level. However, the Great Recession and its aftermath have seen median income fall to -10.7% below the 1989 level by 2012 (*$51,756*).

Exhibit 17.-Median Household Income, Inflation Adjusted
Inland Empire, 1989-2012 (2012=100)

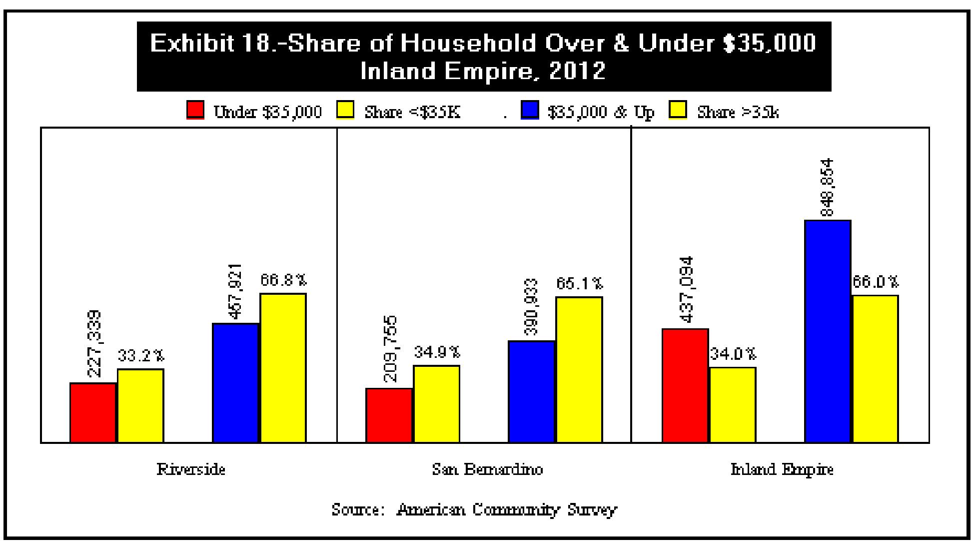


Source: U.S. Census Bureau, U.S. Bureau of Labor Statistics

B. Per Capita Income. The trend for the Inland Empire's inflation adjusted per capita income showed declining significantly during the early 1990s due to the severe aerospace defense recession. Adjusted to 2012 price levels, the level dropped from $12,999 to $12,009, off -7.6% (*Exhibit 17A*). From there, per capita income rose to dual highs of $13,945 in 2001 and $13,940 in 2006. However, the Great Recession sent the level down to $12,886 in 2010, off -7.6% from the peak. A small gain to $12,919 in 2011 left the inland area -0.6% its 1990 level.



C. Over & Share Under $35,000. In the Inland Empire, roughly one-third the households in both counties earned under $35,000 in 2012. That left two-thirds of the households earning over that level (*Exhibit 18*).



D. Poverty Rate. Between 1990 and 2012, poverty has soared in the Inland Empire. The number of people living below poverty level incomes has increased from 306,417 to 813,251, a 165.4% increase. That occurred in a period when the population grew by

65.9%. As a result, a much larger slice of a much bigger population is now poor. The share has gone from 11.8% in 1990 to 19.0% in 2012 (*Exhibit 19*).

Exhibit 19.-Residents Below Poverty Level, Inland Empire, 1990-2012			
Census Bureau Year	**People In Poverty**	**Share of Population in Poverty**	**Population**
1990	306,417	11.8%	2,588,793
2000	477,496	14.7%	3,255,526
2012	813,251	19.0%	4,293,892
Changes	**+165.4%**	**+7.2%**	**+65.9%**

Source: 1990 & 2000 Census; 2012 American Community Survey

In 2012, the levels of poverty in various groups were quite different:

- African American (*27.2%*)
- Hispanic (*23.9%*)
- White (*12.1%*)
- Asian (*10.4%*)
- Children under 18 (*26.5%*)

V. Educational Attainment in 2012

A. Adult Educational Levels. One of the most difficult issues facing the Inland Empire is the relatively low educational level of its adult population 25 & over (*Exhibit 20*). In 2012, 46.7% had stopped their educations with high school or less schooling. In the economy, that is the equivalent of having no real educational training. Over time, the changes in technology are going to make this worse, not better. At the other end of the spectrum, just 19.6% of adults have a bachelor's or higher degree. This makes it very difficult for the region to compete for the highest paying sectors/

Exhibit 20.-High School or Less Education, Adults 25 & Over, Inland Empire, 2012		
Educational Level	**Number of Adults**	**Share**
Less High School	568,347	21.4%
High school graduate (includes GED)	673,540	25.3%
Some college, no degree	686,858	25.8%
Associate's degree	211,147	7.9%
Bachelor's degree	340,001	12.8%
Graduate or professional degree	179,679	6.8%
Total	**2,659,572**	**100.0%**
High School or Less	1,241,887	46.7%

Source: 2012 American Community Survey

B. Unemployment, Poverty & Median Income by Educational Level. There is no question that educational attainment correlates with unemployment rates and shares of adults living in poverty.

1. In 2012, the share of people who did not finish high school and who were in the labor force and unemployed was 16.1%; the share living in poverty was 25.7%. Their personal median income was only $20,489 (*Exhibit 21*).
2. As educational attainment went up, all three of these measures improved with unemployment and poverty declining and personal median income rising.
3. For those with a bachelor's or higher degree, just 7.2% were unemployed. Only 6.6% were living in poverty. Their personal median income was $57,371.

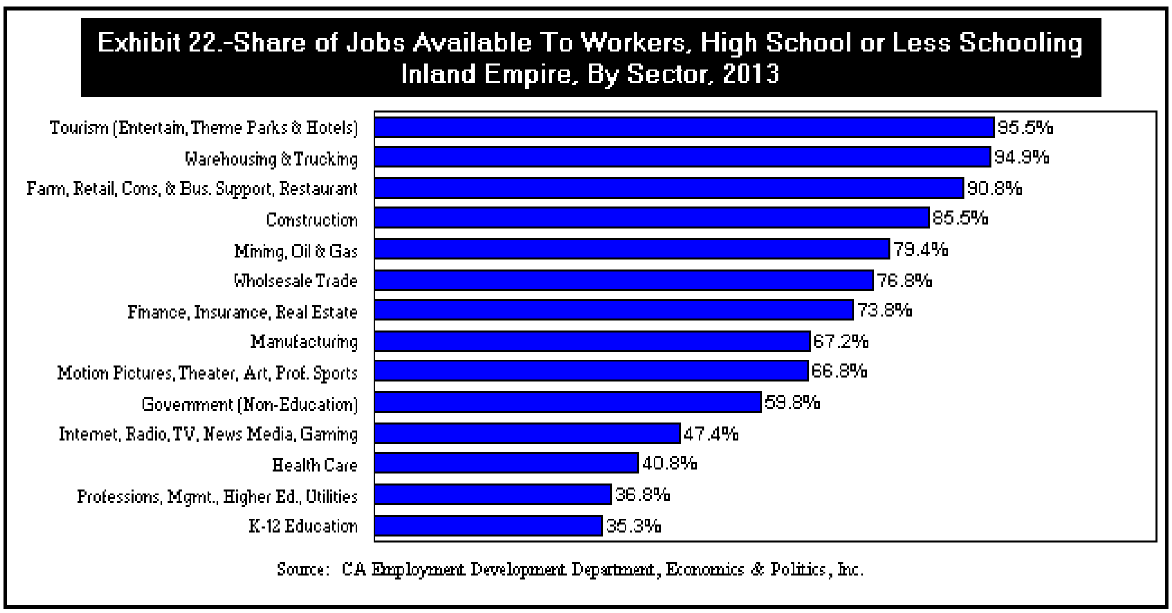
Exhibit 21.-Unemployment, Poverty & Median Income By Educational Attainment, Inland Empire, 25 & Over, 2012

Educational Attainment	25-64 Years Old	Civilian Labor Force	Unemployed	Unemployment Rate	Share In Poverty	Median Income
Less than high school graduate	452,546	282,319	45,504	16.1%	25.7%	$20,489
High school graduate	552,254	389,007	51,061	13.1%	17.2%	$29,335
Some college or associate's degree	753,952	560,492	60,758	10.8%	11.8%	$35,047
Bachelor's degree or higher	420,613	345,626	24,794	7.2%	6.6%	$57,371
Total	**2,179,365**	**1,577,444**	**182,117**	**11.5%**	**15.1%**	**$32,025**

Source: 2012 American Community Survey

C. **Outlook for Sectors Requiring Lower Levels of Education.** In 2013, EDD's data show that numerous sectors allow people to enter the workforce with high school or less educations (*Exhibit 22*). Two of these are very low paying (*Exhibit 16, earlier*):

1. **Tourism** (*median income: $26,128*) allows 95.5% of workers to have marginal educations. While growth will be rapid, there are not many good paying jobs.



2. **Broad Low Income Group** (*median income: $28,250*) allows 90.8% of workers to enter with high school or less schooling. These sectors will also grow rapidly but offer relatively few good paying jobs.

Of the others, several offer significant opportunities for workers to start their careers:

3. **Warehousing & Trucking** (*median pay: $43,911*) has jobs where 94.9% require high school or less school. This is one of two sectors that constitute the logistics group. The group has been one of the fastest growing in the Inland Empire.

4. **Construction** (*median pay: $51,923*) has 85.5% of its jobs requiring minimal levels of formal education, though apprenticeship is necessary for some types of work. The current median pay is skewed because so few field workers are currently employed. However, this analyst sees the number of such jobs gradually improving for several years.

5. **Wholesale Trade (***median pay: $43,911***)** has 76.8% of its positions in which minimal educational levels are needed. It is the other sector that constitutes the logistics group. The group has been one of the fastest growing in the Inland Empire.

6. **Finance, Insurance & Real Estate** (*median pay: $48,113*) will grow as the real estate market recovers. In this sector 73.8% of jobs require minimal entry level educations though many require specific state certifications.

7. **Health Care** (*median pay: $55,475*) offers fewer jobs with minimal educational requirements (*40.8%*). However, the sector is expected to grow rapidly, and those getting certification to work within it will often find themselves interested in moving up within the sector.

VI. Housing Market.

As indicated earlier, much of the economic pain facing the Inland Empire's economy has come about because of the extreme difficulties in its housing and related construction market.

A. **Permits.** Earlier (*Exhibit 6*), it was shown that total Inland Empire building permits valuation fell -82.8% from the peak in 2005 to the trough in 2011. Permit requests have subsequently been growing. Based upon six months of 2013, they should reach $3.5 billion this year. However, that will still be off -71.8%. Looking ahead, it is likely the bottom has been reached and valuation will rise for the foreseeable future.

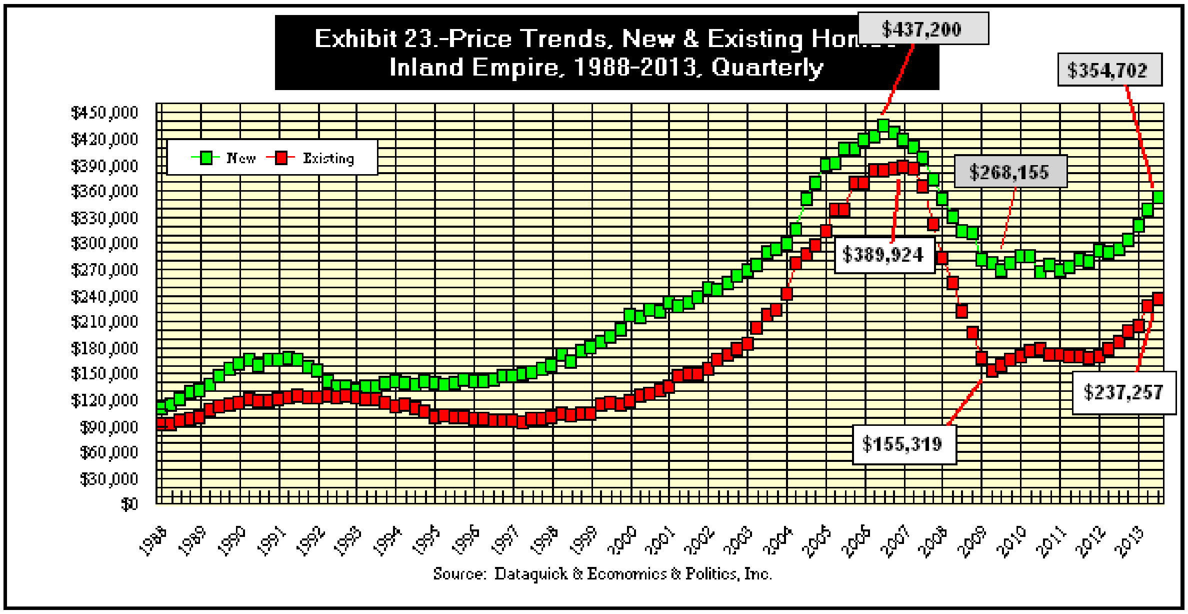
B. **Residential Construction.** It has also been shown (*Exhibit 7*) that single family building permit valuation fell -90.5% from the peak in 2005 to the bottom in 2011. Valuation did grow in 2012 and six month's data in 2013 see that accelerating a little this year. Still, the value of residential permits is anticipated to end the year -77.9% below its peak. That said, a variety of data indicates that this situation should be slowly repaired in the coming three or four years.

C. **Median New and Existing Home Prices.** A hopeful sign for a residential recovery in the Inland Empire is found in looking at the pattern of home prices.

1. **Existing home median prices** peaked at $389,924 in first quarter 2007. From there they plunged -60.2% to $155,319 in second quarter 2009. That decline left 54.9% of all home owners underwater on their mortgages by year end.

   At first, the recovery from that point was slow. However, the entry of investors buying homes has caused the pace to quicken. By third quarter 2013, the median price was back to $237,257, up 52.8% from the trough. In the past twelve months alone, the median price rose 26.3%. However, the current price remains 39.2% below the peak. Today, 24.8% of those with mortgages are underwater. The decline in that metric is one reason more voluntary sellers are now seen in the inland home market.

   Existing home volume for 2013 is forecasted at 57,717 based on nine months of data. That is down from a peak of 73,026 in 2009 when foreclosure activity was clearing out the market. Otherwise, the peak was 71,488 sales in 2005.

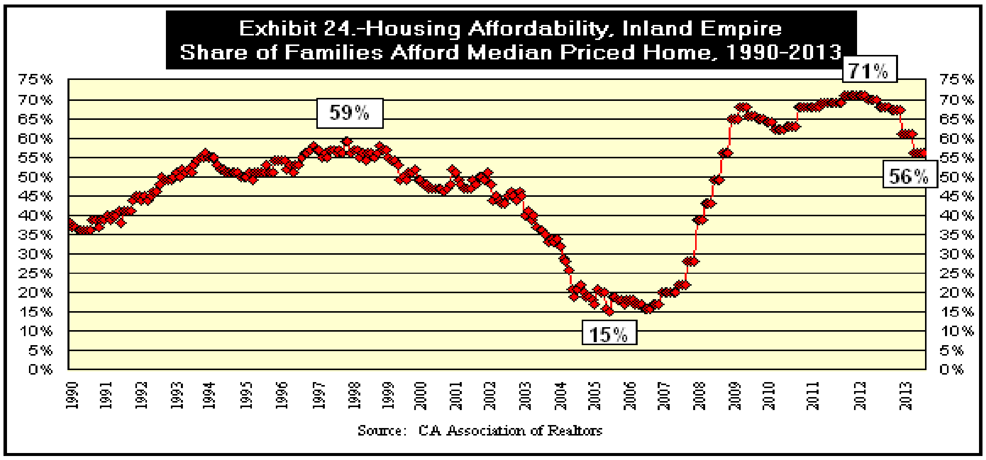


2. **New home median prices** peaked at $437,200 in third quarter 2006. From there they plunged -38.7% to $268,155 in third quarter 2009. The drop occurred as builders were forced to sell off homes in a market that was disappearing. Since then, prices have started up and have recently been accelerating. By third quarter 2013, the median new home was selling for $354,702. That is 50.6% above the 2009 low, though it remains 18.9% below the historic high.

   In 2013, the volume of new homes sales remains at a low level with a forecasted volume of 6,201 sales based on nine months of activity. This contrasts with 37,226 at the peak in 2005. As sales are tending to come from more upscale markets, this has placed an upward bias into recent median home price levels.

D. Affordability. Finally, the future success of the Inland Empire's economy and its housing and residential construction markets continues to rest on the fact that Southern Californians of modest means who wish to own detached single family homes are almost forced to migrate inland.

1. **Inland Empire Affordability.** Today, 56% of the Inland Empire's families can afford the area's median priced home. That is the case with incomes similar to those in Los Angeles County but well below Orange and San Diego Counties. Though that is down from 71% at the beginning of 2012, it is consistent with the period after the last major recession in the 1990s (*59%*). The 56% figure is far above the 32% to 37% affordability found in the coastal counties.



2. **Inland Empire's Modest Prices.** As families find themselves unable to afford homes in Southern California's coastal counties, the Inland Empire will again emerge as the alternative for them. Thus in third quarter 2013, the area's median new and existing home sold for $249,000. That was $202,000 less that in Los Angeles County (*$451,000*). It was $213,000 below San Diego County (*$462,000*) and $381,000 cheaper than Orange County (*$630,000*). It is these price differentials that have historically caused homebuyers to migrate inland and they will again.