

## **Special Research Report**

# THE PROJECTED GROWTH IN WAREHOUSING AND DISTRIBUTION FACILITIES IN THE INLAND EMPIRE AND THE HIGH DESERT DUE TO THE EXPECTED INCREASE IN IMPORTS AND EXPORTS HANDLED BY THE PORTS OF LOS ANGELES AND LONG BEACH

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#### **Executive Overview**

- The industrial market in Southern California is the largest in the United States. At the end of 2007 there was 1.85 billion Square Feet of warehousing, distribution and manufacturing space in Southern California. The Net Absorption in 2007 was 22.4 million Square Feet. The vacancy rate at year end was 4.2%. There is a tendency for firms to relocate from Los Angeles County to the Inland Empire where raw land is available to construct buildings. The 3.4 million Square Feet of negative Net absorption in 2007 reflects this trend.
- Even though there has been a long term trend to replace employees with automation and equipment, the UCLA Anderson Forecast of September 2008, which was issued after the financial crisis on Wall Street, called for manufacturing employment to expand in California, requiring more building floor area per employee. This suggests that the demand for industrial space to house manufacturing operations will increase in Southern California and the Inland Empire beginning with the second half of 2009.
- As of the end of 2007 there were 435 million Square Feet of Warehousing, Distribution and Manufacturing space in the Inland Empire. Over the five years ending in 2007 an average of 18.8 million Square Feet of warehousing and Distribution or Manufacturing space was absorbed in the Inland Empire. In 2007 the Inland Empire absorbed 24.7 million Square Feet of non-flex industrial space, which was 55% greater than the average annual absorption for the previous nine-year period. This occurred in spite of the problems in the financial sector that began to manifest themselves in the summer of 2007. In the first half of 2008 there was a negative Net Absorption of approximately 700,000 Square Feet. As of the summer of 2008, there is an estimated 32million Square Feet of excess vacant industrial space in the Inland Empire.
- Between 1998 and 2007 the California ports of Los Angeles and Long Beach increased the number of loaded In-Bound containers by an average of 551,000 loaded In-Bound TEU per year. During the 11 year period ending in 2006 the year-to-year percentage increase in Loaded In-Bound TEU ranged from 3.1% to 16.6%. There was little change in 2007 but it is estimated that the number of Loaded In-Bound containers will decline by 9.4% in 2008. This decline, which began in July of 2007, is primarily attributed to the problems in the housing market and its effects on the demand for construction components, furniture and retail items for home remodeling. The general slowdown of the U.S. economy has also eliminated most of the increase in imports for a broad spectrum of retail goods. UCLA is forecasting that the imports will rebound to more normal growth rates beginning in the second half of 2009.
- The number of Loaded Out-Bound containers through the two ports began to accelerate in 2005 as the Dollar started to depreciate. Exports increased by 17.2% in 2007 and 16.4 % in 2008. Exports are expected to continue to increase at a relatively high rate over the next few years. The substantial increase in exports will add to the demand for industrial space in the Inland Empire. However there is a lack of information required to associate increases in the



demand for manufacturing and distribution space with increases in export activity. Consequently, this study assumes that the future demand for industrial space in the Inland Empire attributed to the expansion of export activity will be the same as the last few years. Therefore, the growth in future industrial demand due to expanding export activities is most likely substantially understated.

- It is not known how successful the "bailout" of the U.S. financial system will be; or how long it will take commercial banks to lend to businesses and individuals in sufficient volume to stimulate growth in the national economy. Because of all this economic uncertainty I have generated three forecasts for the growth of warehousing, distribution and manufacturing space in the Inland Empire. Each forecast is based on different sets of assumptions regarding the growth in imports through the twin ports of Long Beach and Los Angeles and different short term economic forecasts for the U.S. and California. The three forecasts were labeled the High, Medium and Low Scenarios. The Medium Scenario is the most likely. The odds that the level of industrial growth would equal or exceed the High Scenario forecast or would equal or be less than the Low Scenario forecast is less than 7% for either case. Under the Medium Scenario the In-Bound TEU handled by the two ports in 2010 is projected to increase by 7% over the course of 2009. This would result in an import volume that would still be less than the number of TEU handled in 2006. From 2013 through 2020 the annual growth rate was assumed to be 5%. In the Case of the Medium Scenario the container volume in 2015 is equal to the volume in 2006 increased by only 2.8% per year compounded for the nine year period.
- Under the Medium Scenario the annual Net Absorption of warehousing and distribution as well as manufacturing space in the Inland Empire will likely range from 15 to 22 million Square Feet from 2010 to 2020. This level of absorption would be comparable to the absorption of industrial space in the Inland Empire from 2000 through 2007.
- The excess supply of existing industrial space in the Los Angeles Basin portion of the Inland Empire is expected to be absorbed by 2010. Construction will then start on a limited number of industrial buildings in that year. A disproportionate share of this new construction will be in the High Desert because some of the industrial firms in the High Desert are not dependent on import activity.
- John Husing, in a special report prepared for Ronald J. Barbieri of Lee & Associates, estimated that as of June of 2008 there were only 4,860 acres of industrial land in the Los Angeles Basin portion of the Inland Empire that could eventually be used for industrial development. This includes 1,280 acres of land that is expected to be rezoned from residential to industrial use. Under the Medium Scenario, half of this inventory of vacant land would be used for industrial development by 2013. This will cause land prices to rise sufficiently in the Los Angeles Basin to cause the High Desert to become the low cost solution for a number of firms beginning in 2013.



- The absorption of industrial space in the High Desert is expected to accelerate from 2.3 million Square Feet in 2013 to 16.7 million in 2020. From 2010 through 2020 a total of 76.7 million Square Feet of space will be absorbed under the Medium Scenario forecast.
- The population of the High Desert will likely increase by 12,600 in 2008 and 10,100 in 2009 before rebounding to 13,700 in 2010. The Medium Scenario indicates that the population of the High Desert is projected to return to a high and accelerating rate of growth beginning in 2011. The increased absorption of industrial space in the High Desert and the expected rebound in the construction and sale of Single Family homes is expected to increase the annual population growth of the High Desert in excess of 32,000 by 2015. In 2020, the population is projected to increase by 54,300. This high rate of growth reflects the virtual exhaustion of vacant industrial land in the Los Angeles Basin and the increasing scarcity of residential land in the same area. Under the Medium Scenario, the population of the High Desert will grow from 420,000 at the end of 2007 to 805,000 by 2020.
- The odds that either the Low Scenario or the High Scenario will occur are both very low. If the problems on Wall Street result in a four quarter recession and an anemic rate of economic growth through the remainder of 2009 then the wave of industrial development (2.5 million Square Feet or more of Net Absorption) in the High Desert could be deferred three years until 2016. This would also reduce the acceleration of population growth accordingly.
- In the short term the High Scenario could occur if the "bailout" of the financial institutions over stimulates the economy. In the longer term the High Scenario would only occur if containers could be mostly transported by trains, instead of trucks, from the ports of Long Beach and Los Angeles to the Inland Empire and the High Desert. This is the low cost solution that would enable the twin ports to remain cost competitive with alternative routes for shipping goods to the Midwest and the East Coast of the United States.
- It is important to note that not all of the demand for industrial space in the High Desert is related to imports coming through the two Southern California ports. Other factors include a less restrictive governing Air Quality Control District than those in the Los Angeles Basin, lower labor costs, and lower land costs. Another strategic advantage for warehousing and distribution firms is that they would be able to receive a substantial portion of their inventory from east of Barstow, California for distribution to Southern California or even the Far East. The cities of Victorville, Barstow and to some extent Hesperia will be able to provide rail served sites for companies that require it. Properties served by rail are becoming scarce in the Los Angeles Basin.
- The establishment of a BNSF Inter-modal facility at the Southern California Logistics Airport (SCLA) in the City of Victorville would significantly reduced the transportation costs associated with locating a warehousing and distribution facility in the High Desert. The ability to transport containers by train from the Southern California ports to the High Desert would greatly increase the rate of industrial absorption in the High Desert and the Coachella Valley. A rail solution would also enable the ports of Long Beach and Los Angeles to be



more cost competitive in the longer term. Transportation costs and the lack of potential work stoppages are paramount in the allocation of container traffic to alternative routes.



#### **Abridged Discussion of the Methodology and Forecasts**

This report forecasts growth in the demand for industrial space in the Inland Empire and the High Desert as well as the resultant employment and population growth for the High Desert. The results of the study are summarized below.

The three forecasts for the growth in the Net Absorption of warehousing, distribution and manufacturing space in the Inland Empire region of Southern California are based on three different sets of projections for the growth in imports through the twin ports of Long Beach and Los Angeles and three different short term economic forecasts for the United States. The forecasts are referred to as the "Low," "Medium" and "High" Scenarios. The Medium Scenario represents the most likely outcome. The Low Scenario reflects a fairly pessimistic set of assumptions both in the short term and long term. The High Scenario, which is based on the UCLA Anderson Forecast, is more optimistic; but not dramatically so. The analysis that support all three forecast scenarios are discussed below in an abridged manner and in more detail in the main body of the report, which is in the process of being completed.

The factors that have the greatest influence on the three sets of projections are the increase in the level of imports as measured by the number of In-Bound loaded containers (TEU) handled by the Southern California ports of Long Beach and Los Angeles. In the short run the number of containers handled will be determined by the length and duration of the current U.S. slowdown/recession and the time it takes for the U.S. housing market to recover. In the longer term the growth in the level of international trade and the relative competitiveness of the two Southern California ports compared to alternative routes for delivering containers to the Midwest and the East Coast of the United States become the dominant drivers of the forecasts.

Anyone using this report to evaluate real estate investments in the High Desert should review the entire report so as to have a better understanding of how changes in the economy and growth in imports will impact the results.

#### Economic and Demographic Forecasts for the U.S. and California

The short-term economic assumptions used for the Low Scenario were significantly worse than the most pessimistic of the 56 forecasts in the Wall Street Journal Survey of October 2008. It assumed four quarters of negative growth beginning in the third quarter of 2008. Even this scenario assumes that the Emergency Economic Stabilization Act of 2008, signed by the President on October 03, 2008, worked to some extent enabling financial institutions to resume lending to worthy borrowers by the third quarter of 2009. Under this set of economic assumptions consumers and companies would curtail spending until they become convinced the U.S. economy is not going to go into a depression. The cumulative decline was assumed to be 4.0%. The cumulative decline of the October 2008 WSJ consensus forecast was approximately 0.5%. The Medium Scenario presupposed two quarters of negative growth beginning in September 2008. In this case the actions taken by the Federal Government resolve the credit crunch by the first quarter of 2009 and consumers and businesses increase their spending in the



second quarter of 2009. The cumulative decline in GDP was assumed to be 2. The September 2008 UCLA forecast was used for the High Scenario. It called for two quarters of no growth, followed by two quarters of anemic economic expansion. This could prove to be the case if the banks start to lend fairly quickly and the \$1.2 Trillion to be injected into the U.S. financial system stimulates the U.S. economy enough to overcompensate for the lack of consumer and business spending. A discussion of economic forecasts is presented below in order to provide a framework for port activity and the future demand for Warehousing and Distribution facilities in the Inland Empire.

Most of the 56 economic forecasters surveyed by the Wall Street Journal in October 2008 were forecasting two quarters of negative growth in the GDP or a recession that would start sometime during the third quarter of 2008 and last through the first quarter of 2009. The consensus forecast called for a very slight decline in the third quarter of 2008 and the first quarter of 2009. The annualized rate of decline was 1.2% in the fourth quarter of 2008. Most economists were forecasting a two quarter recession, but they differed as to whether it had started in the third or fourth quarter of 2008. Only a few economists were calling for negative growth the GDP in the second quarter of 2009. A four-quarter recession was projected by only a few of the economists. In all cases the depth of the forecasted recession was shallow to moderate. Cumulative rates of decline ranged from a positive growth to -1.2%. On the opposite end of the spectrum there were 5 economic forecasting groups that did not project a single quarter in which the annualized increase in the GDP was negative.

For the 12 month period starting in October 2008, the average number of jobs projected to be lost each month by the 56 economists was 74,500. In the second quarter of 2008 the U.S. economy grew by 3.3% and the productivity level increased to 4.3%. The lack of hiring is the primary cause of the rise in productivity.

In September 2008 UCLA forecasted a 1.2% annualized increase in GDP for the 3<sup>rd</sup> Quarter of 2008, followed by two quarters of no growth through the first quarter of 2009. After the first quarter of 2009, UCLA projects moderate increases in GDP beginning with an annualized growth rate of 2.0% in the third quarter of 2009, followed by increases of 2.0% to 3.0% through the fourth quarter of 2010.

The financial crisis occurred just before the release of its latest UCLA economic forecast. Since then UCLA has lowered its projections of GDP and other economic variables for the October 2008 Wall Street Journal Survey of economic forecasters. In that survey UCLA projected GDP would decline slightly in the third quarter of 2008, before declining at an annualized rate of -1.5% in the last quarter of 2008 and 1% in the first quarter of 2009. In the Wall Street Journal Survey UCLA projected the GDP would increase at 2.1% annualized rate in the second quarter of 2009. The consensus forecast for the second quarter of 2009 was 1.1% growth in GDP. In its September 2008 forecast UCLA projected housing starts for the nation to decline to 813,000 by the fourth quarter of 2008 and remain below 1 million units until the fourth quarter of 2009. UCLA expects construction starts to gradually increase so that by the third quarter of 2010 housing starts for the U.S. will reach 1.25 million. This would be substantially below the levels



of 2004 through 2006 but approximately 400,000 more than the fourth quarter of 2008. Housing starts will escalate to an average of slightly more than 1,700,000 units after 2013. UCLA believes that housing starts will return to the level required to accommodate the population growth of the United States once the excess inventory of vacant space is absorbed.

UCLA believes the decline of the U.S. Dollar relative to the currencies of industrial countries has substantially run its course. In fact UCLA is forecasting that the value of the Dollar will remain flat relative to such countries through the first half of 2009. Thereafter the dollar is projected to appreciate. In the case of Developing Countries the Value of the dollar is expected to depreciate through 2010. This will encourage Developing Countries to import more goods and services from the United States. Hence, real exports are expected to increase between now and the end of 2010 at annualized rates ranging from a low of 6.5% to a high of 8.3%.

UCLA projects Imports to the U.S. will increase on a sustained basis beginning in the third quarter of 2009. The UCLA forecast calls for annualized increases of 6.6% in the fourth quarter of 2009 and 9.2% in the fourth quarter of 2010.

UCLA noted that California generates 13.1 % of U.S. economic activity. Shipments of final goods originating in California and going to foreign destinations account for 12.5% of total U.S. exports. These numbers do not include those components which were ultimately exported but finished elsewhere. While this is true about exports from other states as well, California as one of the largest manufacturers of computers and aerospace components is probably exporting much more than the 12.5% in the official numbers. Agriculture and forestry, both of which have been booming due to high commodity prices, comprise 1.4% of the California economy and comprise less than 1% of the overall U.S. economy.

The annualized percentage change in Personal Income for California is projected by UCLA to decline 5.4% in the third quarter of 2008 before rebounding to 2.1% in the second quarter of 2009. Real Personal Income is expected to continue to increase at that level through 2010. The state's employment in transportation, warehousing and utilities only increased at 0.2% annualized rate in the first quarter of 2008. This reflects the slowdown in imports caused by the slowdown of the U.S. economy. Much of the decline in imports relates to the contraction in residential construction and home furnishings caused by the problems in the housing market and the resulting credit crunch. UCLA forecasted a 2.2% in warehousing and distribution and utility employment beginning in the first quarter of 2009. Job formation in the Warehousing, Distribution and Utility sectors is projected to rebound to 3.4% in 2010. UCLA expects employment growth in this sector to fluctuate around 2.7% through 2020. The rebound in warehousing and distribution employment will be the result of additional demand for warehousing and distribution space in California.

Total Employment per the Household Survey, which includes independent contractors, self employed individuals and farm workers declined by 0.5% in the first three months of 2008. UCLA believes it will increase slightly (0.4% to 0.5%) in the second and third quarter of 2009. Employment growth is forecasted to improve in 2009. However, it will not be until 2010 until

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the growth rate equals or exceeds 1.3% or more. Total employment, as measured by the Household Survey, is expected to rebound to 1.6% in 2011 and 2012 and remain relatively high for most of that decade. Non Farm employment reached 15,167,000 at the end of the first quarter of 2008. It is projected to decline slightly in the second half of 2008 before continuing to expand. For the next five years after 2010, California's Non-Farm employment is forecasted to increase between 200,000 and 297,000 per year. UCLA is projecting a three year surge in Payroll employment beginning in 2011. UCLA expects the unemployment rate for California, which was 7.3% in July 2008, to retreat to 5.5% in 2011 and to fluctuate around that level through 2020.

Construction in California declined at an annual rate of 10.1% in the first six months of 2008. UCLA projects construction will continue to decline, but at a decreasing rate throughout 2008. However, by the first quarter of 2009 UCLA expects the growth in construction employment will be slightly positive. By 2010 total construction employment will be expanding at a rate greater than 2%. UCLA expects construction employment to catch up beginning in 2010. They are forecasting a 2.4% increase in 2010 and 2.7% increase the following year. In the first quarter of 2008 residential building permits were being pulled at a rate that would allow the construction of only 67,200 units per year. This is approximately 1/3 of the long term average. UCLA projects that the construction level will remain severely depressed through 2010. This is consistent with the fact that residential home values for Single Family Residential units in most areas of California are substantially below replacement costs. In fact, a substantial portion of the permitted units are for multi-family residential units in urban areas. Residential building permits are projected to go from a low of 68,100 units to a high of 103,800 by 2010. A population increase of close to 600,000 per year, the historical long-term growth rate for the state of California, would necessitate that at least 200,000 units be constructed to provide adequate housing. This assumes an average of three individuals per household.

In the second Quarter of 2008, Trade Employment declined by -0.7% on an annualized basis. UCLA expects trade to decline in the second quarter of this year before rebounding to around 0.6% in the second half of 2009. Job formation in the Trade sector is projected to accelerate from 1.2% in 2010 to 2.4% in 2011.

At the end of the first quarter of 2008, California had a population of 38,031,000. The State's population, which is estimated to be 39,030,000 at the end of 2010, is projected to reach 44,667,000 by 2020. Because of the problems facing the state economy the population is projected to grow at an annual rate of between 415,000 and 424,000 per year or 1.1% per year until the 2<sup>nd</sup> quarter of 2010. This is substantially below historical levels. It reflects a Natural increase of approximately 310,000 per year and a Net Immigration of approximately 100,000 per year or less. The annual increase in population is expected to ramp up from 416,000 in 2009 to approximately 600,000 in 2015. The population growth of 600,000 is consistent with the historical long term growth of the state. Starting in 2014 the population growth rate for California is projected to ramp up to 292,000 per year in 2018. Such an increase in Net Immigration is predicated on the anticipated higher rate of economic growth for California.



#### Historical Warehousing and Distribution Activity in Southern California

The industrial market in Southern California is the largest in the United States. At the end of 2007 there were 1.85 billion Square Feet of Warehousing and Distribution space in Southern California. Net Absorption in 2007 was 22.4 million Square Feet. The vacancy rate at year end was 4.2%.

WAREHOUSING AND MANUFACTURING SPACE IN SOUTHERN CALIFORNIA 2007						
	At Year End	At Year End	At Year End	Net		
	Existing	Total	Vacancy	Absorption		
County	Inventory	Vacancy	Percent	in 2007		
Los Angeles	1,010,307,692	29,697,812	2.9%	(3,407,490)		
Orange	239,102,237	9,262,753	3.9%	73,544		
Inland Empire	435,523,041	28,738,063	6.6%	24,706,385		
San Diego	150,116,377	9,374,404	6.2%	1,074,315		
Southern California	1,835,049,347	77,073,032	4.2%	22,446,754		
CoStar Industrial Reports Final 2007						

There is a tendency for firms to relocate from Los Angeles County to the Inland Empire because land is available to construct buildings. The 3.4 million Square Feet of negative Net Absorption in Los Angeles County in 2007 reflects this trend.

As of the end of 2007 there were 435 million Square Feet of Warehousing and Manufacturing space in the Inland Empire. Approximately 407 million Square Feet of that space was occupied. In addition there was 15 million Square Feet of R&D or flex space in the Inland Empire. Over the five years ending in 2007 an average of 18.8 million Square Feet of warehousing and Distribution or Manufacturing space was absorbed in the Inland Empire. From 1998 through 2006 a total of 144 million Square Feet of space was absorbed. This represents an average of 15.9 million Square Feet per year. Approximately 83 percent of the absorption was for warehousing and distribution. The balance is manufacturing which has increased at an average of two million Square Feet per year.





During 2007 the Inland Empire absorbed on a net basis approximately 24.7 million Square Feet of non-flex industrial space. This is 55% greater than the average annual absorption for the previous nine-year period.

#### Growth in Imports and Exports through Two Southern California Ports

The growth in warehousing and distribution space in the Inland Empire is driven by the growth in imports and exports that are handled by the ports of Los Angeles and Long Beach. Between 1998 and 2007 the California ports of Los Angeles and Long Beach increased the number of loaded In-Bound containers handled by 5.51 million TEU for an average annual increase of 551,000 loaded In-Bound TEU over the 10 year period.

For the five year period ending in 2007, the increase in the number of loaded In-Bound TEU handled each year through the two Southern California ports averaged 602,000. The largest annual increase was 901,000 TEU in 2006. The small increase in container activity in 2001 was attributed to the recession in the U. S. The 13,000 decline in the loaded In-Bound TEU handled by the Ports of Long Beach and Los Angeles in 2007 compared to 2006 reflects the start of a decline in imports attributed to the general slowdown in economic growth in the U.S. and specifically to the problems in the housing industry and the decline in furniture imports. Total TEU, which include empty containers, increased by 1,566,000 TEU in 2006 over 2005, but declined by 92,000 TEU in 2007 compared to 2006. The number of empty TEU handled decreased by 547,000 while the number of loaded containers exported increased by 454,000. The forecasts for the demand for warehousing and distribution space in the Inland Empire are based on the loaded In-Bound TEU handled by the two Southern California ports. While the number of Loaded In-Bound TEU handled by the two Southern California ports. While the number of loaded In-Bound TEU handled by the two Southern California ports. While the number of Loaded In-Bound containers in 2007 was approximately the same as the prior year, the level of imports was up approximately 6% in the first six months compared to 2006; but down an estimated 7% in the second half of 2007 compared to the same period in the prior year.





The decline of 762,000 TEU in 2008 is predicated on the results of the first 7 months of 2007 extrapolated to the end of the year using seasonal adjustments. This has been attributed to the slowdown in the U.S. economy and the sharp decline in residential construction and the purchase of home furnishings due the problems in housing market. The number of Loaded Out-Bound containers is projected to increase by 521,000 TEU over 2007. Again this is based on the shipping volumes of the first 7 months of 2008.

During the 11 year period ending in 2006 the year-to-year percentage increase in Loaded In-Bound TEU ranged from 3.1% to 16.6%. There was little change in 2007 but it is estimated that the number of Loaded In-Bound containers will decline by 9.4% in 2008.





The number of Loaded Out-Bound containers began to accelerate in 2005 as the Dollar started to depreciate. Exports increased by 17.2% in 2007 and 16.4 % in 2008. Exports are expected to continue to increase at a relatively high rate over the next few years. The substantial increase in exports will add to the demand for industrial space in the Inland Empire. However there is a lack of information that could be used to associate increases in the demand for manufacturing and distribution space with increases in export activity. Consequently, this study assumes that the future demand for industrial space in the Inland Empire attributed to the expansion of export activity will be the same as the last few years. Hence the growth in future industrial demand due to export activities is most likely substantially understated.

#### Future Absorption of Warehousing and Distribution Space in the Inland Empire

From 1998 through 2007 an average 16.9 million Square Feet of industrial space was added each year to accommodate an average annual increase of 484,000 TEU of loaded In-Bound container traffic. The addition of each loaded TEU was associated with an additional 34.73 feet of Warehouse space in the Inland Empire. If the ratio of containers involved in trans-loading to containers that go directly on to trains and leave the region remains approximately the same as the last 10 years, then the addition of 484,000 loaded In-Bound TEU handled per year would require an additional 16.8 million Square Feet of warehousing and distribution space in the Inland Empire.



TABLE III-2 COMPARSION OF INCREASE IN LOADED IN-BOUND CONTAINERS HANDLED AT LOS ANGELES PORTS					
TO NET ABSORPTION OF WAREHOUSE SPACE IN INLAND EMPIRE					
	Increase in the No. of	Net Absorption			
	Loaded In-Bound	of W arehouse	Ratio of		
	Containers	Space in	Net Absorption		
Year	TEU's (in Thousands)	Thousands of Sq. Ft.	to TEU's		
1998	543	13,583	25.0		
1999	471	14,952	31.7		
2000	666	18,081	27.1		
2001	155	14,758	95.2		
2002	581	12,722	21.9		
2003	539	13,208	24.5		
2004	704	19,787	28.1		
2005	299	17,219	57.6		
2006	901	19,279	21.4		
2007	(13)	24,706	(1,900.5)		
Total	4,846	168,295			
Average In	crease in 1,000 SF of Net	34.73			

The forecast in this report contains three scenarios: Low, Medium and High. The Medium Scenario projects a loaded In-Bound container volume of 13.3 million TEU in 2020. This is 164 percent of the loaded container volume in 2007. It is also equivalent to a Total Container volume, which includes empty containers of 26.8 million TEU. This is less than the lower end of the range of shipping activity forecasted by the representatives of the ports and IMS Worldwide, Inc., a recognized expert in this area Such forecasts range from 29 million to 45 million containers by the year 2020. The following graph depicts the projected annual increase in Loaded and Total containers handled by the twin ports from 2009 through 2020. In the Medium Scenario only a 2% increase over 2008 is projected for 2009 because of the assumed recession in the national economy.





In 2008 the loaded In-Bound volume was 9.6% below that of 2006. By 2010, the increase in loaded In-Bound TEU handled by the two ports is projected to be 7%, which results in an import volume that would still be less than the number of TEU handled in 2006. The forecasted In-Bound container volume for the Medium Scenario in 2015 is equal to the volume in 2006 increased by only 2.8% per year compounded for the nine year period. The Medium Scenario assumed a 5% increase in loaded In-Bound containers after the three year surge beginning in 2010 to compensate for the sharp decline in imports in 2007 and 2008. From 2013 through 2020 the annual growth rate was assumed to be 5%.

In the case of the Low Scenario there was a 1% decline in In-Bound Loaded TEU followed by a smaller surge for three years before stabilizing at a 4% yearly rate of growth until 2020. This reflects a 4-quarter recession and a slower rate of growth in 2010 and beyond. The slower growth rate from 2015 through 2020 could be caused by a slower increase in global trade or the fact that the two ports were not making progress towards an all rail solution to move the containers to an inland port; therefore, becoming less competitive as a shipping route. Under the High Scenario the stabilized growth rate was projected to be 7% after the initial 3 year surge beginning in 2010. This higher growth could be caused by a significant rebound in the level of imports to the U.S. or because the two Los Angeles ports established an all rail solution to an Inland Port and negotiated agreements with the unions to avoid work stoppages. This occurrence





The Low Scenario generated a decline of 74,000 loaded In-Bound TEU in 2009 before increasing by 408,000 TEU in 2010. At the end of the decade the increase in inbound containers was 70% of the growth of the Medium Scenario. The projected growth in loaded In-Bound container traffic in 2009 under the High Scenario was 294,000 TEU. The projected increase in 2010 was 749,000, which grew to 1,109,000 TEU in 2020. This represents a 43% increase over the Medium Scenario in 2010 and a 75% increase in 2020.





In the short-term the number of loaded In-Bound TEU will mostly be a function of the economic growth rate for the United States. During the intermediate-term the rate that Imports and Exports increase will also depend on the growth in global trade. For the long-term, the competitiveness of the ports of Long Beach and Los Angeles will emerge as the dominant factor. The map below illustrates the new shipping routes for imports into the United States.



Over the next decade shippers will have more alternatives routes for shipping containers into the United States. Two additional ports are planned for Mexico. At least one other port is planned for western Canada. The San Francisco Bay will likely be dredged to allow larger container ships to dock at the port of Oakland. Construction is under way to increase the capacity of the Panama Canal to accommodate larger ships and more ships. This will allow a greater number of ships to go from China to Texas or ports on the East Coast. Countries in the Far East will also make greater use of the Suez Canal to haul goods through the Mediterranean Sea and across the Atlantic Ocean to the Eastern Seaboard of the U.S.

In the future the choice of routes will be based on three factors: (1) the minimization of Transportation Costs, (2) the lowest In Transit Time and (3) minimizing the risk of work stoppages by using multiple routes.

In order for the Ports of Long Beach and Los Angeles to maintain market share they will have to develop an all-train solution for moving containers to and from Inland Ports. One train with two



engineers can transport the same number of containers as 220 trucks, with 220 truck drivers. One train uses less fuel than 220 trucks, because, when in traffic, trucks start and stop. An all-train solution to an Inland Port could reduce the shipping time by three days. Railroads have far less union work stoppages than trucking firms.

If the Southern California ports continue to transport goods to warehouses in the region only by truck, they will become less competitive. This will cause the rate of growth in Imports through the two ports to diminish; possibly becoming negative after 2020. It would stifle the expansion of Warehousing & Distribution operations in the Inland Empire. This would also curtail the economic growth in the Region. The expansion of Warehousing & Distribution has accounted for 1/3 of the Inland Empire's growth in employment.

The Low Scenario assumes that containers cannot be transported from the ports of Long Beach and Los Angeles by rail to the High Desert or any other Inland Port before the end of the next decade. The Medium Scenario is predicated on a rail solution being committed to by 2014 and operational by 2020. The High Scenario assumes containers can get to the High Desert by 2016.

The projected absorption of warehousing, distribution and manufacturing space in the Inland Empire from 2008 through 2020 was based on the Medium Scenario for shipping activity through the ports of Long Beach and Los Angeles and a two quarter recession that began in the 4<sup>th</sup> quarter of 2008 after little growth in the third quarter of 2008. Under this scenario the annual Net Absorption of Warehousing and Distribution space in the Inland Empire as determined by CoStar would be a negative 2.0 million Square Feet in 2008. Thereafter the Net Absorption would ramp up from 5.1 million Square Feet in 2009 to 22 million in 2020.



Under the Low Scenario Net Absorption is projected to decline by 3 million Square Feet in 2008 and another 2.57 million in 2009 before rebounding to over 14.1 million Square Feet in 2010.



The projected absorption for the Low Scenario ranges from 11.7 to 15.4 million Square Feet between 2011 and 2020. Even in the case of the High Scenario Net Absorption



of industrial space in the Inland Empire is a negative 1 million Square Feet in 2008. But it quickly rebounds to 10.2 million in 2009, and continues on its way to 26.0 million in 2010. While this may seem high given the problems associated with the credit crunch it is only 1.5 million Square Feet greater than the absorption of industrial space in 2007, which was not a good year for the economy. In 2020 the projected Net Absorption is 38.5 million. For this to occur, the twin ports of Long Beach and Los Angeles have to demonstrate that they will continue to be the low cost route for much of the United States devoid of union lead work stoppages. To continue to be the low cost supply route the two ports must be committed to a rail solution to move many of the containers to one or more Inland Ports.

# The Allocation of Industrial Absorption to the High Desert, Coachella Valley and the Los Angeles Basin

The High Desert, which includes Barstow, competes with three industrial sub-markets in the Los Angeles Basin portion of the Inland Empire. The sub-markets are known as (1) The West End Market, (2) The East Valley Market, and (3) March JPA Market. Eventually, the Beaumont/Banning area and the Coachella Valley will also compete with the High Desert for industrial users.







On behalf of our client, I commissioned Dr. John Husing, a regional economist, to do an in-depth study of the industrial market in the Inland Empire with the goal of estimating when the development of warehousing & distribution facilities would migrate to the High Desert in volume. As part of that study Dr. Husing determined:

- a. There are approximately 4,860 acres of vacant land in the Los Angeles Basin portion of the Inland Empire that could be developed with warehousing & distribution space. He estimated that only 1,280 acres, which is included in the 4,860 acres, not "thousands" of acres would be rezoned from residential to industrial uses.
- b. Industrial activity in the Inland Empire is expected to return to more normal levels by 2010. However, the High Desert is not expected to begin capturing a significant portion of the industrial absorption of the Inland Empire until around 2013 when the availability of vacant industrial land in the Los Angeles Basin is projected to be approximately half current levels.
- c. Dr. Husing netted the incremental transportation costs associated with being in the High Desert with the expected labor cost and rent savings due to lower land costs in order to arrive at a "Combined Difference." He concluded that if there were an inter-modal facility in Victorville, the labor cost and land costs savings in the High Desert would not completely offset the extra drayage fees compared to the San Bernardino-Redlands area. However, when the High Desert is compared to the March JPA area, the total cost differential narrows significantly. Dr. Husing estimated the cost differential as of June 2008 to range between \$0.035 and \$0.055 per square-foot of building floor area per month, depending on the size of the building.

Obviously costs and benefits of locating a warehousing & distribution facility in the High Desert will vary from company to company. Nevertheless, Dr. Husing' study presents reasons why more and more companies will find it economically advantageous to locate in the High Desert as we approach the year 2013. Dr. Husing' Study is an exhibit to this report.

The development of warehousing and distribution as well as manufacturing facilities in the High Desert will accelerate once the BNSF inter-modal facility in the City of Victorville becomes operational and the availability of industrial land in the Los Angeles Basin becomes more limited. As the availability of industrial land declines industrial land prices in the Los Angeles Basin will increase to levels that will make the High Desert the low cost logistic solution in Southern California for an increasing number of warehousing and distribution operations. The tipping point is expected to occur in 2012, which is the year the BNSF inter-modal facility is assumed to be completed. The inter-modal facility would reduce the cost to ship containers to destinations east of Barstow, California.

Also, as the supply of industrial land diminishes in the Los Angeles Basin, large box users and tenants will have to locate in the High Desert or Coachella Valley, because they will not be able to find large enough sites that could accommodate the million plus square foot facilities. As of the end of 2007 real estate agents in the eastern and western portions of the Inland Empire claimed there were at most four possible sites that could accommodate a million square foot user.



The 1.5 million square foot users would have to locate in the High Desert or possibly the Coachella Valley. As more land is absorbed in the Los Angeles Basin the largest size tenant that could be accommodated in a single building will diminish.

Most warehousing and distribution firms would prefer to locate in the High Desert rather than the Coachella Valley for two reasons. First the total transportation costs associated with locating in the Coachella Valley would be higher than locating in the High Desert. Second, BNSF is planning an inter-modal facility in Victorville, while Union Pacific has not announced any plans to establish an inter-modal facility along the I-10 freeway in Coachella Valley. John Husing' study concluded that the existence of an inter-modal facility would significantly reduce transportation cost.

In the case of the Medium Scenario the 4,860 acres of industrial land that were available at the end of June 2008 would be reduced to 2,610 acres in 2013 before declining to 298 acres in 2020.



Under the Medium Scenario no land is used for vertical development in the Inland Empire until 2010, when the 116 acres are taken for construction. This is because the projected Net Absorption of industrial space would first be accommodated by the 32.4 million Square Feet of excess vacant space in the Inland Empire. It is only after the vacancy level declines to 5% that new construction is expected to handle the additional demand. In the case of the Low Scenario industrial land would not be used for new construction in 2012. The High Scenario calls for industrial land first being committed for new construction in 2010. In the case of the High Scenario the Los Angeles Basin is projected to have less than 1,000 acres of vacant land in 2014. This would occur in 2017 under the Medium Scenario and for the Low Scenario the inventory of vacant land would fall below 1,000 acres in 2019.

The graph below depicts the percentage share of the net absorption of warehousing and distribution space projected to be captured by the Los Angeles Basin portion of the Inland



Empire, the High Desert and the Coachella Valley. These capture rates are predicated on the Medium Growth Scenario for imports and exports and the BNSF Inter-modal facility in Victorville becoming operational by 2012.



These capture rates account for the 880,000 Square-Foot, Wal-Mart Grocery Warehouse facility in Barstow that will be operational in 2009. The High Desert is projected to absorb industrial space before the Coachella Valley. After the Los Angeles Basin runs out of industrial land 80% of the increased demand for industrial space will migrate to the High Desert. The remaining 20% will locate in the Coachella Valley. In 2010, under the Medium Scenario 95% of the Net Absorption will occur in the Los Angeles Basin portion of the Inland Empire. The remaining 5% will locate in the High Desert. By 2013, the High Desert will capture 15% while the Los Angeles Basin claims 84%. The Coachella Valley accounts for the remaining 1%. By 2016, an estimated 40% of the increase in demand for industrial space will be in the High Desert. The Coachella Valley is forecasted to capture 4% leaving 56% for the Los Angeles Basin.

In the High Scenario forecast the High Desert captures more of the absorption sooner because the accelerated increase in industrial demand reduces the level of excess vacancy and the level of industrial land sooner. The opposite is true for the Low Scenario.





In 2010 the High Desert would capture 25% of the Inland Empire's industrial absorption under the High Scenario, and 55% of the increase in industrial demand by 2015. Under the Low Scenario only 9% of the Net Absorption of industrial space would be in the High Desert in 2013. The High Desert is not projected to capture 22% of the increase in demand until 2017.

Approximately 3.17 million Square Feet of the large box industrial space was absorbed in the High Desert over the six year period ending in 2007. This corresponds to an average annual absorption of 500,000 Square Feet per year. Large warehousing and distribution firms





currently operating in the High Desert include: Wal-Mart, Goodyear, ConAgra Foods, General Electric, M&M's-Mars, Pratt & Whitney, Nutro Pet Foods, Rubbermaid, and Northwest Pipe Company. 912,000 Square Feet are expected to be absorbed in 2010 reflecting a capture rate of 5 percent. By 2013 the net absorption is expected to reach 2.3 million Square Feet and accelerate to 13.0 million by the year 2018, when the High Desert is projected to capture 72% of the Net Absorption of the industrial space in the Inland Empire.

The Low Scenario forecast results reveal substantially less absorption of industrial space in the High Desert than the Medium Scenario. This is the result of lower projected absorption of industrial space in the Inland Empire due to the lower growth of imports and reduced capture rates. Under the Low Scenario it would take until 2016 to achieve the same levels of absorption in the High Desert that was projected for 2013 in the Medium Scenario. The Low Scenario only calls for 6.6 million Square Feet of industrial space being absorbed in 2020. This is substantially less than the 16.7 million Square Feet projected for the Medium Scenario.



The High Scenario forecasts a substantially higher rate of industrial absorption in the High Desert compared to the Medium Scenario. Over 8 million Square Feet would be absorbed in 2013 under this scenario. This would be approximately 3.5 times the level in the Medium Scenario. An estimated 19.7 million Square Feet would be absorbed in 2016 and 30.8 million in 2020. While these numbers seem high given the current economic environment they are based on a forecast for shipping activity and annual rates of increase that are materially below the lower forecasts that were generally accepted in the first half of 2007.

In order to deliver industrial buildings that can be absorbed by tenants, it will be necessary to take down land for construction of buildings a minimum of one year before delivery. The following table depicts the annual absorption of land required to support the absorption of industrial space. In 2008 only 41 acres of raw land were used to construct 880,000 Square Feet



of industrial space that will be delivered in 2009 to house the Wal-Mart cold storage facility in Barstow, California. By 2012 an estimated 120 acres would be used for construction.



The absorption of vacant industrial land is projected to be 534 acres by 2016 and 770 acres in 2018 for the Medium Scenario. This compares to the 850 to 1000 acres that have been used annually for construction over the last 5 years in the Los Angeles Basin. The use of industrial land for construction would be substantially less for the Low Scenario and substantially greater for the High Scenario.



The number of industrial acres sold to developers and users is usually substantially greater than the acreage actually absorbed. Developers and users often purchase more land than what is required to construct the initial buildings. Also, land investors take positions in land in order to profit from the expected increases in land values as the rate of development accelerates. As of December 31, 2007, AMB has purchased 468 acres of industrial land in the City of Adelanto. The Stirling Company has 340 acres ready for vertical development at SCLA. First Industrial Realty Trust has acquired approximately 600 acres in the Town of Apple Valley and has another 600 acres in escrow. Watson Land Company purchased 314 acres and is negotiating to tie up an additional 140 acres in the same city. Prologis is in escrow to purchase approximately 500 acres of land in the Northern Triangle area of the City of Victorville. All of the land holdings of the large industrial developers are in the northern part of the Victor Valley area, near the existing I-15 freeway and the future Cross-Town (E220) freeway. This is where most of the industrial development will occur in the Victor Valley area of the High Desert.



### Industrial Holdings - High Desert



IDS will be developing a 900-acre industrial park in Barstow, California. This project is adjacent to the BNSF main line and will be rail served. The IDS industrial park is where the 880,000 square foot Wal-Mart grocery facility will be built, and it is expected to attract rail users and other firms with special distribution requirements.



## Industrial Holdings – Barstow



#### Historical and Projected Employment Growth in Warehousing & Distribution

For the seven years prior to 2008 the growth in employment attributed to warehousing and distribution activities in the High Desert likely averaged less than 600 jobs per year. Under the Medium Scenario the growth in warehousing and distribution activities is expected to add 1,914 Base Employment jobs to the High Desert in 2015. This is predicated on 90% of the industrial space being added would be used for warehousing and distribution operations and the remaining 10% would house manufacturing operations. On average, warehousing and distribution operations require 0.435 employees per 1,000 Square Feet of building floor area, while manufacturing typically creates 1 job per 1,000 Square Feet. The weighted average is equivalent to 0.49 employees per 1,000 Square Feet of the absorption of industrial space in the High Desert in thousands of Square Feet and the number of employees per square foot. For the Medium Scenario the 4,660 thousands Square Feet of industrial space that became operational in 2015 will, when operating at capacity, create 2,289 jobs.



It was assumed that 60% of the jobs at capacity would be added in the year the building was first occupied or absorbed. The following year an additional 20% would be hired. By the third year an additional 15% would be employed; and in the fourth year the remaining 5% would be hired to reach capacity. This hiring pattern is reflected in the lagged employment figures. Thus, in 2015 the number of employees forecasted to be added to payroll was 1,914. All such jobs represent base employment.

The projected growth in Base, Secondary and Total Employment due to the absorption of warehousing, distribution and manufacturing space in the High Desert is summarized in the following graph. The Base Employment corresponds to the lagged Base Employment

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determined for the Medium Scenario in the previous graph. Secondary Employment was estimated based on a 1 to 1 ratio between Base and Secondary Employment for the High Desert. The ratio would be higher for the entire Inland Empire, because some of the Secondary Employment created by Base Employment in the High Desert would actually be located in the Los Angeles Basin. The growth in Secondary Employment also lags the increase in Base Employment. The addition of 100 jobs in warehousing would add 25 jobs in the year the increase in Base Employment occurred. Thirty jobs would be created in the first and second year after the increase in Base Employment and the remaining 15 jobs in Secondary Employment would not be created until the third year after the hiring of the Base Employment.



The Base Employment jobs created in the years 2012 through 2015 would result in an increase of 1,288 Secondary Jobs in 2015. Under the Medium Scenario, increases in Base and Secondary Employment in warehousing, distribution and manufacturing would add 3,202 jobs to the High Desert in 2015. Under this same scenario an estimated 13,826 jobs would be created in the High Desert in 2020. Of that total 7,631 would be in Base Employment and 6,195 would be Secondary Employment.

A similar analysis was done for the Low and High Scenarios. The graph below depicts the total increase in employment due to the absorption of warehousing, distribution and manufacturing space in the High Desert for all three scenarios. A total of 1,389 jobs would be created in 2015 under the Low Scenario compared to 3,202 jobs in Medium Scenario. This substantially lower rate of employment growth is due to the fact that under the Low Scenario it will require another three or four years to absorb the excess vacant industrial space and half the vacant raw industrial land in the Los Angeles Basin, thereby deferring industrial development in the High Desert. For the same year under the High Scenario 10,762 jobs were added because of the absorption of



industrial space. In 2020 the Low Scenario added 4,906 jobs compared to 13,826 for the Medium Scenario and 21,120 for the High Scenario.



Growth in the High Desert over the last 20 years has been attributed primarily to the increase in the number of individuals that commute through the Cajon Pass to the Los Angeles Basin for employment. The estimated 60,000 individuals currently traveling to the Los Angeles Basin for work generate Secondary Employment in the High Desert in a manner similar to the Base Employment created by warehousing and distribution operations in the area. It is anticipated that the number of commuters will continue to increase; thereby, fueling the population growth in the High Desert. The increase in 2008 through 2009 will probably be substantially less than during the period 2004 through 2006. However, the growth in secondary employment, particularly in the retail, service and government sectors may partially compensate for the slowdown in the increase in commuters to the Los Angeles Basin. By 2012 the increase in the number of commuters from the High Desert is expected to diminish as a an increasing percentage of the warehousing, distribution and manufacturing jobs are created in the High Desert rather than the Los Angeles Basin.



#### Population

The High Desert is one of the fastest growing areas of the Inland Empire, which itself is the fastest growing region in Southern California and the entire state. The Inland Empire, comprised of Riverside and San Bernardino Counties, had a combined population of 4,171,780 as of January 1, 2008. Over the last 7 years, the population of the Inland Empire increased by an average of 117,487 per year. Over the next five years, the growth rate is expected to continue at the same level with some cyclical variations due to fluctuations in the rate of economic growth. The population increase in 2008 and 2009 are expected to be less than the historical average due to the decline in employment and lack of employment growth. Nevertheless, even in a recession, the growth in population of the Inland Empire would likely increase by more than 80,000 per year.

The population of the High Desert, which includes the cities of Victorville, Hesperia, Apple Valley, Adelanto and Barstow, as well as the surrounding unincorporated areas, was estimated to be 416,000 at the end of 2007. The population increased by 18,000 in 2007. This was less than the estimated population growth of 27,600 for 2006 and the population growth of 24,500 in 2005. This represents a population growth rate of 4.3% in 2007, down from 7.4% in 2006. Between the U. S. Census in 2000 and the end of 2004, the population increased by an estimated 44,550, which is a 3% annual rate of increase. The High Desert did not experience a significant growth in commuters to the Los Angeles Basin until 2003 when the price differential between homes in the Los Angeles Basin and the High Desert increased to a level that compensated for the added cost and time to commute to the Los Angeles Basin.

While a portion of this population growth was supported by the establishment of warehousing, distribution and manufacturing facilities in the High Desert as well as an increase in aerospace employment at the Southern California Logistics Airport (SCLA) in the City of Victorville, most of this growth was due to the increase in the number of individuals that purchased homes in the High Desert and commuted to work in the Los Angeles Basin. It is estimated that 60,000 individuals commute to jobs in the Los Angeles Basin as of the summer of 2008. These commuters represent the equivalent of more than 80% of the Base Employment of the High Desert.

The population of the High Desert is expected to grow at a substantially slower rate in 2008 through 2009. This is due to the downward adjustments occurring in the residential housing markets in the Inland Empire and the resulting decrease in construction, real estate and finance employment. Under the Medium Scenario the population of the High Desert is forecasted to





Increase by only 12,600 in 2008 and 10,100 in 2009 before rebounding to 13,700 in 2010. The population of the High Desert is projected to return to a high and accelerating rate of growth beginning in 2011. The increased absorption of industrial space in the High Desert and the expected rebound in the construction and sale of Single Family homes is expected to increase the annual population growth of the High Desert in excess of 32,000 by 2015. In 2020, the population of the High Desert under the Medium Scenario is projected to increase by 54,300. This high rate of growth reflects the virtual exhaustion of vacant industrial land in the Los Angeles Basin and the increasing scarcity of residential land in the same area.

There are two components to the population forecast. One component is the increase in population due to the absorption of industrial space in the High Desert and the resultant increase in employment. In this case it was assumed that an increase of one employee in the High Desert would add 2.63 individuals to the population. This reflects the weighted average of population to employment in both the High Desert and San Bernardino County. Historically, this component has only accounted for a small portion of the population growth in the High Desert. However for the Medium Scenario it will account for more than 50% of the increase in population in the High Desert after 2017.

The second component is the increase in population in the High Desert due to the increase of commuters to the Los Angeles Basin and the number of retirees in the High Desert. In the past this has accounted for most of the population growth. This component of population growth is expected to decline from 26,100 in 2006 to a low of 9,000 in 2009. Thereafter, under the Medium Scenario, it is expected to rebound to a high of 24,000 in 2014 and 2015 before decreasing to 18,000 by 2018. The reduction in the level of population growth in 2008 and 2009 is the result of the loss of construction, real estate and finance jobs in the High Desert and the rest of the Inland Empire due to the problems in the housing market. The projected recession for the second half of 2008 and the slow rate of growth in 2009 will also contribute to the slow



population growth. As the economy expands in 2010 through 2012 the rate of population growth for this component will increase. After 2015 this component of population growth will continue to increase but at a diminishing rate, because a greater percentage of the growth in Base Employment in the Inland Empire will occur in the High Desert rather than the Los Angeles Basin. This will reduce the growth in commuters.

Under the Low Scenario population growth declines from 27,700 in 2006 to only 6,100 in 2009 before rebounding in 2010. This reflects the projected lack of job formation in 2008 and 2009. Net migration could very well be negative in 2009 if there is a four quarter recession. Annual Population growth in the High Desert would not exceed 20,000 until 2014. It is not until 2016 that the increase in population approaches 25,000, which was the average annual population increase from 2005 through 2007.



In the case of the High Scenario, the population increase in 2009 is forecasted to be just over 13,000. The economic slowdown in the second half of 2008 and the first half of 2009 would result in some loss of jobs, but not ecough to cause negative Net Migration. The High Scenario calls for a population growth of 19,800 in 2010 and 39,200 in 2012. The increases in population continue to accelerate reaching 90,200 in 2020.

Under the Medium Scenario the population of the High Desert is projected to grow from 402,000 as of the end of 2006 to 805,000 by the end of 2020. In the process the High Desert will transform from a lower and moderate income bedroom community to a more integrated middle income community with a significantly larger percentage of higher income households.





Under the Low Scenario the population would reach 669,000 by 2020 which is 17% less than the Medioum Scenario. Under the High Scenario the population would grow to 1,048,000 by the end of the next decade. This would reflect a population growth rate of 7.3% from 2008 through 2020. The High Scenario presupposes a substantial increase in the number of containers handled by the ports. This would only occur if it were possible to haul containers from the two ports to the High Desert via rail before 2020.

