Cerro Coso Community College

Educational Master Plan 2011-2016

Selected Components

INTRODUCTION

Introduction

The four chapters contained in this report provide only portions of a completed Educational Master Plan. The outline for the typical Educational Master Plan, ten chapters, that Cambridge West Partnership, LLC would normally produce, is found in the appendix. These four chapters were those the Kern District asked the Partnership to create as an aide to the college efforts to update their Educational Master Plans.

The four chapters address an external scan of the College environment, opportunities for the future direction of the instructional program, projections of fall term unduplicated student headcount to 2025, and projections of space needs for both the instructional program and support services of the College out to 2025.

The External Environmental Scan for Cerro Coso Community College targets those conditions at the national, state, regional, and local service area levels that have the greatest potential for impacting the College. Some of these impacts will be positive; some will be negative. What is certain is that they will have a direct bearing on the College and the provision of education.

There is no magic crystal ball to predict all of the possible events that will occur in the future. We only have to look back in time a few years to be reminded of two such events that came without warning yet had a great impact on the country and, as a result, the College: The terrorist attacks that took place on September 11, 2011 and, more recently, the Great Recession of 2007. Although neither of these events were anticipated, both have changed the way we live and how we will go forward in the future.

For this Educational Master Plan, the elements selected in the External Environmental Scan were limited to those deemed to be the most relevant to the College. They include the following:

- The College in Context to its Environment: An overview of physical locale of the College in terms of its "sense of place".
- Economic Conditions: An overview of the nation, state and regional economic conditions and the possible implications for the College. The economic vitality of the country, state and region will have the single greatest impact on the College in the future.
- Conditions for Higher Education: National and state mandates and polices that will affect community colleges; the implication for Cerro Coso Community College.
- Key Demographic Considerations: An overview of demographic data for the Cerro Coso Community College Territories, key foundation and planning element for the future.
- Key Cities and Effective Service Areas: Cities that provide the current and future student base for the College. The area served by the Cerro Coso campuses. An overview of demographic and income data, educational attainment, student participation rates, primary and secondary sources for student sources, comparison with statewide averages; the overall implications for the College.

The chapter on Opportunities for the Future explores future labor markets in the state, Central Valley Region and Kern, Inyo and Mono Counties. Attention is given to identifying occupations expected to have some number of annual future openings and those requiring postsecondary education through the bachelor's degree. Planning considerations are reviewed that take advantage of state higher education initiatives and future labor markets, but caution is urged before new programs are started as there is extensive competition in the service area. Opportunities for improvement and expansion are summarized based upon the curriculum initiatives the College is presently advancing or has been considering. Based upon an analysis of the awards actually granted over the last six academic years, existing programs that need strengthening and those that might be reconsidered are identified. To conclude the chapter several general suggestions are offered for program changes and adjustments.

The chapter on Projections for Future Growth provides an analysis, by site or center, of weekly student contact hours (WSCH) and full-time equivalent students (FTES), plus fall term unduplicated headcounts that are anticipated in each five-year increment from 2010 to 2025. That overall expected growth is then applied to the future program of instruction to indicate potential counts of sections, WSCH and FTES by instructional division over five-year increments from 2010 to 2025. The discipline-level analysis of this projection is located in the Appendix of this report.

The concluding chapter on the Determination of Future Space Needs provides a discussion of space requirements for the academic program and projected needs, by instructional division, in five-year increments from 2010 to 2025. The discipline-level analysis of these projected instructional program space needs is located in the Appendix of the Facilities Master Plan. The chapter concludes with an analysis of projected space needs for the support service areas of the College. Those needs are expressed in five-year increments from 2010 to 2025.

V. Environmental Scan

College in Context to its Environment

Cerro Coso College serves a geographical area larger than the states of Vermont and New Hampshire combined, some 18,500 square miles. The main campus is located in northeastern Kern County in the city of Ridgecrest or the Indian Wells Valley. The Eastern Sierra Educational Center has been established in two locations to serve the communities of Mammoth and Bishop, north of Ridgecrest. South and west of Ridgecrest, the Kern River Valley-South Kern Educational Center has been established in two locations to serve the communities around Lake Isabella and Edwards Air Force Base. The College also operates a very comprehensive online instructional program. While the College service area also includes Inyo and Mono Counties, much of the land in those counties is publicly owned and sparsely populated. The Cerro Coso service area sweeps into central and eastern California from the low of Mojave Desert to the high Sierra Nevada mountain range anchored in the north by Bishop and Mammoth Lakes.

Economic Conditions[1]

As part of the external scan process, the economic climates at the national, state and regional levels were reviewed. While the economic conditions at these levels may appear to be removed from the day-to-day operations of the College, they will have a significant impact on the direction the College takes in the future. The sections that follow outline the findings from this review.

National

Based on the most current information from the Kyser Center for Economic Research (Los Angeles, California), the national recessing has hit bottom and the economy is beginning to rebound. Gross Domestic Product (GDP), the best measure of economic output, has regained the territory lost during the recession of 2007 to 2009.

The U.S. economic recovery, however, has been very unbalanced and unstable. Generally, it has been led by three factors: 1) Federal government spending (including the Bush Administration's Troubled Assets Relief Program, or TARP) and the Obama Administration's American Recovery and Reinvestment Program, or ARRA); 2) growth in exports; and 3) consumer spending. While consumer spending only registered a 1% gain over the past three years, the base for consumer spending is so large that even a slight upturn or a downturn can have an enormous impact on the economy.

Economic forecasts indicate that the U.S. economy is recovering. However, it continues to be dragged down by a slow moving real estate market with massive numbers of foreclosures pending, decreased business investment spending, declining revenues and reduced spending by state and local governments. Employment, which fell precipitously in 2008 and 2009, saw an increase of 1.1 million jobs for 2010. While this is encouraging, it needs to be put in perspective. A total of 8.4 million jobs were lost from 2007 to 2009. This translates to a jobs deficit of 7.3 million at the end of 2010. Viewed in this light, it will take labor markets several years to get back to pre-2007 employment levels.

Following are some the key indicators for the national economy in moving into 2011/2012 and beyond:

- GDP: After increasing by 2.9% in 2010, GDP is projected to grow by 3.1% in 2011 and by 3.4% in 2012.
- Consumer Spending: Overall, consumer spending (inflation adjusted) is forecast to grow by 3.1% in 2011 and by 3.0% in 2012. Consumer spending is the largest sector of the U.S. economy and holds the key to the future economic outlook. Not surprisingly, this sector is informed by consumer confidence.

[1] Sources for the determination of economic conditions included: Federal Level: Bureau of Economic Analysis, Bureau of Labor Statistics, Congressional Budget Office, Federal Reserve Bank, Office of Management and Budget, U.S. Census Bureau. State Level: California Board of Equalization, Department of Finance, Employment Development Department (Labor Market Information), and California Association of Realtors. Regional Level: Kern Council on Government, Kern County Government, and Tulare County Government. Private Level: The Kyser Center for Economic Research, Kern County Economic Development Corporation, Tulare County Economic Development Corporation, ESRI Data Systems, EMSI Data Systems.

- Labor Market Conditions: Unemployment for the fourth quarter of 2010 was at 9.4%. It is projected to hover around 9.0% (adjusted) by the end of 2011. Employment gains have been recorded in the sectors of Education and Healthcare, Business and Professional Services, Tourism, Manufacturing and Retail Trade. The nation's unemployment rate likely will continue to be unacceptably high through 2012.
- Household Financial Assets: Grew by 4.3% by the end of 2010. However, the value of household real estate assets decreased by -2.1% (reflecting foreclosures and lower prices).
- Housing Starts: The number of housing starts was 587,600 in 2010. It is projected to be 650,000 in 2011 and 940,000 by 2012. In 2005, at the height of the real estate boom, housing starts across the nation totaled 2,076,000.
- Corporate Conditions: Adjusted total pre-tax corporate profits across the nation were up by 26% for 2010. This upward trend is projected to continue in 2011 and 2012.
- Government Spending: The forecast for 2011 and 2012 is for continued growth in federal government purchases, although at substantially lower rates than the "stimulus era" of the past three years. Spending is projected to grow particularly in workforce training and education, unemployment compensation, and healthcare programs. The purchase of goods and services by state and local governments will be flat to declining.
- Foreign Trade: U.S. exports are projected to increase (inflation adjusted) by 6.2% in 2011 and by 5.1% in 2012. Purchases of foreign made goods and services are forecast to increase by 4.0% in 2011 and by 6.5% in 2012.
- Inflation: Measured by the Consumer Price Index (CPI), annual consumer inflation decelerated from 2.8% in 2007 to 1.4% in 2010. The price for oil (forecast at $90 to $105 per barrel) and natural gas ($4.75/thousand cubic feet) are projected to escalate through 2012. As a result, food prices and the cost for transported goods are also projected to increase through 2012. Overall, the CPI is projected to increase by an average of 2.5% in 2011 and 2012.
- Monetary Policy and Interest Rates: Actions taken in the last three years by the Federal Reserve (Fed) will ensure that short-term inflation is kept in check through 2011. The Fed will endeavor to return interest rates to more normal levels. At the same time, market jitters are causing havoc for long-term interest rates. The current projections are for 10-year Treasury Notes to reach 3.5% by 2011 and increase to 4.0% by 2012. The 30-year fixed-rate mortgage is projected to remain below 5.0% through 2011 and increase to 5.5% by the end of 2012.
- Fiscal Policy: The Congressional Budget Office (CBO) forecast that the effects of the American Recovery and Reinvestment Act (ARRA) are expected to fade away over the next two years. The CBO is projecting a $1.5 trillion deficit for FY 2011. This will equal 9.8% of the GDP. It is almost as high as in 2009, when the deficit was 10% of the GDP – the highest in nearly 65 years.

- Global Markets: Failing global capital markets cannot be overlooked in terms of impact to the U.S. economy. The threat of economic failure from countries such as

Greece and Ireland (rescued by the IMF and the European Union) as well as the dubious financial positions of Italy and Spain underscore the reality that whatever happens globally, affects the United States.

Summary: The baseline forecast calls for the U.S. economy to continue on its recovery path through 2012. The recovery will be moderate, however. A number of uncertainties could cause the economy to accelerate or contract through 2012 and beyond. Chief among these uncertainties are the following:

- Market Fragility: The financial market system carries considerable risks, particularly in global capital markets. The weakening of the financial position of state and local governments is another concern. Any of these risks could trigger problems in the global capital markets, and consequently affect the large U.S. banks and trickle into the domestic economy.
- Credit Crunch: The banking industry is still reluctant to provide the credit needed to expand business and support economic growth. The economy cannot improve without credit to finance business and household spending for big-ticket items. The large commercial banks are on the mend. However, many small community banks are in weaker positions due to the high number of ailing (local) commercial real estate ventures that are currently on the books.
- Housing: There is no definitive timeline on when lenders will work through their toxic real estate loans or when home prices will stop the free fall.
- Price of Oil and Gasoline: Sustained increases in oil and gas prices have the potential to drag the recovery in the opposite direction. Gasoline prices have risen in 2011 and are projected to increase again in 2012.

Following are the Key Economic Indicators for the U.S. Economy:

Table 1: U.S. Economic Indicators

(Annual % change except where noted)	2005	2006	2007	2008	2009	2010	2011f	2012f
Real GDP	3.1	2.7	1.9	0.0	-2.6	2.9	3.1	3.4
Nonfarm Employment	1.7	1.8	1.1	-0.6	-4.3	-0.5	1.1	1.8
Unemployment Rate (%)	5.1	4.6	4.6	5.8	9.3	9.7	9.0	8.5
Consumer Price Index	3.4	3.2	2.8	3.8	-0.3	1.6	2.5	2.5
Federal Budget Balance (FY, $billions)	-$319	-$248	-$162	-$455	-$1,415	-$1,294	-$1,500	-$1,100

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Office of Management and Budget, Keyser Center for Economic Research, Los Angeles Economic Development Commission

Table 2: U.S. Interest Rates

(4th quarter averages, %)	2005	2006	2007	2008	2009	2010	2011f	2012f
Fed Funds Rate	3.2	5.0	5.0	1.9	0.16	0.18	0.25	2.5
Bank Prime Rate	6.2	8.0	8.1	5.1	3.3	3.3	3.3	5.5
10-Yr Treasury Note	4.3	4.8	4.6	3.7	3.3	3.2	3.5	4.0
30-Year Fixed Mortgage	5.9	6.4	6.3	6.0	5.0	4.7	4.9	5.5

Sources: Federal Reserve Bank, Keyser Center for Economic Research, Los Angeles Economic Development Commission

Implications for Cerro Coso College:

- While the national economy is improving, it will be a very slow process. Regaining the ground that was lost will take several years.
- Because there is an imbalance among the key economic indicators, some growing, some lagging, the recovery will be in fits and starts.
- Expect high unemployment rates to continue, as business and industry, although growing, are reluctant to commit to expand or either rehiring laid-off personnel and/or new hiring.
- U.S. jobs that will see growth will be in the sectors of Education and Healthcare, Business and Professional Services, Tourism, Manufacturing, and Retail Trade.
- Real estate assets will continue to be depressed until the number of foreclosures is decreased.
- Federal spending will be focused on workforce training and education, unemployment and healthcare programs.
- Higher costs for energy can be expected, with projected cost increases for oil and natural gas. Higher prices at the pumps will likely impact the education choice for students who travel a great distance or do not have access to public transportation.
- The looming $1.5 trillion federal budget deficit will affect consumer confidence, including those of taking-on additional tax burdens.
- Reduced funding support from the federal government will impact the state and local governments. They will be burdened with matching revenues to expenses.
- Households of the service area will be impacted by the national credit crunch. Loans for business and big-ticket domestic purchases will be more difficult to secure.

<u>California</u>

The performance of the California economy was mixed in 2010 – some sectors grew, some remained flat and some weakened. Retail sales have finally showed signs of recovery. The tourism industry also rebounded to help improve the state's gross financial output from the previous year. At the same time, property values continued to fall and even though state and local revenues were up from 2009, failure to get a handle on government spending and a lack of new job growth limited the state to only a 0.5% gain in year-over GDP growth. GDP growth was 1.5% in 2009 and 2.0% in 2010.

One of the greatest concerns for continued progress in California's recovery is the condition of the State budget. While tax revenues increased during the first six months of 2011, general fund expenditures also increased. By the end of 2011, the State Department of Finance projects an $8.2 billion dollar deficit. Looking ahead to 2012, the Governor is projecting a budget shortfall of $17.2 billion. Over the two years, this translates to $25.4 billion dollars of red ink. Whatever solutions are determined, i.e. reductions in government employment and spending or the addition of new taxes, the impact will be the same - a slow California recovery.

The potable water supply is another serious concern for the state. Even with the heavy rains in December of 2010, water in California continues to be in short supply. Environmental rulings regarding water have the potential to place one of California's greatest economic generators, i.e. agriculture, in jeopardy. It will also have an impact on municipalities and domestic users. It will create an atmosphere of uncertainty and speculation.

The third concern is the labor market. It did not improve much from 2009 to 2010. Nonfarm employment fell by -1.5% during 2010. This translated to a loss of 212,600 jobs. Equally distressing was the state's unemployment rate, which averaged 12.4%. For 2011, nonfarm employment is projected to gain only 0.8% while unemployment is forecast to average 12.1%. The forecast for 2012 reflects improvement, but it will not be robust by any means. Nonfarm job growth is projected to rise by 1.8%; unemployment is forecast at 11.5%.

These factors will combine to keep the California recovery moderate in 2012 and 2013.

Pluses and minuses, relative to the California economy since 2009 are captured in the following overview:

Pluses

- Retail and Automobile Sales: Spending in retail and auto markets by consumers has improved. Retail sales rose by 6.6% in 2010 and are expected to maintain growth in 2011 and 2012. Automobile sales also have been a strong.
- Agriculture: Gross farm receipts rebounded in 2010 by 5.9% after falling by -9.6% in 2009. Assuming normal weather patterns and stable fuel and feed costs, agriculture revenues are projected to post a moderate year-over increase for 2012.
- Technology (Including Aerospace): The components of California's Technology sector have been somewhat mixed. Business demand for technology products rose in 2010 and is forecast to continue through 2011 and 2012. Sales of consumer technology were very strong, particularly for computers, e-readers, electronic notepads, MP3 players, and smart phones. California's high tech manufacturers of semi-conductors have benefited as a result. In the defense sector, a number of government-sponsored projects are underway within the state. However key defense cutbacks beginning in 2012 could impact this sector of the economy.
- Tourism: Hotels in California posted increases in revenues of 7.4% in 2010, taking back some of their losses from 2009. Through 2011 and 2012, hotel revenues are projected to record moderate gains.

- Exports/Imports: The State's ports were busy in 2010. Growth through 2012 is expected to be solid. Exports through the first 11 months of 2011, via the state's custom districts, increased by 23.5% while imports grew by 21.9%.
- Entertainment: This sector posted a solid gain in 2010 via a strong consumer demand.
- Private Education: Driven by the need for training, re-training, and changing technology, there has been a strong (renewed) consumer interest in education. Private education has been the beneficiary of this demand. While postsecondary public institutions have recognized the demand, they have not been able to capitalize on it due to State mandated budget cuts.
- Healthcare: Driven by the baby boomer generation, healthcare and the health-related industry are projected to remain strong for 2012 and into the future.
- Population Growth: The state's population as of July 2010 was 38.7 million. It is projected to reach 39.5 million by mid-2012. The sheer volume of people within the state creates an economic engine and GDP that is second only to eight other countries in the world.

Minuses

- Housing/Housing Related Activities: Even though new housing starts increased from 2009 to 2010, the increase was marginal. The increase was primarily due to federal tax credit incentives. These have gone away. As a result, the construction of new homes continues to be in a near depression state. The recovery of the housing market is very uncertain. The next round of foreclosures is fueling the uncertainty. In 2009, only 36,421 housing permits were issued. For 2010, there were 44,601 new housing starts. For 2011, the number of single-family residential units is projected to grow by 9.0%. However, these numbers are a fraction of the 2004 peak, when new housing starts registered 212,960. These numbers underscore the condition of the current housing market. With regard to public works projects, 2010 and 2011 will show increases. These increases, however, will be short-lived, as the federal stimulus program winds down in 2012. New public works projects at the state and local governments will be limited in 2012 and 2013 due to lack of funds.
- Environmental Regulations: AB 32 (greenhouse gas legislation) will present business/industry and the consumer with many new regulations. It is projected to have a dampening impact on the business climate. California residents and businesses will likely face higher energy costs in the future.

Summary: Recessionary employment losses are diminishing. Still, there is a considerable gap between pre 2007 and the current employment/unemployment conditions. As firms gain confidence that the recovery is for real, an upturn in employment will be experienced.

The largest gains for 2011 are projected to occur in Leisure and Hospitality (30,900 jobs), Administrative and Support Services (19,200 jobs), Professional, Scientific, and Technical Services (15,300 jobs), Transportation and Utilities (14,900 jobs), Wholesale Trade (12,800 jobs) and Health Services (11,000 jobs). Only two industry sectors are projected to lose employees in 2011, Management of Enterprises (-300 jobs) and

Implications for Cerro Coso College (including the campuses of Indian Wells Valley/Ridgecrest, South Kern/Kern River Valley and Eastern Sierra College Center):

- While the state economy is improving, it is not improving at more than a marginal rate.
- California's rate of unemployment will remain high (11.5%) through 2012.
- The projected State budget deficits through 2012 will likely trigger more belt tightening for state postsecondary institutions and for state-sponsored capital construction projects.
- Jobs within the State that will experience the greatest growth will be in these industries: (1) Leisure Provision and Hospitality; (2) Administrative and Support Services; (3) Professional, Scientific, and Technical Services; (4) Transportation and Utilities; (5) Wholesale Trade; and (6) Health Services.
- Housing starts will be anemic through 2012; the annual growth rate of the population will slow considerably.
- Energy costs, for gasoline and natural gas will be on the rise. The impacts of AB 32 (California Greening) will also create a financial burden on residents within the State. Distance education may play a larger role in the postsecondary education market.

Tables that display multiple year trends in California economic indicators and nonfarm employment are found in Appendix A of this report.

The Regional Economy

Cerro Coso Community College's (Cerro Coso) covers a total of 18,500 square miles and spans three counties and a very small part of a fourth. The service area is extremely large and geographically diversified. It ranges from the mountains of the Eastern Sierras to the desert. It also includes the transition areas in between the mountains and the desert. The service area features vast amounts of open land with extremely few residents per square mile. Alternately, there are pockets of more densely populated areas. With the exception of Interstate 395, the major transit infrastructure is limited. Most highways within the service area are two-lane roadways.

The more densely populated areas have most often been developed around existing features and infrastructures. In the Indian Wells Valley/Ridgecrest area, it is the presence of the Naval Air Weapons Center, Warfare Center (NAWCWD); in the California City/Mojave area, it is Edwards Air Force Base (EAFB); and, at Mammoth Lakes and Bishop, it is the national parks and the Mammoth Mountain Ski Resort.

To address the diversities of Cerro Coso's vast service area, two primary sub areas were created: 1) East Kern County and 2) the Eastern Sierras. East Kern County includes the sub sets of Indian Wells Valley/Ridgecrest, Kern River Valley/Lake Isabella, and South Kern. The Eastern Sierras area includes the counties of Inyo and Mono, with the sub sets of the cities of Bishop and Mammoth.

A. The Sub Area of East Kern County

While economic data is available for all of Kern County as a geopolitical entity, there is no specific data available for East Kern County. To provide an overview of the economic climate of East Kern County, two sources were referenced: 1) Selected "flash points" within with the sub area, i.e. places with identifiable populations and/or places that supported existing educational centers; and 2) greater Kern County.

1. The East Kern County Flash Points

- Indian Wells Valley /Ridgecrest

The main campus of Cerro Coso Community College is located in the Indian Wells Valley/Ridgecrest area. The economy of this area is closely tied to the NAWCWD at China Lake. NAWCWD's presence gives rise to housing, schools, commercial development, and the need for professional and technical services. It is the driver of the economy for this area.

In 2010, the Indian Wells Valley/Ridgecrest area had a combined population base of 28,171. As previously noted, employment is buoyed by the presence of the federal government. The greatest percentages of non-government workers are employed in the professional and related occupations (29.21%) sector. Retail trade (22.19%) and services (19.48%) follow. Unlike other sections of Kern County, there is virtually no agriculture-related economic activity. Only 0.17% of the working population is engaged in the industry sector for farming, fishing, and forestry.

Table 3: Economic Profile for the Indian Wells Valley/Ridgecrest Area

Year	Population	Primary Emp Sector	Unemployment	Per Capita Income	Median HH Income	Taxable Retail Sales (in Millions)
2000	26,688	Government	4.6	$20,038	$44,333	$197.4
Current	28,171	Professional Healthcare Retail Trades Services	9.5	$24,102	$51,292	$241.0
10 Yr +/-	5.6%			20.3%	15.7%	22.1%
Ann Aver	0.51%			1.84%	1.43%	2.01%

Source: ESRI Data Systems, California Employment Development Department, Labor Market Information, California Board of Equalization

The Indian Wells Valley/Ridgecrest area has exhibited a slow annual rate of growth since 2000. The average has been only 0.51%, with total growth of only 5.6%. In addition to government employment, professional and related occupations, services and sales comprise the bulk of the labor force. While still well below the rest of Kern County, its 9.5% unemployment rate (December 2010) was more than twice the unemployment rate in year 2000. From 2000 to year 2010, there was an overall gain in retail sales tax of 22.1%, with a 2.01% annual growth rate average. Taxable retail sales reached an apex in the prerecession year of 2006, when it topped $285 million dollars. Per capita income and median household

income for 2010 lagged behind the state averages ($27,845 per capita and $60,992 for household income). Both are growing at slower annual rates as well.

- Kern River Valley

Lake Isabella was selected as a "flash point" for this sub set. It is the home of the Kern River Valley Education Center. The Kern River Valley area does not have a defined driver of the economy. While government plays a significant role relative to employment, it is not in the form of an economic generator. The economy reflects a strong orientation to tourism and leisure. It is a favored spot for retirees, particularly those who enjoy the outdoors. It is also a destination point for many who travel to the area for recreation. A good part of the economy is built around the provision of services required to support this leisure industry sector.

Table 4: Economic Profile for Kern River Valley/Lake Isabella

Year	Population	Primary Emp Sector	Unemployment	Per Capita Income	Median HH Income	Taxable Retail Sales (in Billions)
2000	11,500	Government	10.0	$14,767	$22,593	*
Current	13,803	Hospitality Services Construction/Extraction Professional/Tech Services	19.2	$16,568	$26,445	*
10 Yr +/-	20.0%			12.2%	17.0%	
Ann Aver	1.82%			1.11%	1.55%	

Source: ESRI Data Systems, California Employment Development Department, Labor Market Information,

Since year 2000, the annual average population growth rate for Lake Isabella has been 1.82%. While this represents a growth rate above the statewide average, taken in perspective, it is an increase of only 2,303 individuals. The population base was 11,500 in 2000. In 2010, it was 13,803.

The impact of the recent recession has fallen hardest on those areas that rely on outside revenue for their economic base. Lake Isabella is such an area. Lake Isabella has also been impacted by state and local budget cuts for capital construction projects, particularly those for infrastructure and roadway development/repair. This has impacted the local construction industry and, in turn, trickle into the service related industries of the community.

Unemployment, which has been traditionally high in this area, was up to 19.2% at the end of 2010. The area's low per capita and median household incomes reflects the economic hardships that exist. Years 2011 and 2012 should bring back some of the economic losses experienced over the past three years but the recovery will be slow. It will take Lake Isabella time regain the ground lost.

- South Kern

The South Kern Educational Center is currently located on Edwards Air Force Base. Similar to the Indian Wells Valley/Ridgecrest area, the economy of South Kern is closely tied to the military, EAFB.

For this analysis, the South Kern area was defined as a 10-mile radius with a center point in the southern portion of California City. This area included California City, EAFB, the northern portions of Rosamond, and portions of Mojave. While EAFB represents the major economic generator, this defined area also has an economic base that includes the industry sectors of professional/technical services, retail trade, facilities support, construction/extraction and manufacturing. Additionally, it is also home for some of Kern County's cutting edge enterprises. The Mojave Air and Space Port is one such example.

The key economic indicators for the South Kern area are captured in the graphic that follows:

Table 5: Economic Profile for the South Kern Area

Year	Population	Primary Emp Sector	Unemployment	Per Capita Income	Median HH Income	Taxable Retail Sales (in Millions)
2000	9,637	Government	6.4	$19,602	$44,366	$17.2
Current	15,057	Facilities Support Professional/Technical Retail Sales Construction/Extraction Manufacturing	13.0	$22,460	$53,838	$25.7
10 Yr +/-	56.2%			14.6%	21.3%	49.4%
Ann Aver	5.11%			1.33%	1.94%	4.49%

Source: ESRI Data Systems, California Employment Development Department, Labor Market Information, California Board of Equalization

The South Kern area has had a substantial gain in population since year 2000. The annual rate of growth was 5.11%. This was approximately 2.8 times the state annual growth rate over the same period. Unemployment, while high at 13.0%, is well under the current rate for the greater Bakersfield area and close to the statewide average. The per capita income of $22,460 is below the statewide mark of $27,845. The same is true of the median household income, which stands at $53,838 as compared to the state's $60,992. Taxable retail sales revenue has averaged a healthy annual growth rate of 4.5% since 2000. At the present time, it is down from its high of $36 million dollars in 2006 to $25.7 million dollars.

2. Greater Kern County

In greater Kern County, there are currently 269.2 thousand wage and salaries jobs. This mark is down from 2006, when the county had 278.6 wage and salary jobs. While all sectors have been affected by the recession, some have been more affected than others. The greatest drop has been in construction, which, countywide, has lost 7,800 jobs over a five-year period. This translates to a 40% overall loss. Wholesale and retail trade has also been impacted with the loss of 3,300 jobs over the view period. These two particular industry sectors, along with professional services and leisure, were significantly impacted in East Kern County.

The table that follows captures the employment conditions by industry sector for year 2006 (beginning of the recession) through 2010 (emergence from the recession) for greater Kern County. While it is not possible to separate the data of Kern County between west and east, those areas highlighted in blue are associated with the industry sectors and employment dynamics of East Kern County.

Table 6: Kern County Employment as a Current Measure of Economic Vitality

Year	Total Wage & Salary	Farm	Construction	Manufac-turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Health & Education	Leisure	Government
					employment (thousan ds o f jobs)						
2006	278.6	45.3	20.0	13	9.4	36.9	9	25	23	20.7	57.7
2007	284.3	45.6	18.4	13.3	9.6	36.9	9.1	26.1	24.5	21.5	60
2008	287.6	49.6	16.5	13.7	9.6	35.1	8.9	25	25.5	21.5	61.5
2009	269.9	42.8	13.1	13.2	8.9	32.8	8.5	23.7	25.8	20.9	60.8
2010	269.2	44.9	12.2	12.8	8.5	32.6	8.2	23.7	25.6	20.6	60.8

Source: California Economic Forecast, Calrans, Economic Assessment, 2011

The table that follows depicts the employment projections for these same industry sectors through the year 2025. Industry sectors highlighted in blue depict those that are most applicable to East Kern County.

Table 7: Projected Kern County Employment as a Measure of Future Economic Vitality

Year	Total Wage & Salary	Farm	Construction	Manufac-turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Health & Education	Leisure	Government
					employment (thousan ds o f jobs)						
2011	273.1	45.6	12.7	12.8	8.9	33.3	8.3	24.5	26.2	21.2	60.1
2012	280.7	46.2	14.6	12.8	9.2	34.3	8.7	25.7	26.8	21.4	60.5
2013	289.9	46.8	16.8	12.9	9.5	35.5	9.1	26.8	27.4	22.2	61.6
2014	297	47.4	17.9	13.1	9.9	36.6	9.4	28	28	22.9	62.2
2015	303.9	47.7	19	13.3	10.2	37.7	9.5	29	28.6	23.6	63.1
2016	309.5	48.2	19.3	13.5	10.7	38.9	9.5	29.9	29.2	24.4	63.5
2017	314	48.6	19.5	13.7	11	39.6	9.5	30.7	29.9	25	63.9
2018	318.9	49	19.6	13.8	11.4	40.3	9.4	31.4	30.7	25.7	64.7
2019	324.2	49.5	19.6	14	11.8	41	9.4	32.2	31.6	26.3	65.8
2020	329.8	49.8	19.7	14.2	12.3	41.7	9.5	33	32.6	26.9	67.1
2021	335.2	49.9	19.6	14.3	12.7	42.6	9.5	34.1	33.8	27.4	68.1
2022	340.9	50.2	19.7	14.4	13.1	43.3	9.6	35.2	35	27.9	69
2023	346.5	50.5	19.8	14.6	13.5	44	9.6	36.3	36.1	28.4	70
2024	352.2	50.9	19.7	14.7	13.9	44.7	9.8	37.5	37.2	28.8	70.9
2025	357.8	51.4	19.7	14.8	14.3	45.5	9.9	38.7	38.2	29.2	71.8

Source: California Economic Forecast, Caltrans, Economic Assessment, 2011

Future Outlook for East Kern County

The future outlook for East Kern County is mixed. There are concerns about micro economies that are built around a single industry or economic generator. At the same time, there is optimism for what is happening, particularly in the South Kern area.

Both the Indian Wells Valley/Ridgecrest area and the South Kern area will need to keep a keen eye on their respective military bases. The demographic forecast for the next five years shows a declining population for EAFB area, with an annual rate slightly less than neutral. The NAWCWD forecast is for a slow rate of growth. Both of the military bases have passed the BRAC reviews for continuance. Both are deemed necessary for the future military operations of the country. Each facility offers unique physical characteristics, which are at the core of their respective missions. In the case of NAWCWD it has earned the distinction of being cited as a Center of Excellence several times in the past and it can boast a lower cost

of operation than its peer research/development test/evaluation sites. Both, however, are also subject to the political winds of Washington, D.C. It is a well-known fact that Congress will be forced to address the possibility of defense reductions to meet the greatest budget deficit in history ($1.5 trillion dollars).

The economy of the Kern River Valley (KRV) area is on shaky but familiar grounds. The outlook for the future does not offer any quick fixes for a corrective course. It will continue to have an economic base that is dependent on outside revenues. If there is a secondary dip into a recession, this area will be the first to know it and the last to recover. A proactive economic strategy for the KRV would be a most beneficial endeavor. The KRV Educational Center is a very bright spot in the community, providing hope for a better future. This may be the starting point for a grander economic development strategy that is needed for the area.

Overall, the pluses for East Kern County are many. The Kern Economic Development Commission has targeted two major industries for East Kern County: Aerospace and Defense and Energy. Aerospace and Defense presently account for 20,000 high-paying, full-time jobs in Kern County. This is four times the national average. The location of NAWCWD and EAFB are great pluses in this regard. East Kern County has also attracted the Mojave Air and Space Port. It is the first facility certified in the United States for horizontal launches of reusable spacecraft. In 2004, East Kern County made history, as Space Ship One became the first privately built, manned and funded spacecraft to travel into outer space. Ten of millions of dollars have been invested in space tourism efforts over the past several years. The spaceport has become the hub of aerospace activity in the county. Additionally, ICON Aircraft, located in Tehachapi, is on the cutting edge of air travel with the development of the ICON5 aircraft, a two-seater, lightweight plane developed for short recreational flights. The average person can fly it with just 20-hours of in-flight training.

Another primary target for the Kern Economic Development Commission has been renewable energy. Kern County's westside has a storied past with regard to oil production used for energy. More recently, it has turned its sights on renewable energy sources, harvesting wind and solar sources for power. East Kern County has been at the forefront of this charge. Today there are a host of companies that are generating power from natural sources in East Kern County. The Mojave Desert hosts a commercial-sized solar farm that contributes to the state's energy grid. Closer to home, the solar fields of Cerro Coso Community College in Ridgecrest powers the campus, making good use of the average 280 days-a-year that have sunlight. In Tehachapi, California's largest, single wind-energy source operates 700+ mega-watt producing turbines that support the power grid. Geothermal companies have been established in East Kern County for over a decade.

East Kern County's economic picture for the future can be bright. While there are economic concerns, there are also opportunities. The opportunities appear to outweigh the concerns.

B. The Sub Area of the Eastern Sierra's

The campuses of Cerro Coso's Eastern Sierra College Center are located in Bishop (Inyo County) and Mammoth Lakes (Mono County). While the geo-political boundaries are different, the two communities have more similarities than differences. Both are located on

the eastern slopes of the Sierra Nevada Mountains against the backdrop of Yosemite National Park. Their respective economies are built around tourism, leisure, and the hospitality industries. Government employment, schools, and education drive the labor force. Both have economies with larger-than-average numbers of retirees that fuel the services sector.
The following is a broader look at Eastern Sierra's economic climate.

- Inyo County

In terms of physical landmass, Inyo County is the second largest county in California. State and federal government departments publicly manage a total of 98% of the land area. Inyo County has an economic base that is almost totally established on the leisure and hospitality sectors. It is home to Mt. Whitney, the highest peak in the continental United States. It also includes is home to Death Valley, the lowest point in the western hemisphere. Inyo National Park is a destination point for tens of thousands of recreation enthusiasts on an annual basis. Bishop is the only incorporated city in the county.

Inyo County's population was 18,565 in 2010. It generated 7,659 wage and salary jobs. A total of 48 new wage and salary jobs were created in Inyo County during 2010, yielding a net increase in employment of 0.6%. Retail trade and manufacturing lost jobs during 2010. Overall, the unemployment rate was 10.0%. The per capita income was $23,489 and the average salary of an employed worker was $43,469.

Public sector employment currently accounts for 42% of the total employment in the county. Leisure services (20%) and retail trade (13%) are the two other most prominent job-providing industries.

A snapshot of Inyo County's forecast for the future includes the following:

- Wage and salary employment is forecast to be flat in 2011. From 2011 to 2016, total employment is projected to grow at an average of 1.4% annually.
- Inflation adjusted salaries are expected to rise an average of 0.5% annually from 2011 to 2016. Adjusted salaries will remain below the California state average.
- What modest growth that does occur over the next five year will be in professional business services, construction, education, healthcare, leisure services, and government. Combined, these will account for 75% of all jobs in Inyo County
- The rate of annual population growth for 2011 to 2016 is projected to be less than 1.0%.
- Total taxable sales are expected to increase on average of 3.7% per year for 2011 to 2016.

- The City of Bishop

The city of Bishop houses one of the two Eastern Sierra College Center locations. The economy of Bishop mirrors that of Inyo County. With a median age of 41.7, it reflects an older population base. One-third of the population is 55 years of age or older; almost 20% are retirement age, i.e. 65 years or older. The economic engine for Bishop is based in the industry sectors of tourism, hospitality, and retail sales. Transportation infrastructure is present to support this base. It includes Interstate 395, a popular highway that serves the Southern California region and provides access to Mammoth Mountain Ski Resort and

Yosemite National Park. It is also home to the Eastern Sierra Regional Airport that provides quick access to an otherwise remote area.

Table 8: Economic Profile for Bishop

Year	Population	Primary Emp Sector	Unemployment	Per Capita Income	Median HH Income	Taxable Retail Sales (in millions)
2000	3,575	Government	4.6	$17,660	$27,218	$131.4
Current	3,466	Leisure Hospitality Retail Trades Constructiion	9.0	$21,713	$34,119	$151.6
10 Yr +/-	-3.0%			23.0%	25.4%	15.4%
Ann Aver	-0.28%			2.09%	2.30%	1.40%

Source: ESRI Data Systems, California Employment Development Department, Labor Market Information

The current indicators show a relatively flat economic picture for the city of Bishop. The annual rate of growth since 2000 was neutral to slightly declining. The 2010 rate of unemployment was up to 9.0%, still well below the state averages but almost twice the rate that Bishop had in year 2000. Per capita income lags behind the state average of $27,845. This is also the case for the median household income. Growth in sales tax revenue shows an average gain of 1.40% annually for the study period. Taxable sales were as high as $183.0 million dollars in 2006, but retreated back to $151.6 million dollars in 2010.

Like most other places in the state with tourist-based economies, the Bishop area was seriously impacted over the past three years. The current economic snapshot could not have been taken at a more unflattering time. The good news is that the economy is projected to rebound over the next five years. Preliminary forecasts show unemployment dropping back to 6.5% by the end of 2013. Although retail sales are projected to see a bounce-back in the current year (2011), the recovery will not be immediate. However, it will be moving in the right direction based on the third quarter returns for 2011.

- Mono County

Mono County is located on the eastern slopes of the Sierra Nevada mountain range, adjacent to Yosemite National Park and the Sierra National Forest. Its eastern borders reach to the Nevada state line.

The economy of Mono County is predominantly based on leisure and tourism. Mammoth Mountain Ski Resort is the principal attraction. It offers year-round outdoor activities, and features one of the longest skiing seasons in the nation. Mammoth Lakes is the only incorporated city in Mono County.

Currently, Mono County has a population of 14,215 people and produces 6,871 wage and salary jobs. The per capita income is $30,796, and the average salary per worker is $41,626. The largest industry sectors in the county are leisure services and government. Combined, they account for 69% of the total labor market.

In 2010, a total of 188 total wage and salary jobs were lost in Mono County. This represented a relative decline of 2.7%. It triggered an increase in the unemployment rate to 10.5%. The greatest employment declines were in the leisure services and construction sectors.

Employment and population growth are expected to be modest, but positive over the next five years. Much of the growth in employment will be attributable to the tourism sector, which is driven by the resorts and national and state parks located in the county.

A snapshot of Mono County's forecast includes the following:

- Total wage and salary job growth is forecast to increase by 0.6 %. From 2011 to 2016, total job growth is projected to average 2.2 % per year.
- Average salaries adjusted for inflation are currently lower than the statewide averages. They are projected to remain in that condition for the foreseeable future. On a relative basis, they are expected to grow by 0.3% per year between 2011 and 2016.
- Leisure services and government will continue to be the employment generators between 2011 and 2016. By 2016, these sectors are projected to account for 57% and 17% of job growth, respectively.
- Annual population growth for 2011 to 2016 is forecast to be less than 1.0% annually.
- Total taxable sales, adjusted for inflation, are forecast to increase by 5.6% in 2011. From 2011 to 2016, taxable sales are forecast to increase at an average rate of 4.5%year.

- Mammoth Lakes

The city of Mammoth Lakes houses one of the two Eastern Sierra College Center locations. Similar to the city in Bishop (Inyo County), it has an economic base that reflects the use of the area – i.e. tourism, recreation and hospitality. Government is also a significant industry sector in the economy. Its population is officially listed at 7,246 but it can swell to several times that base on a holiday weekend.

The population has a median age of 35.6. Transportation infrastructure is present to support the economic base served. Interstate 395, a popular highway that provides access from the Southern California region, primarily enables access to the area.

Table 9: Economic Profile for the City of Mammoth Lakes

Year	Population	Primary Emp Sector	Unemployment	Per Capita Income	Median HH Income	Taxable Retail Sales (in Millions)
2000	7,093	Leisure/Tourism	4.4	$24,526	$44,575	$131.2
Current	7,246	Hospitality Retail Trades Government Services	6.1	$33,326	$60,151	$137.9
10 Yr +/-	2.2%			35.9%	34.9%	5.1%
Ann Aver	0.20%			3.26%	3.18%	0.46%

Source: ESRI Data Systems, California Employment Development Department, Labor Market Information

The annual rate of population growth (0.2%) residents has been very slow put positive since year 2000. Even with the impact of the great recession over the past three years, unemployment has only risen to 6.1%, half of the statewide average for 2010. Mammoth Lakes has a relatively healthy per capita income and median household income; both are above the statewide averages. Taxable sales show only a small annual rate of gain in a 10-year period but these rates are in the recovery mode, bouncing back from the downturn of the past three years.

Future Outlook for the Eastern Sierras

The overall economic perspective for the future looks positive for the Eastern Sierras. The forecast shows a slow rate to an even declining rate of population growth over the next five years. Fortunately, the area does not rely on population growth to drive its economy. It has a huge economic engine in the Mammoth Mountain Ski Resort and the national parks – i.e. it imports its population base on a regular basis. The blueprint has worked well, based on the economic indicators reviewed. While there may be hiccups in revenue generation from time-to-time and good years and bad years, the long-term perspective is for continued vibrancy.

Summary: The economic climates for East Kern County and the Eastern Sierras offer challenges and opportunities for both the present and future. The physical land mass and the geographical differences that make-up the service areas are among the greatest challenges. Future planning will require a focused and compartmentalized approach for each. This could possibly include the reorganization or aggregation of service areas. The following should be included as key tenets: 1) make the most of the resources that are immediately available within each area; 2) leverage those resources in tandem with curricular offerings; and, 3) through the educational experience, provide hope for and the reality of a better future to populations served.

Implications for Cerro Coso Community College (including the campuses of Indian Wells Valley/Ridgecrest, South Kern/Kern River Valley and Eastern Sierra College Center):

- Population growth, as a natural economic driver, will be generally slow. This condition will affect the College. Opportunities to grow at the various campuses will need to rely on other means.
- Based on the demographic information reviewed there will be an opportunity to capture a good part of the existing population who could benefit from postsecondary education. On average, 45% to 50% of the population 25+ years has only a high school diploma or a high school diploma with some college courses.
- There are some areas with expanding population and economic bases. The profile for the South Kern area (10-mile radius from the southern portion of California City) indicates the annual rate of growth at more than 2.8 times the state average over the past ten years. The College should endeavor lead in the path of progress and consider realignment of its centers where justified.
- There are unique economic conditions within the service areas of East Kern County. The South Kern is presently showing cutting edge opportunities in both aerospace and renewable energy.

- There is a need for proactive economic development within the service area, particularly for assisting areas with diversification of the economic base. There is a need for leadership. The College should play a role in this endeavor.
- With dwindling resources from the State, the College may need to investigate more self-generating revenues vis-à-vis contract education and not-for-credit education.

The Eastern Sierra area may benefit by aligning its curriculum with the local economic base.

Industries and Employers By County

The tables below identify, by county, the major industries and the projected annual average employment openings between 2008 and 2018. Other tables have been prepared to identify the major employers in each county. As noted in the analysis above, the College serves the eastern portion of Kern County; however, the data source consulted for this analysis, EDD, does not provide sub-county projections.

Table 10: Kern County, Employment by Industry

	Annual Average Employment				10-Year %	Annual
Industry	2008	%	2018	%	Change	Change
Self Employed	17,200	5.60%	18,600	5.30%	8.10%	0.80%
Unpaid Family & Private Household Workers	4,500	1.50%	5,700	1.60%	26.70%	2.70%
Farm	49,600	16.00%	48,800	13.90%	-1.60%	-0.20%
Mining and Logging	10,700	3.50%	11,400	3.20%	6.50%	0.70%
Construction	16,500	5.30%	18,000	5.10%	9.10%	0.90%
Manufacturing	13,700	4.40%	15,500	4.40%	13.10%	1.30%
Trade, Transportation & Utilities	44,700	14.50%	51,200	14.60%	14.50%	1.50%
Information	3,000	1.00%	3,300	0.90%	10.00%	1.00%
Financial Activities	8,900	2.90%	9,500	2.70%	6.70%	0.70%
Business & Professional Services	25,000	8.10%	31,300	8.90%	25.20%	2.50%
Education & Health Services	25,500	8.20%	35,800	10.20%	40.40%	4.00%
Leisure & Hospitality	21,500	7.00%	25,900	7.40%	20.50%	2.00%
Other Services	7,000	2.30%	7,400	2.10%	5.70%	0.60%
Government	61,500	19.90%	68,600	19.50%	11.50%	1.20%
Total	**309,300**		**351,000**		**13.50%**	**1.30%**

Source: Labor Market Information, Kern County Projections by Industry 2008-2018. Prepared August 25, 2010; analysis by Cambridge West Partnership, LLC

Major employers in the County, with more than 500 employees, include the following firms. Almost all of these businesses are located in western side of the County.

Table 11: Kern County, Major Employers

Employer Name	Location	Industry
Bakersfield Memorial Hospital	Bakersfield	Hospitals
Bolthouse Farms	Bakersfield	Fruits & Vegetables-Brokers (Whls)
Catholic Healthcare West	Bakersfield	Hospitals
Chevron Corp	Bakersfield	Oil Refiners (Mfrs)
Edwards AFB	Edwards AFB	Federal Government-National Security
Foster Care Human Svc	Bakersfield	Foster Care
Frito-Lay Inc	Bakersfield	Potato Chip Factories (Mfrs)
Giumarra Vineyards Corp	Bakersfield	Wineries (Mfrs)
Grimmway Farms	Arvin	Fruits & Vegetables-Brokers (Whls)
Jackson & Perkins Operations	Wasco	Nurseries-Plants Trees & Etc-Wholesale
John J Kovacevich & Sons	Arvin	Fruits & Vegetables-Growers & Shippers
Kern County School Supt	Bakersfield	Schools
Kern Medical Ctr	Bakersfield	Hospitals
Marko Zaninovich Inc	Delano	Fruits & Vegetables-Growers & Shippers
Nabors Well Svc Co	Bakersfield	Oil Well Services
NAVAL Air Warfare Ctr	Ridgecrest	Military Bases
Paramount Farms	Lost Hills	Fruits & Vegetables-Growers & Shippers
San Joaquin Community Hospital	Bakersfield	Hospitals
State Farm Operations Ctr	Bakersfield	Management Services
Sun Pacific Farming	Bakersfield	General Farms-Primarily Crop
Tuv Industry Svc	Ridgecrest	Contractors-Engineering General
US Borax Inc	Boron	Mining Companies
US Naval Air Weapons Station	Ridgecrest	Federal Government-National Security
US Navy Public Affairs Office	Ridgecrest	Federal Government-National Security
Wasco State Prison Reception	Wasco	State Govt-Correctional Institutions

Source: California Economic Development Corporation, America's Labor Market Information System (ALMIS) Employer Database, 2012 Edition

Alpine, Inyo and Mono Counties are merged together in the EDD data. Government has been the primary employer, followed by farming, the trade, transportation and utilities industry sector. Employment in all industries is projected to grow by 41,700 jobs or 1.3 percent annually. The fastest growing nonfarm sector is Education, Health Care and Social Assistance. The annual growth rate in those sectors is expected to be around 2.7% percent per year. However, employment in this area of California tends to be seasonal, concentrated in the leisure and hospitality sector, and with the peak months being mid-December through to the end of April.

Table 12: Alpine, Inyo and Mono County, Employment by Industry

	Annual Average Employment					
Industry	**2008**	**%**	**2018**	**%**	**% Change**	**Annual Change**
Self Employed	1,440	8.30%	1,490	8.00%	3.50%	0.30%
Unpaid Family & Private Household Workers	110	0.60%	150	0.80%	36.40%	3.60%
Farm	70	0.40%	70	0.40%	0.00%	0.00%
Mining and Logging	30	0.20%	30	0.20%	0.00%	0.00%
Construction	750	4.30%	730	3.90%	-2.70%	-0.30%
Manufacturing	350	2.00%	380	2.00%	8.60%	0.90%
Wholesale Trade	100	0.60%	120	0.60%	20.00%	2.00%
Retail Trade	1,720	9.90%	1,830	9.80%	6.40%	0.60%
Transportation, Warehousing, & Utilities	300	1.70%	330	1.80%	10.00%	1.00%
Information	150	0.90%	130	0.70%	-13.30%	-1.30%
Financial Activities	530	3.10%	570	3.00%	7.50%	0.80%
Business & Professional Services	600	3.50%	690	3.70%	15.00%	1.50%
Education, Health Care & Social Assistance	480	2.80%	610	3.30%	27.10%	2.70%
Leisure & Hospitality	5,150	29.70%	5,420	29.00%	5.20%	0.50%
Other Services	440	2.50%	450	2.40%	2.30%	0.20%
Government	5,100	29.40%	5,690	30.40%	11.60%	1.20%
Total	**17,320**		**18,690**		**7.90%**	**0.80%**

Source: Labor Market Information, Kern County Projections by Industry 2008-2018. Prepared August 25, 2010; Analysis by Cambridge West Partnership, LLC

Major employers in Inyo County, with more than 500 employees, include the following firms.

Table 13: Inyo County, Major Employers

Employer Name	Location	Industry
Bishop Care Ctr	Bishop	Nursing & Convalescent Homes
C G Roxane Water Co	Olancha	Water Companies-Bottled, Bulk, Etc
County Courthouse	Independence	Government Offices-County
Death Valley National Park Lib	Death Valley	Special Interest Libraries
DEATH Valley Ntl Park Svc	Death Valley	Parks
Elm Street Elementary School	Bishop	Schools
Furnace Creek Ranch	Death Valley	Museums
High Country Lumber	Bishop	Building Materials
Inyo County Sheriff	Independence	Sheriff
Kmart	Bishop	Department Stores
Lo-Inyo Elementary School	Lone Pine	Schools
Lone Pine School District Ofc	Lone Pine	Schools
Los Angeles Operation & Mntnc	Independence	Government Offices-City, Village & Twp
Los Angeles Water & Power Dept	Bishop	Government Offices-City, Village & Twp
Los Angeles Water Supply Div	Bishop	Government Offices-City, Village & Twp
Mc Donald's	Bishop	Limited-Service Restaurant
Northern Inyo Hospital	Bishop	Hospitals
Southern Inyo Hospital	Lone Pine	Hospitals
Stovepipe Wells Village	Death Valley	Hotels & Motels
Toiyabe Indian Health Project	Bishop	Physicians & Surgeons
Transportation Department	Bishop	State Government-Transportation Programs
US Forest Svc Supervisor	Bishop	Government-Forestry Services
US Forestry Dept	Bishop	Government-Forestry Services
Vons	Bishop	Grocers-Retail
Whiskey Creek Inc	Bishop	Full-Service Restaurant

Source: California Economic Development Corporation, America's Labor Market Information System (ALMIS) Employer Database, 2012 Edition.

Major employers in Mono County, with more than 500 employees, include the following firms.

Table 14: Mono County, Major Employers

Employer Name	Location	Industry
Auld Dubliner	Mammoth Lakes	Full-Service Restaurant
Chart House Restaurant	Mammoth Lakes	Full-Service Restaurant
Double Eagle Resort	June Lake	Resorts
Double Eagle Resort & Spa	June Lake	Spas-Beauty & Day
Eagle Run	Mammoth Lakes	Resorts
Eastern Sierra Unified Sch Dst	Bridgeport	Schools
Grand Sierra At the Village	Mammoth Lakes	Resorts
Holiday Inn	Mammoth Lakes	Hotels & Motels
June Mountain Ski Area	June Lake	Skiing Centers & Resorts
Juniper Springs Resort	Mammoth Lakes	Resorts
Mammoth Elementary School	Mammoth Lakes	Schools
Mammoth Hospital	Mammoth Lakes	Hospitals
Mammoth Lakes Fire Dept	Mammoth Lakes	Fire Protection Service
Mammoth Mountain Inn	Mammoth Lakes	Hotels & Motels
Mammoth Mountain Ski Area	Mammoth Lakes	Skiing Centers & Resorts
Mammoth Ranger District Ctr	Mammoth Lakes	Government Offices-Us
Mammoth Reservation	Mammoth Lakes	Vacation Rentals
Mammoth Unified School Dist	Mammoth Lakes	Schools
Mono County Office-Emergency	Bridgeport	Government Offices-County
Mono County Public Works Dept	Bridgeport	Grading Contractors
Mountainside Grill	Mammoth Lakes	Full-Service Restaurant
Sheriff Office-Finance	Bridgeport	Sheriff
Tamarack Lodge & Resort	Mammoth Lakes	Resorts
Vons	Mammoth Lakes	Grocers-Retail
Westin Monache Resort	Mammoth Lakes	Hotels & Motels

Source: California Economic Development Corporation, America's Labor Market Information System (ALMIS) Employer Database, 2012 Edition.

Conditions for Higher Education

Several key policy decisions will influence the California Community College system in the coming years. The College is part of the national and State higher education community. As such, it has a public responsibility to make decisions in light of national goals, policies and resources. Speaking at Macomb Community College (Michigan) in July 2009, President Obama articulated the American Graduation Initiative (AGI), which has a goal of increasing the percentage of U.S. residents who earn high quality degrees and credentials from the present rate of 39 percent to a rate of 60 percent by the year 2025. The Lumina Foundation and the Bill and Melinda Gates Foundation have developed similar goals for increasing the educated population. Both philanthropic organizations are preparing to provide incentives, which are intended to stimulate students to complete degree programs successfully. While it has been announced that some new federal resources will be allocated for use by community colleges, the Congress is currently also struggling to restrain spending and to reduce debt levels. This may have an impact on the amount of money that the community colleges receive.

President Obama has pushed to increase college graduation rates across the nation. Complete College America, a non-profit organization, was formed to advance this mission. It has enlisted support from 22 state leaders to ensure greater numbers of students to acquire degrees. In its publication, *Time is the Enemy*, has focused national attention on several key observations:

- Nontraditional students are the new majority
- Part-time students rarely graduate
- Graduation rates are especially low for students who are of African American or Hispanic descent; as well as students who are older or poorer than the typical student
- Students are wasting time earning excess credits, and taking too much time to earn a degree
- Too many students need remediation, and too few succeed when they get it[2]

The Gates, Ford, Lumina, and Kellogg Foundations as well as the Carnegie Corporation of New York fund their work and the efforts of others to promote change in higher education.

The community colleges may be helped by federal legislation to consolidate student loan programs within the US Department of Education and increase the amount of Pell funds per grant. However, recent Congressional proposals to curtail the Pell grant awards may hurt the colleges and students. The long-term impact remains to be seen. President Obama has signed an executive order to align the monthly repayment rate of federal loans to the level of future wages earned by the student. That may ease the burden of debt for students and make the act of borrowing for a college education more feasible for prospective students.

After the Higher Education Opportunities Act was passed by Congress in 2008 a series of new federal regulations have been issued to improve program integrity where Title IV financial aid funds are involved. Regional accrediting bodies are now expected to provide *closer* scrutiny of member institutions on a range of new topics such as:

- The analysis and use of student achievement data, expressed at a variety of levels and in different ways, to improve programs and services.
- Specific attention must be given to the institution's longitudinal data on student achievement, disaggregated and analyzed in a variety of forms, to identify any concerns about stability and achievement of the institution's mission.
- Conformance of credit hours awarded to the "Carnegie Unit" standard as found in a variety of curriculum and instructional settings.
- The efficacy of methods that the institution uses to verify the identity of students enrolled in distance and correspondence education classes and steps taken to preserve the integrity of the credits and grades awarded.
- Public disclosure of educational costs and employment prospects for students in any career and technical program designed to prepare those students for gainful employment upon graduation.

[2] Complete College America. *Time Is The Enemy.* September 2011

In part, stimulated by prior federal government actions, regional accrediting bodies are insisting that greater attention be given to student *learning* outcomes. The expectation by the Accrediting Commission for Community and Junior Colleges (ACCJC) is that proficient assessment processes will be routinely practiced at the course, program, and degree levels by all member institutions by fall 2012.

These new areas are in addition to the traditional goals of accreditation:

1. Providing assurance to the public that the education provided by the institution meets acceptable levels of quality
2. Promoting continuous institutional improvement
3. Maintaining the high quality of higher education institutions in the region

Although subtle, the Commission has changed the term used for the initial phase of the comprehensive reaccreditation process from a self-study to a self-evaluation. The change underscores the increased emphasis that claims made by the institution must be supported by evidence and evaluation.[3]

The President's challenge to the nation, which was aimed at increasing the numbers of college graduates, has not been ignored in California. Within California, the Public Policy Institute (PPI) has estimated that one million additional bachelor's degree holders will be needed by 2025 to meet workforce needs in California.[4] The Community College League of California (CCLC) launched a futures project, 2020 Vision for Student Success, to respond to the national graduation goal by identifying policy and practice changes that could be implemented to increase student achievement. To contribute its part toward achieving the national graduation goal, California needs to produce a total of 1,065,000 degrees or certificates per year. That translates to producing an *additional* 23,000 degrees and certificates per year, a 5.2% annual increase.[5] These aspirations are closely coupled with the need to assure the quality of the awards conferred. A recent national report notes the following:

> Quality in higher education must be defined in terms of student outcomes, particularly learning outcomes…. The value of degrees and credentials- both for the individual and society as a whole- ultimately rests on the skills and knowledge they represent…. Ultimately, learning is what students' need, what degrees and credentials should represent and what higher education should provide to everyone who seeks it. (p. 1) [6]

The following State initiatives are intended to increase student success rates:

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[3] Accrediting Commission for Community and Junior Colleges. *Preparing for A Comprehensive Visit*. Workshop materials presented on October 21, 2011

[4] Hans Johnson and Ria Sengupta *Closing the Gap: Meeting California's Need for College Graduates* (San Francisco, CA: Public Policy Institute of California, April 2009)

[5] *2020 Vision: A Report of the Commission on the Future,* (Sacramento, CA: Community College League of California, 2010)

[6] *A Stronger Nation Through Higher Education: How and Why Americans Must Achieve a "Big Goal" for College Attainment. A Special Report,* (Indianapolis, IN: Lumina Foundation for Education, 2009)

- The Board of Governor's basic skills initiative seeks to enable more students to overcome their academic deficiencies.
- The Student Success Task Force, formed under the provisions of SB1143, prepared a set of recommendations to bolster measures designed to promote student success and degree completion.
- Additional legislation, SB1440 Student Transfer Achievement Reform or STAR Act, simplified the process of transferring from a community college to a school in the California State University (CSU) system. This program provides a pathway for students to follow so that they can be admitted to a CSU with junior status.
- Enacted in Fall 2010, AB2302 directs the community college system and the CSU to find ways to clearly articulate transfer requirements and provide guaranteed admission to students who meet those requirements. It also requests that the University of California collaborate with community colleges to design transfer programs and to publicize those programs to increase the number of students who transfer from community colleges.

Perhaps the most potentially far-reaching set of recommendations for change in policy and practice are included in the report from the California Community College Chancellor's Office Student Success Task Force. The group has proposed eight areas of focus with 22 recommendations. The focus areas are:

1. Increase college and career readiness
2. Strengthen support for entering students
3. Incentivize successful student behaviors
4. Align course offerings to meet student needs
5. Improve the education of basic skills students
6. Revitalize and re-envision professional development programs
7. Enable efficient statewide leadership and increase coordination among colleges
8. Align resources with student success recommendations

Some of these recommendations require changes to State law and regulations. Others require new resources. The rest can be accomplished in each community college district that has the will to do so without either of these state-level changes. Two of the Task Force recommendations already have been passed into law. They include creating a common assessment/placement system and providing electronic transcripts. Assembly Bill 743, supporting the common assessment tests, has received a one-time allocation of $500,000. Those public funds will be combined with Gates and Hewlett Foundation grant funding to total $850,000 for start-up costs beginning in January 2012. Assembly Bill 1056, supporting the introduction of electronic transcripts, has also received a one-time allocation of $500,000 to help fund the cost of converting from paper to an electronic transcript system. The ongoing maintenance expenses for an electronic transcript system are anticipated to be covered by the savings generated by the use of the more efficient electronic system.

The Task Force recommendations come in the wake of a severe shortfall in resources for the State's public higher education institutions. Fiscal support to the community colleges has

been sharply curtailed in recent years. As noted above, the prospects for a *quick* recovery to the state's economy and ability to support higher education are not good. The Legislature has increased the enrollment fee that students pay from $26 per unit to $36 per unit and they will likely increase it again in the near future. Governing boards for the University of California and the California State University systems have also responded to reduced State support by increasing their tuition fees. Both university systems are reducing the number of students that are accepted and redirecting many to the community colleges. The community college system is overwhelmed with enrollment. As a result, class sections, which have been reduced in number, fill quickly causing students to take more time to earn their degrees.

Key Demographic Considerations

Selected aspects of demographic information for the counties and cities served by Cerro Coso College have been incorporated into the discussion of economic conditions above. Looking to the future, the estimated growth rates for the counties in general and the effective service areas where the College's campus and centers are situated are shown in the table below. The population base likely will not grow and may shrink modestly in the Eastern Sierra area but population is expected to grow modestly in the Kern River Valley and South Kern areas.

Table 15: Projected Growth Rates for Cerro Coso College Territories

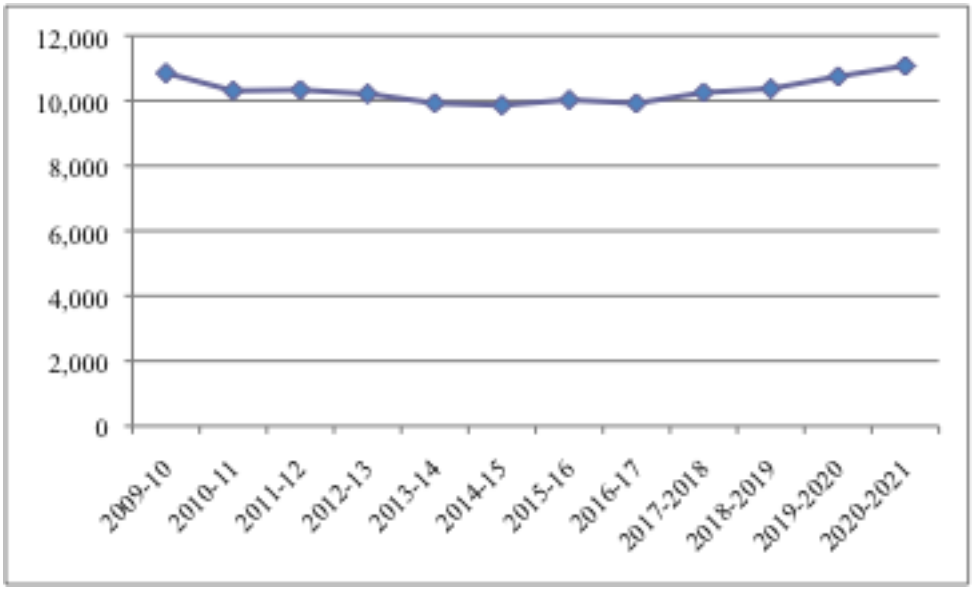
	Projected Growth Rates 2010 to 2015		
Location	**Projected Population**	**Projected Owner Occupied Housing Units**	**Median Household Income**
Effective Service Areas			
Indian Wells Valley	0.35%	0.16%	2.13%
Bishop area	-0.51%	-0.41%	2.11%
Mammoth Lakes area	-0.35%	-0.12%	1.97%
Kern River Valley	1.33%	1.33%	2.30%
South Kern area	1.17%	1.66%	2.44%
Kern County	1.37%	1.41%	3.05%
Inyo County	-0.59%	-0.56%	2.85%
Mono County	-0.42%	-0.28%	2.18%
San Bernardino County	0.91%	0.83%	2.54%
State of California	0.70%	0.68%	2.59%
United States	0.76%	0.82%	2.36%

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015

Most of the high schools in the College service area are small. They are located in small communities often 30 to 40 minutes drive apart from one another. Future headcounts for the College will not come from any "tidal wave" of recent high school graduates. As noted below, the past yield rates to the College from these high schools has been relatively low. Both factors indicate that the College should consider an aggressive recruiting strategy in Eastern Kern County.

The California Department of Finance projects an annual .11% growth in the number of high school graduates between 2009-10 and 2020-2021 in Kern County. As illustrated in the graphic below, a gradual increase is expected between 2016-17 and 2020-2021. However, the vast majority of these graduates are attending high schools on the western side of the County.

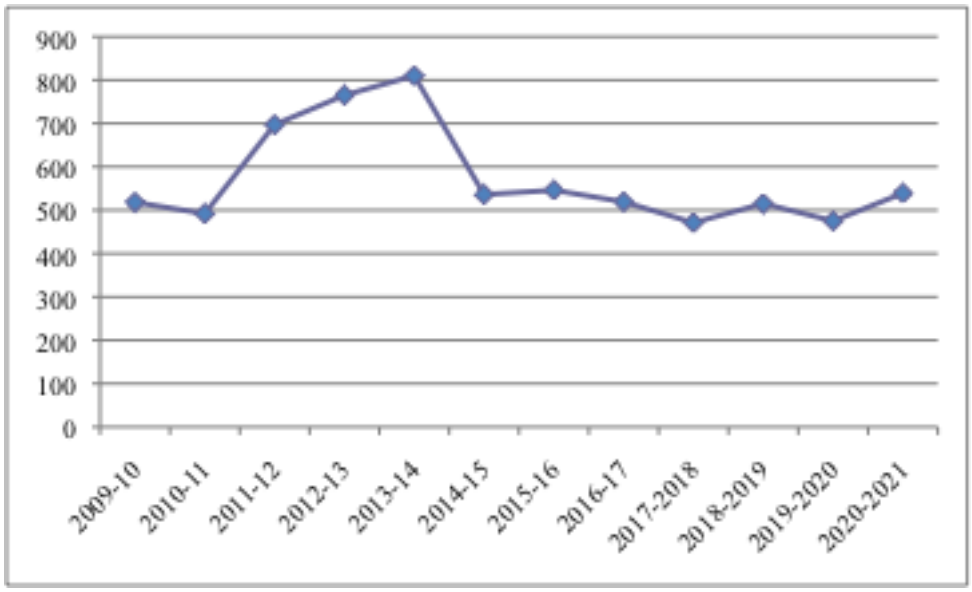
Kern County, Expected Growth of High School Graduates



Source: State of California, Department of Finance, California Public K-12 Graded Enrollment and High School Graduate Projections by County, 2011 Series. Sacramento, California, October 2011.

An annual .4% increase in the number of high school graduates between 2009-10 and 2020-2021 is projected for Inyo and Mono Counties. As shown in the graphic below, a sharp decline is expected between 2013-14 and 2014-2015. Between the two counties Inyo County is expected to have a .86% annual growth rate, while Mono County is expected to decline by -1.26% annually through the year 2020-2021. As noted below, the past yield rates to the College from these high schools has been relatively low. Both factors indicate that the College should consider an aggressive recruiting strategy in Inyo and Mono Counties.

Inyo and Mono County, Expected Growth of High School Graduates



Source: State of California, Department of Finance, California Public K-12 Graded Enrollment and High School Graduate Projections by County, 2011 Series. Sacramento, California, October 2011.

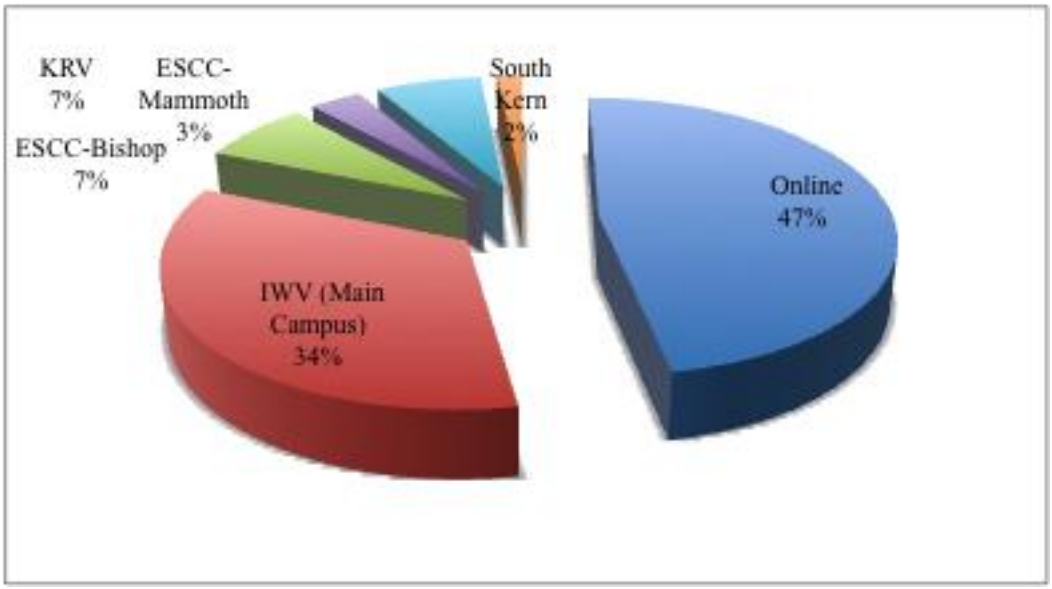
Implications for Cerro Coso College (including the campuses of Indian Wells Valley/Ridgecrest, South Kern/Kern River Valley and Eastern Sierra College Center):

- The southern portion of the College service area is expected to have slow positive population growth while the northern portion will experience little or some negative growth out to the year 2015.
- Projections for high school graduates in Kern County are relatively flat while the Eastern Sierra counties expect to experience a decline in graduates.
- These projections mean that the College will likely need to recruit aggressively for students, work hard to retain those who attend, and look to growth from online instruction and perhaps contract education services.

Key Cities and Effective Service Areas

A review of fall term headcount data from 2006 to 2011 reveals that the five cities where College facilities are located contribute prominently to the student on-campus headcount average for each fall term. Approximately, 47% of the headcounts are from online course offerings rather than on-campus classes.

Cerro Coso College Headcount Share by Site Fall 2006-2011



Source: KCCD Research and Planning; analysis Cambridge West Partnership, LLC

Over this period of time headcounts in online classes has grown by 39% while participation at Bishop has declined by 65%. Participation at South Kern has plummeted by 51% between 2006 and 2011. Distance education classes offered by the College have a global reach with students drawn from approximately 1,000 cities and zip codes, a few as far away as Montreal, Canada.

The shifts in sources for student headcounts might also be explained by considering the numbers of students participating each fall in broad categories described as the college service area in which they residence. Although the numbers are small, the greatest change was the gain in students from the Porterville College service area. Larger numbers of students are recorded in the gain from the Bakersfield College service area. The greatest loss was from the Cerro Coso College service area itself.

Table 16: Cerro Coso College Headcount Draw by District Service Areas

		Fall Term							
College	Service Area	2006	2007	2008	2009	2010	2011	Total	% Change
	BC Service Area	724	885	727	1,483	1,947	1,337	7,103	84.67%
	CC Service Area	3,745	3,443	3,907	3,534	3,255	2,813	20,697	-24.89%
	Outside Service Area	1,151	1,096	1,152	1,157	1,262	1,225	7,043	6.43%
	PC Service Area	50	55	53	67	126	114	465	128.00%
CC Total		***5,670***	***5,479***	***5,839***	***6,241***	***6,590***	***5,489***	***35,308***	***-3.19%***

Source: KCCD Research and Planning

Indian Wells Valley, Ridgecrest

At Indian Wells Valley (IWV) Main Campus, four cities tend to account for most of the student population. The city of Ridgecrest contributed the most students, but has suffered a 21% decline between 2006 and 2011. Some face-to-face course offerings located at IWV, such as in-service Administration of Justice classes, serve as magnet programs that attract students from as far away as Bakersfield, Tehachapi, and Lake Isabella. Those cases were excluded from the analysis used to create the effective service area.

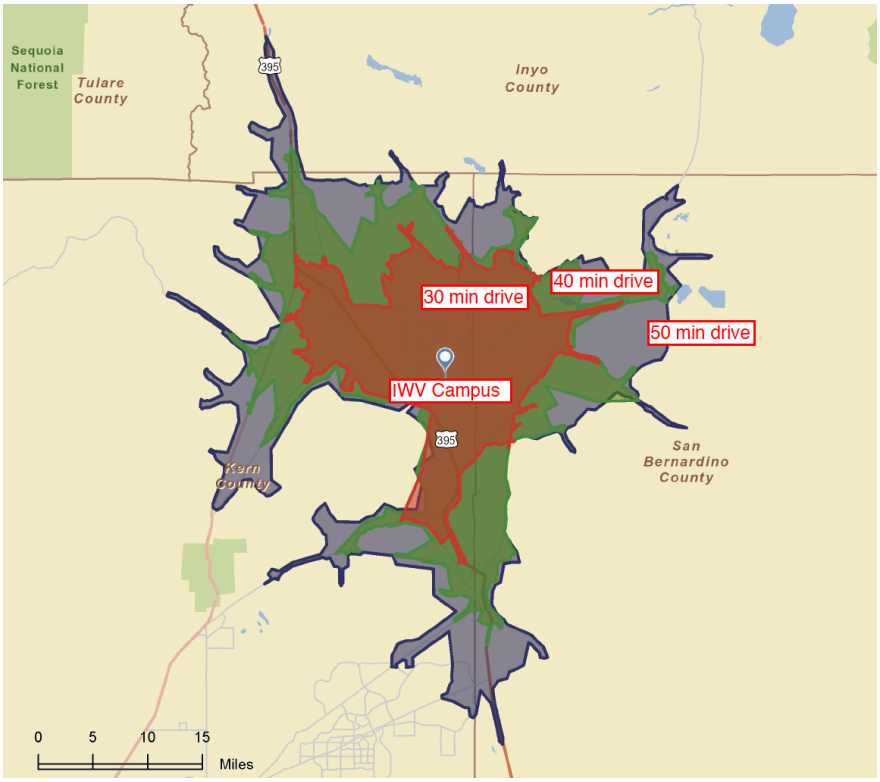
Table 17: Indian Wells Valley (Main Campus) Common Cities of Residence

City	Total	Headcount Fall Term Average	Running Total %	2006	2007	2008	2009	2010	2011
Ridgecrest	10,662	1,777.0	79%	1,830	1,734	2,052	1,913	1,681	1,452
Inyokern	588	98.0	83%	79	98	121	103	97	90
Trona	317	52.8	85%	65	44	55	64	58	31
Lone Pine	151	25.2	86%	48	20	25	19	24	15
All Others	1,926	321.0	100%	157	355	31	625	549	209
Total	**13,582**	**2,263.7**		2,179	2,251	2,222	2,724	2,409	1,797

Source: KCCD Research and Planning; analysis Cambridge West Partnership, LLC

Based on an analysis of residential zip codes reported by enrolled students, a driving time of 50 minutes, originating from the IWV campus in Ridgecrest, comprises the effective service area of the campus and is illustrated in the graph below.

Indian Wells Valley Campus Effective Service Area

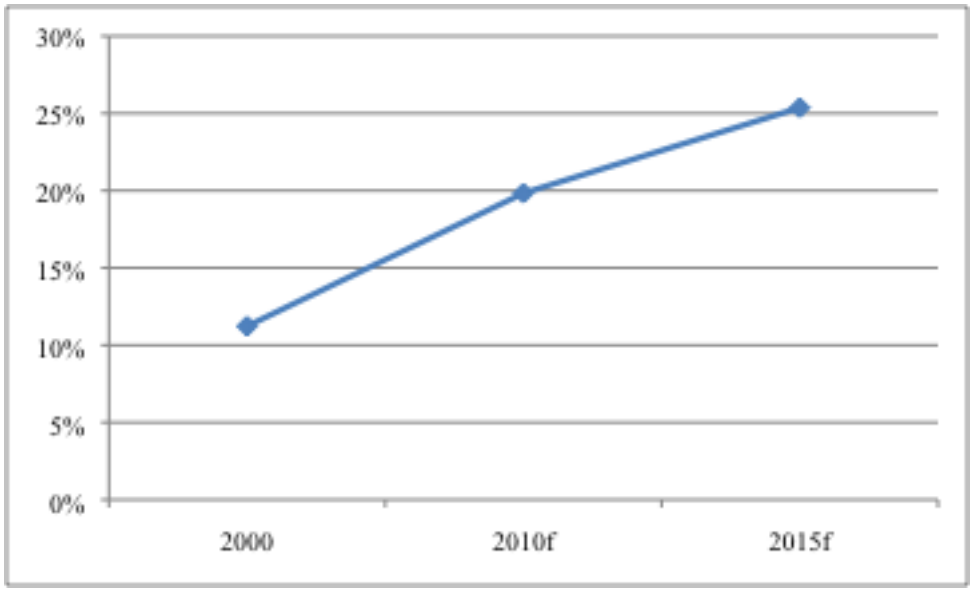


Source: Environmental Systems Research Institute (ESRI); analysis by Cambridge West Partnership, LLC

The population in this effective service area was 33,903 in the year 2000 and is projected to be at 36,589 by 2015. The area is expected to grow very slowly at an annual rate of .35% as compared to the State annual growth rate of .70%. The median age of the population in this service area was 37.1 in 2000 and likely will be 38.9 by 2015. Per capita income for the effective service area had been a $21,460, and it is expected to be $27,564 in the year 2015. The median household income, projected at $57,852 by 2015, is expected to grow between 2010 and 2015 at an annual rate of 2.13% as compared to the California rate of 2.59% and the national rate of 2.36%.

Few changes in the race/ethnicity mix in this effective service area are expected. The White Alone group is forecast to drop from being 84 percent of the area population in 2000 to becoming 75 percent of the area population in 2015. However, residents of Hispanic descent, regardless of race, are expected to comprise 25 percent of the population in this effective service area in the year 2015, whereas in 2000 they were 11% of the population.

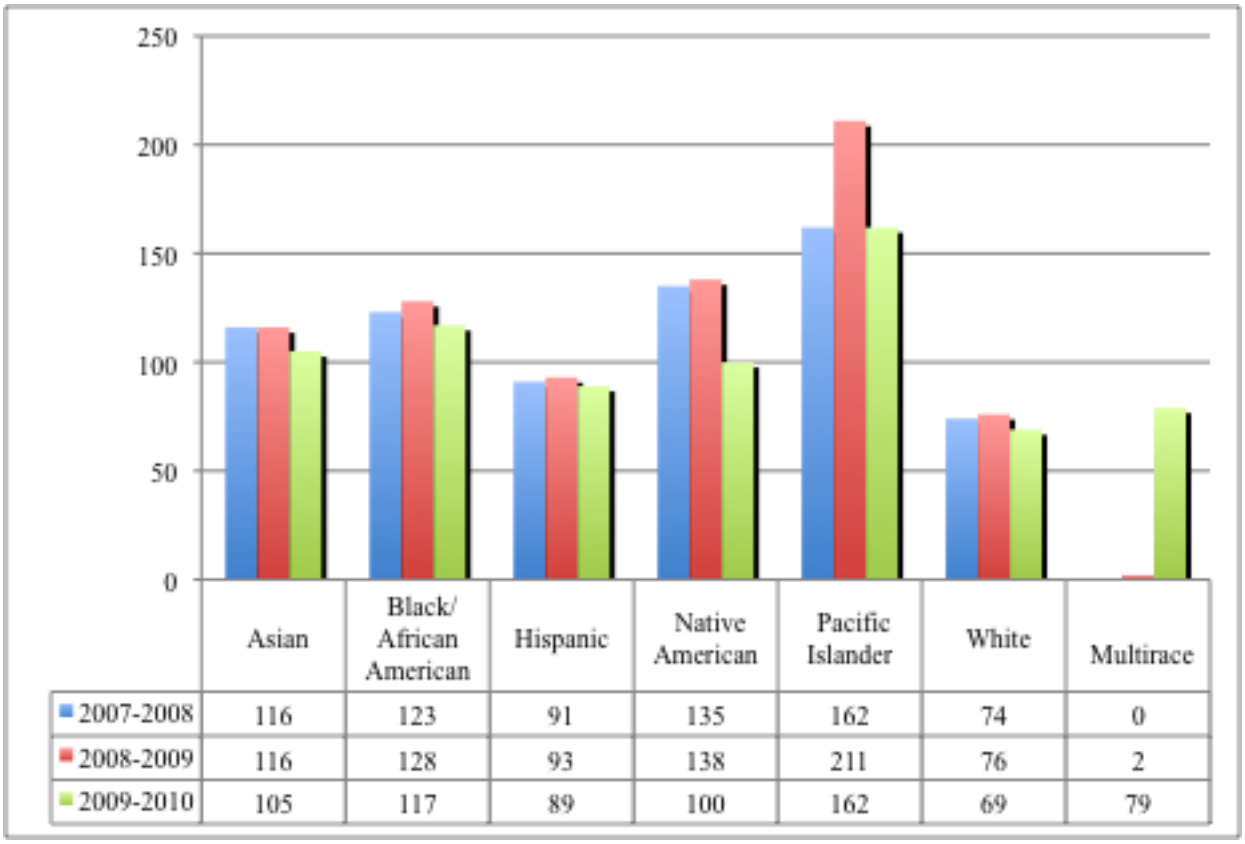
Residents of Hispanic Origin, Effective Service Area



Source: U.S. Bureau of the Census, 2000 Census of Population & Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Given the traditional rates of participation in higher education, these shifts in ethnicity/race within the effective service area have implications for future enrollments at the College. The statewide community college participation rate differences among various ethnic groups are shown in the graph below. In general, Hispanics are not as likely to attend college as other groups. Therefore, as the Hispanic population increases, outreach efforts may be needed to encourage college attendance at all of the sites where the College operates.

Statewide Community College Participation Rates by Ethnic Group per 1,000 Adults

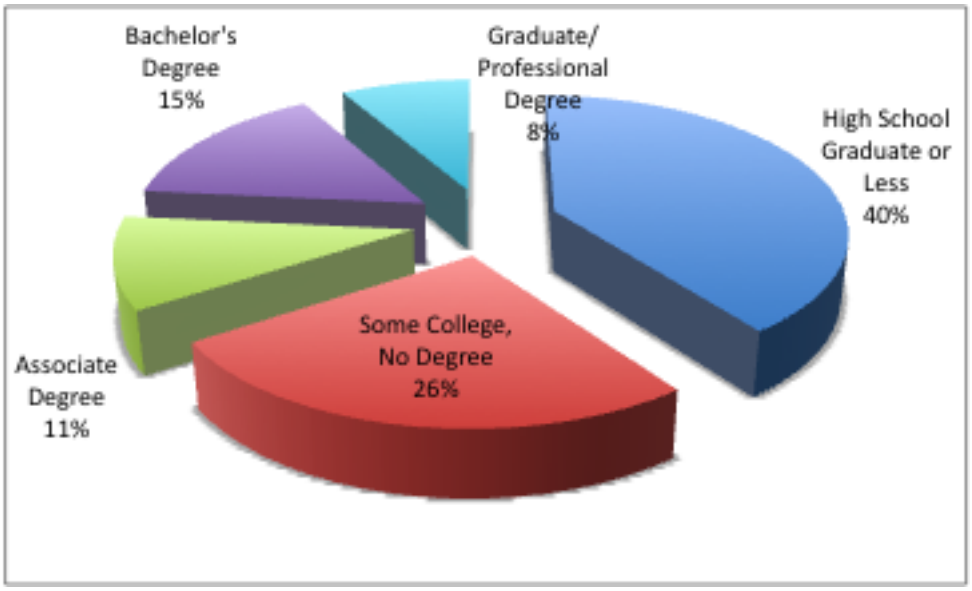


	Asian	Black/ African American	Hispanic	Native American	Pacific Islander	White	Multirace
2007-2008	116	123	91	135	162	74	0
2008-2009	116	128	93	138	211	76	2
2009-2010	105	117	89	100	162	69	79

Source: Community College Chancellor's Office, Accountability Reporting for Community Colleges 2011

For the year 2010, the highest educational attainment among the population age 25 and older, within the effective service area, is shown below. Approximately 40% of the adult population is a high school graduate or less. Those residents who have no college degree (either Associate's or Bachelor's) comprise 66 percent of the young adult or older population in the effective service area. Many of these adults would likely gain access to a broader range of employment opportunities upon completing a community college education.

2010 Educational Attainment, Age 25+, Effective Service Area



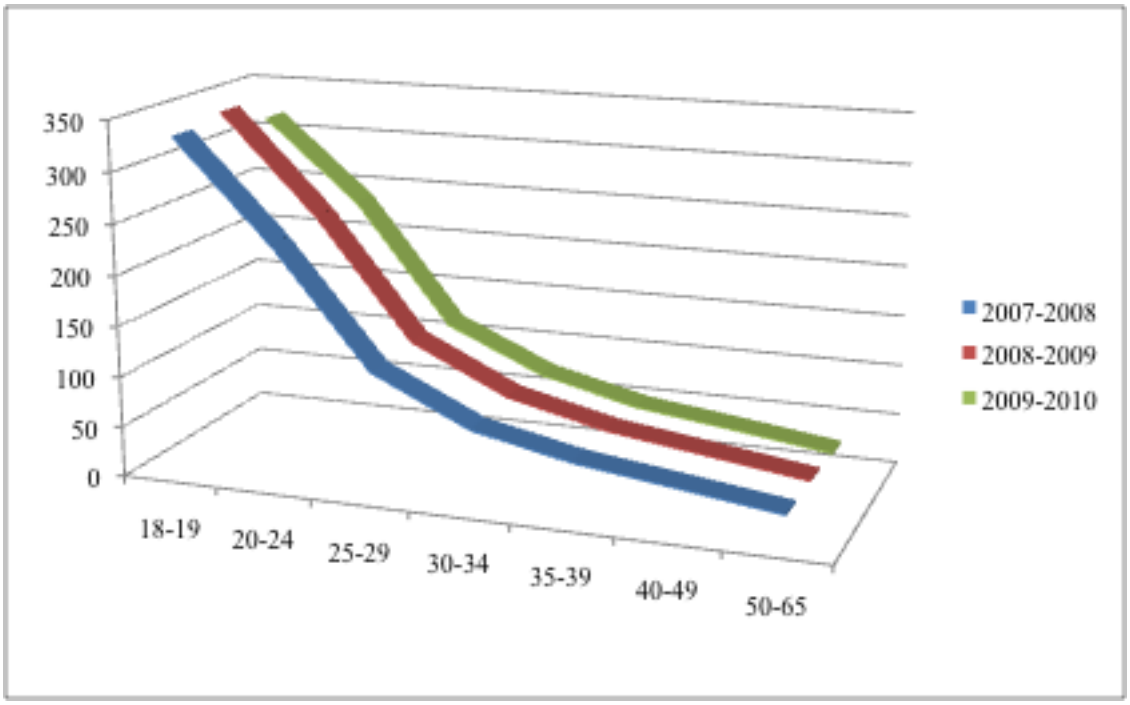
Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Within the effective service area, the senior age groups 65+ are forecast to increase their share of the population between 2010 and 2015 by 13.1%. In the immediate future, now through the year 2015, the 20 to 24 year age group in the effective service area is forecast to increase by only 2%, but their percentage of the population will remain at 5.9%. The number of students in the 15 to 19 year age group is projected to decrease by -8% between 2010 and 2015, and their percentage of the population will also decline to 6.6% by 2015.

Participation in the community college system across the state is influenced by age. The highest rates per 1,000 people are found in the 18-19 and 20-24 age groups. Therefore, as the size of these age groups shrinks in each of the areas served by the main campus and centers, the College may need to engage in more aggressive recruiting.

However, in 2010 the combined 15 to 19 and 20 to 24 year old groups is 13.2 percent of the population. Throughout the state those two groups combined are 14.9 percent of the population. Looking forward to 2015 the combination of the two age groups in the effective service area declines to 12.5 percent of the population but throughout the state it the combined groups are 13.9 percent of the population. Young people of prime college-going age are a smaller percentage of the population in the effective service area than is the case throughout the state.

Statewide Community College Participation Rates by Age Group Per 1,000 Adults



Source: Community College Chancellor's Office, Accountability Reporting for Community Colleges 2011

The three high schools that provide the largest number of IWV students have been contributing an annual average of 107 students per year since 1996. A primary feeder school, Burroughs High School, has contributed an average of 50 or more students annually to the College.

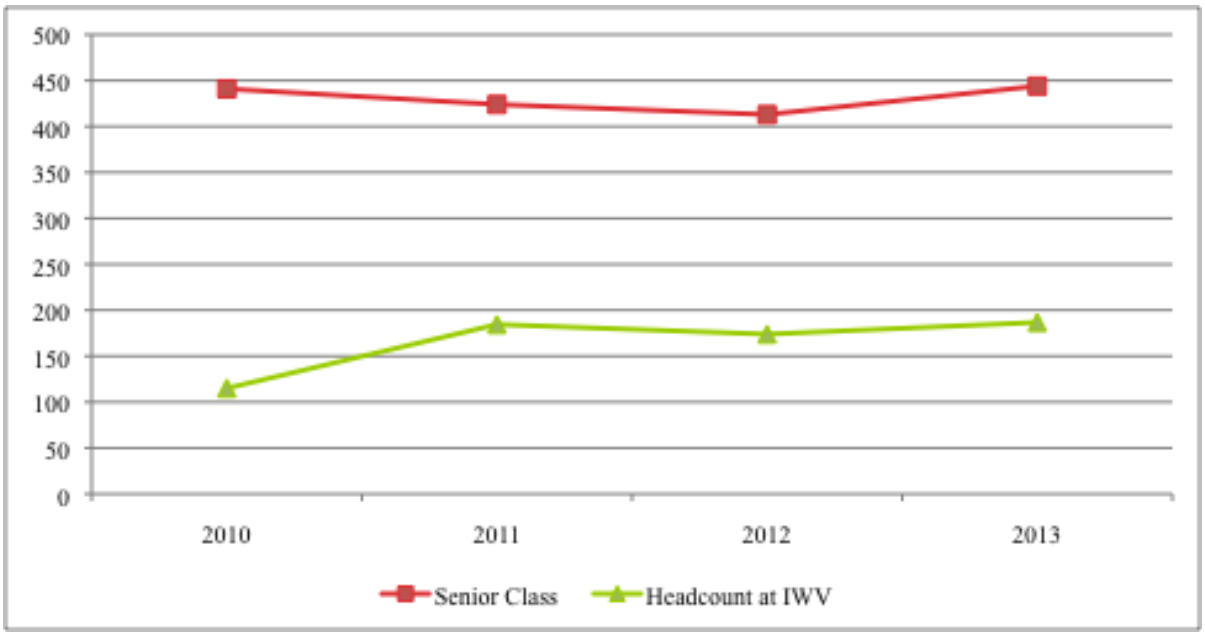
Table 18: High Schools Supporting IWV & Average Headcounts

High School	District	Location	2005-10 Av Yield Ratio	Annual Average	Last 3 Yrs Average	% Change 1996 to 2010
Indian Wells Valley						
Burroughs High	Sierra Sands Unified	Ridgecrest	43.00%	89.7	117	56.70%
Mesquite Continuation High	Sierra Sands Unified	Ridgecrest	58.10%	8.3	6.3	-45.50%
Immanuel Christian School	Private	Ridgecrest		2.9	3.3	-66.70%
Trona High	Trona Joint Unified	Trona	20.80%	5.7	3.3	-40.00%
				106.6	130.0	

Source: California Postsecondary Education Commission, Detailed Data, Freshman Pathways;
analysis by Cambridge West Partnership, LLC

The IWV average high school admissions yield rate from 2005 to 2009 was 41%. Based on 2010-11 headcounts in grades nine through twelve and the campus admission yield rate, a set of projections for possible future high school enrollments at the campus has been illustrated in the graphic below. However, an aggressive recruiting strategy might improve the yield rate.

High Schools Headcount Projection



Source: California Department of Education and California Postsecondary Education Commission; analysis by Cambridge West Partnership, LLC

Eastern Sierra Educational Center- Mammoth Lakes

The vast majority of students attending the Eastern Sierra Education Center site at Mammoth Lakes are from that community, although some students come from Bishop. Between 2007 and 2011 there has been a steady decline in the numbers of students attending at this site.

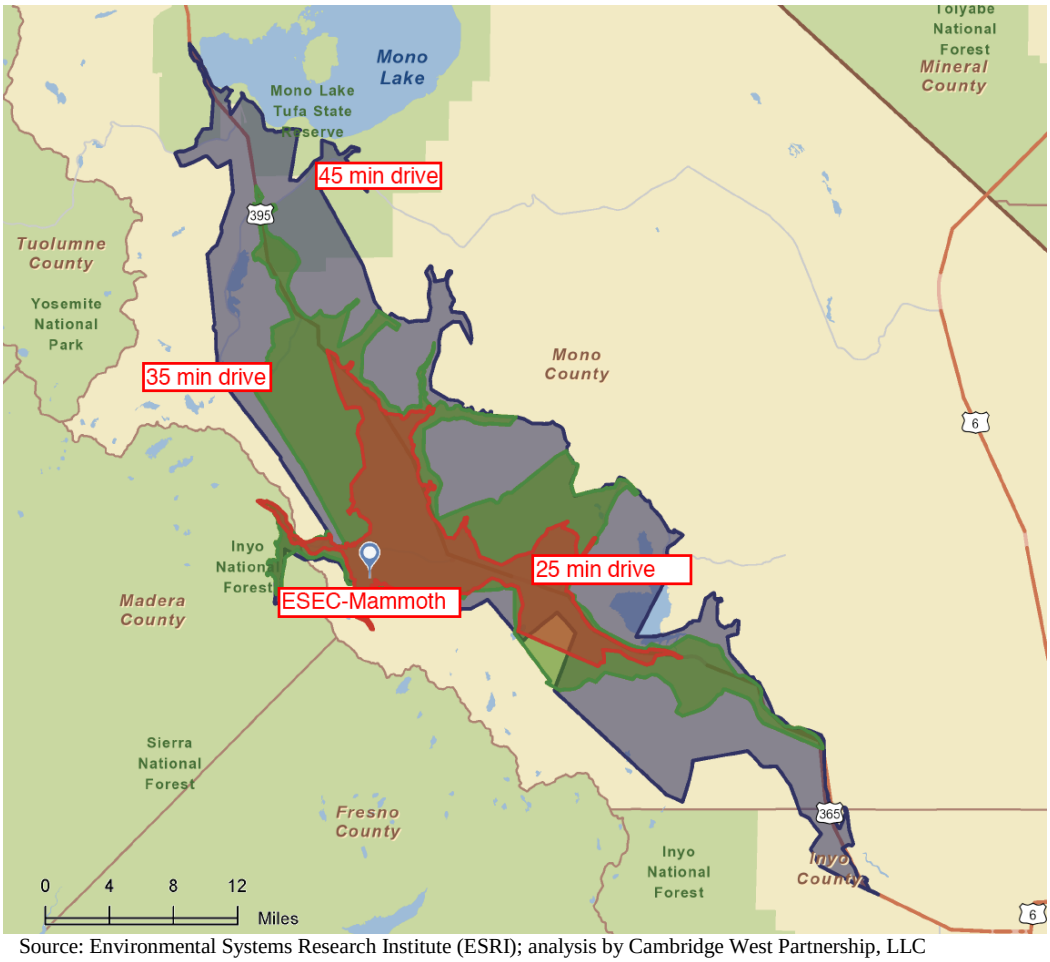
Table 19: Eastern Sierra Education Center- Mammoth Lakes
Common Cities of Residence

City	Total	Headcount Fall Term Average	Running Total %	2006	2007	2008	2009	2010	2011
Mammoth Lakes	1,238	206.3	87%	197	236	232	204	200	169
All Others	177	29.5	100%	36	22	45	31	28	15
Total	**1,415**	**235.8**		**233**	**258**	**277**	**235**	**228**	**184**

Source: KCCD Research and Planning; analysis Cambridge West Partnership, LLC

Based on an analysis of residential zip codes reported by enrolled students, a driving time of 45 minutes, originating from the property in Mammoth Lakes, comprises the effective service area of the campus and is illustrated in the graph below.

Eastern Sierra Education Center- Mammoth Lakes Effective Service Area



Source: Environmental Systems Research Institute (ESRI); analysis by Cambridge West Partnership, LLC

The population in this effective service area was 9,174 in the year 2000 and is projected to be at 9,172 by 2015. The population is concentrated in and immediately around the municipality of Mammoth Lakes. There are some small population groups along Highways 395 and 6, but they are approximately 20 to 30 miles apart. A drive from Mammoth Lakes north to June Lake is 21 miles, to Lee Vining is 29 miles, to Mono City is 37 miles, to Bridgeport is 54 miles and into Coleville is a distance of 90 miles. There is no public transportation operating in that direction.[7] The population growth in this area is expected to be flat or decline very slowly at an annual rate of -.35% as compared to the State annual growth rate of .70%. The median age of the population in this service area was 34.7 in 2000 and likely will be 38.7 by 2015. Per capita income for the effective service area had been a $25,160, and it is expected to be $39,104 in the year 2015. The median household income, projected at $68,078 by 2015, is expected to grow between 2010 and 2015 at an annual rate of 1.97% as compared to the California rate of 2.59% and the national rate of 2.36%.

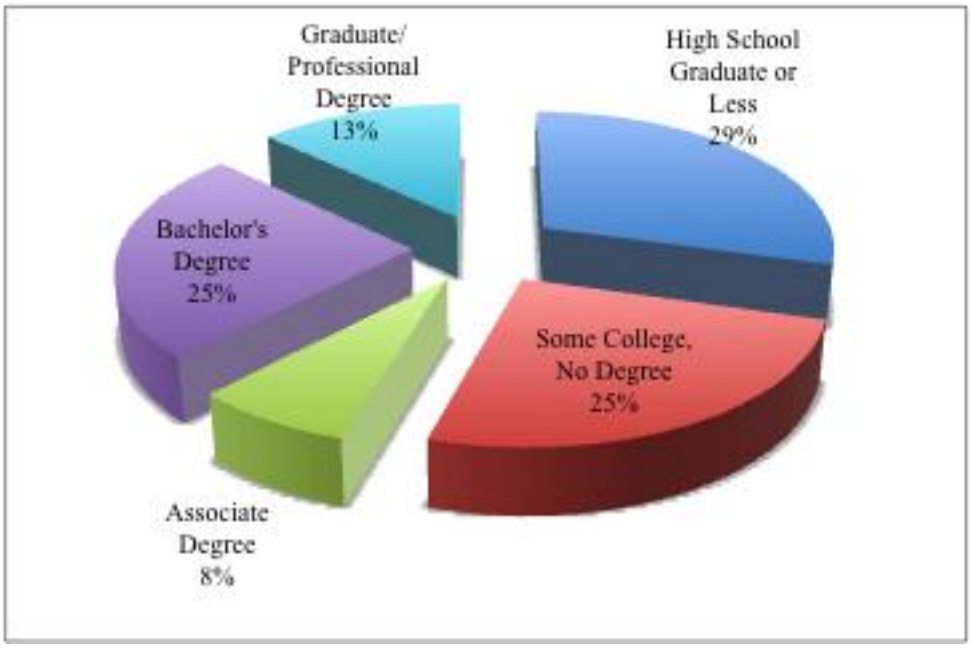
[7] Campbell, Deanna. *Eastern Sierra College Center Business Plan 2010-2015 (draft).* undated

Almost no change in the race/ethnicity mix for this effective service area is expected. Those residents describing themselves as White Alone constitute 85% of the population. However, within Mammoth Lakes the Hispanic population is at 22% and is projected to remain at that percentage to 2015. Throughout Mono County the U.S. Census surveys from 2005-2009 indicate that 19.4% of the population age 5 or more speak some language other than English at home.[8] These data suggest a need for English as a Second Language instruction.

For the year 2010, the highest educational attainment among the population age 25 and older, within the effective service area, is shown below. Approximately 30% of the adult population is a high school graduate or less. Those residents who have no college degree (either Associate's or Bachelor's) comprise 54 percent of the young adult or older population in the effective service area. Many of these adults would likely gain access to a broader range of employment opportunities upon completing a community college education.

[8] U.S. Census Bureau. *State and County Quick Facts Derived from Population Estimates through the American Community Survey.* Retrieved 11/15/11 from www.quickfacts.census.gov/qfd/states

2010 Educational Attainment, Age 25+, Effective Service Area



Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Within the effective service area, the senior age groups 65+ are forecast to increase their share of the population between 2010 and 2015 by 32%. In the immediate future, now through the year 2015, the 20 to 24 year age group in the effective service area is forecast to decrease by -11%, and their percentage of the population will drop to 6.8%. The number of students in the 15 to 19 year age group is projected to decrease by -22% between 2010 and 2015, and their percentage of the population will also decline to 4.5% by 2015.

However, in 2010 the combined 15 to 19 and 20 to 24 year old groups is 13.2 percent of the population. Throughout the state those two groups combined are 14.9 percent of the population. Looking forward to 2015 the combination of the two age groups in the effective service area declines to 11.3 percent of the population but throughout the state it the combined groups are 13.9 percent of the population. Young people of prime college-going age are a smaller percentage of the population in the effective service area than is the case throughout the state.

The single high school that provides students to the Center has been contributing an annual average of 6 students per year since 1996.

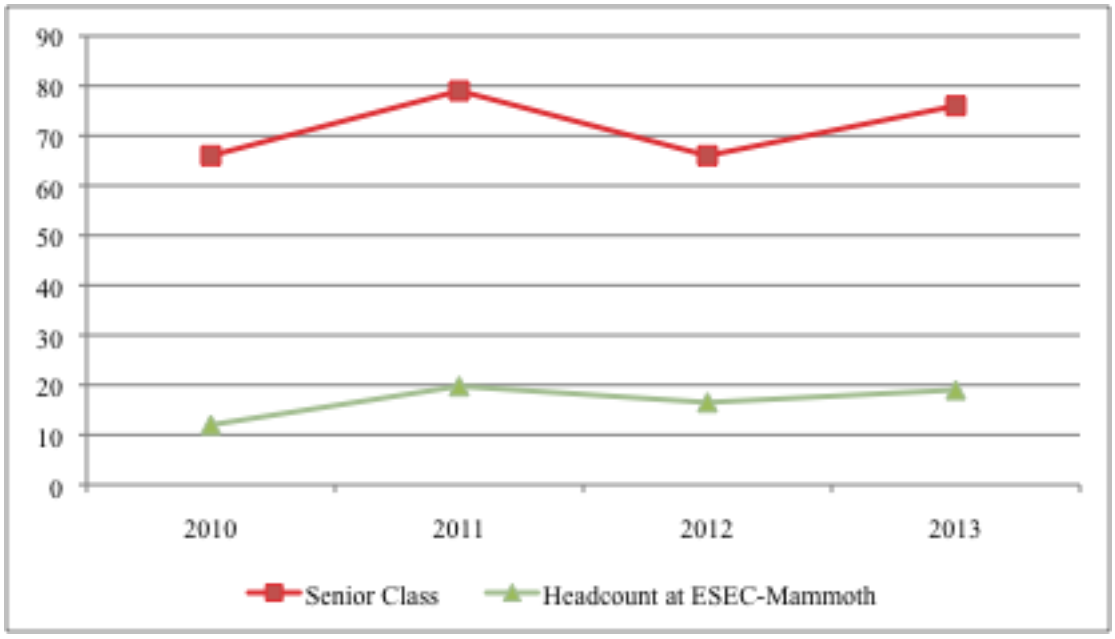
Table 20: High Schools Supporting Eastern Sierra Educational Center- Mammoth Lakes & Average Headcounts

High School	District	Location	2005-10 Av Yield Ratio	Annual Average	Last 3 Yrs Average	% Change 1996 to 2010
ESEC- Mammoth						
Mammoth High	Mammoth Unified	Mammoth	25.0%	5.5	10	500%

Source: California Postsecondary Education Commission, Detailed Data, Freshman Pathways and California Department of Education, Data Quest; analysis by Cambridge West Partnership, LLC

The average high school admissions yield rate from 2005 to 2009 was 25%. Based on 2010-11 enrollments in grades nine through twelve and the campus admission yield rate, a set of projections for possible future high school enrollments at the campus has been illustrated in the graphic below. However, an aggressive recruiting strategy might improve the yield rate.

High Schools Headcount Projection



Source: California Department of Education and California Postsecondary Education Commission; analysis by Cambridge West Partnership, LLC

Eastern Sierra Educational Center- Bishop

The vast majority of students attending the Eastern Sierra Education Center site at Bishop are from that community, although some students do come from Big Pine and a small number reside in Mammoth Lakes. Between 2007 and 2011 there has been a steady decline in the numbers of students attending at this site.

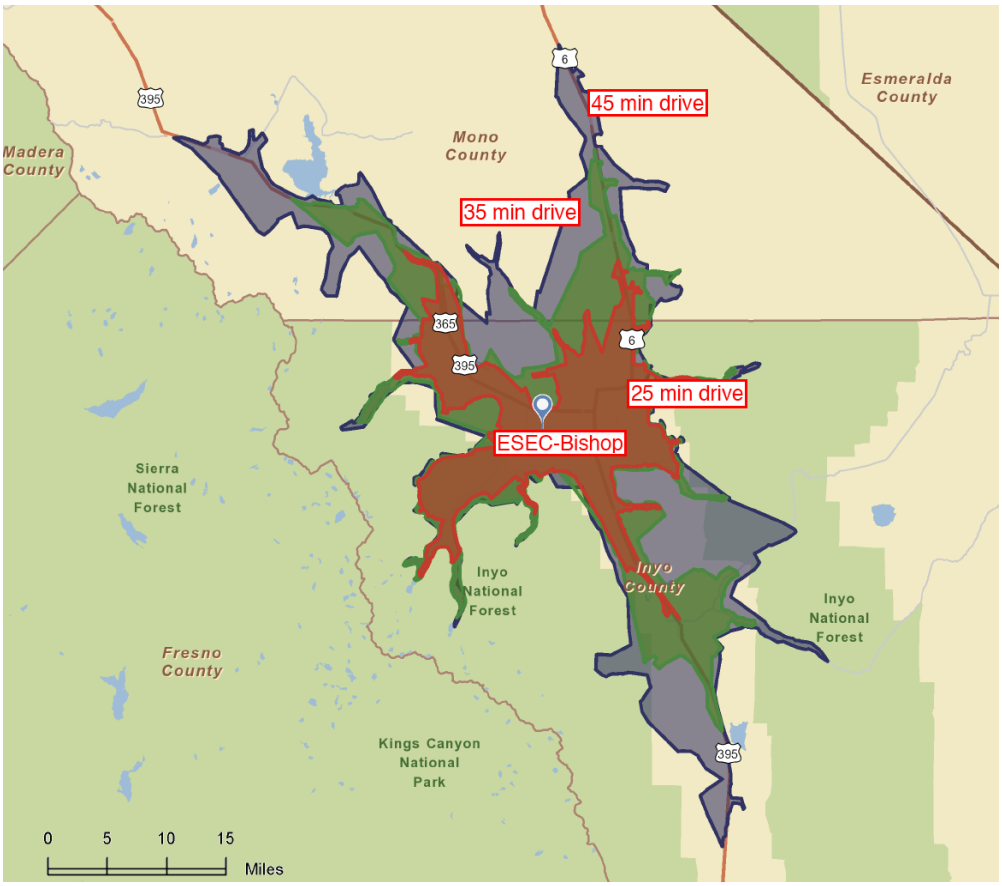
Table 21: Eastern Sierra Education Center- Bishop Common Cities of Residence

City	Total	Headcount Fall Term Average	Running Total %	2006	2007	2008	2009	2010	2011
Bishop	2,707	451.2	85%	645	480	506	379	375	322
Big Pine	379	63.2	97%	62	60	66	64	68	59
All Others	91	15.2	100%	39	13	14	13	6	6
Total	**3,177**	**529.5**		**746**	**553**	**586**	**456**	**449**	**387**

Source: KCCD Research and Planning; analysis Cambridge West Partnership, LLC

Based on an analysis of residential zip codes reported by enrolled students, a driving time of 45 minutes, originating from the property in Bishop, comprises the effective service area of the campus and is illustrated in the graph below.

Eastern Sierra Education Center- Bishop Effective Service Area



Source: Environmental Systems Research Institute (ESRI); analysis by Cambridge West Partnership, LLC

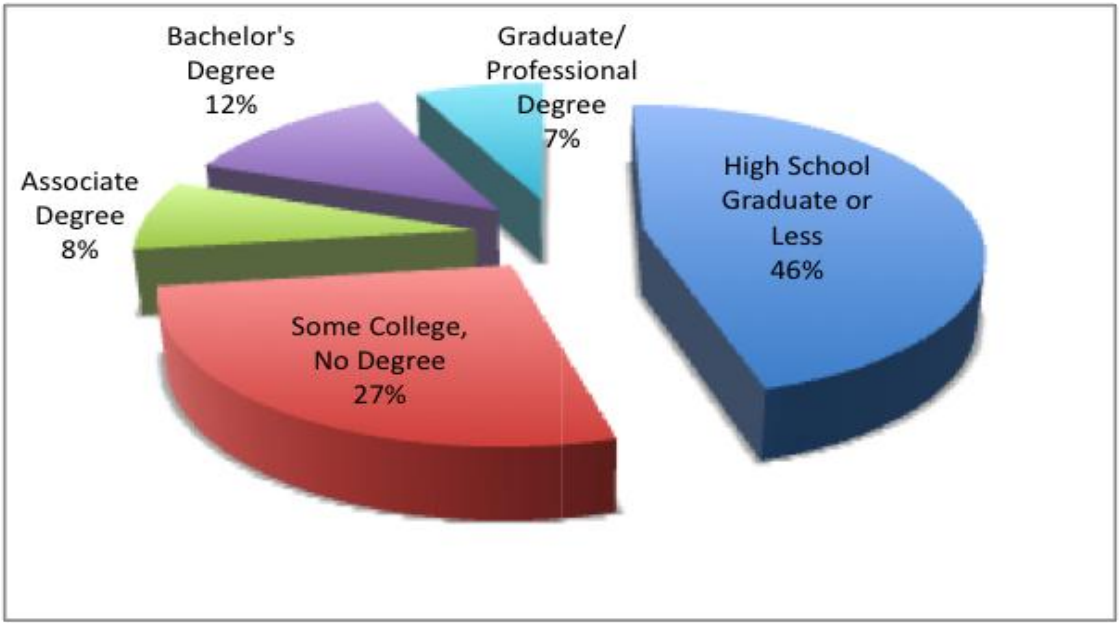
Population around Bishop is spread along Highway 395 at intervals roughly 20 miles apart. From Bishop, traveling south, Big Pine is 20 miles, Independence is 47 miles and Lone Pine is 63 miles away. The population in this effective service area was 16,436 in the year 2000 but is projected to decline to 15,787 by 2015. The population growth in this area is expected to be flat or to decline very slowly at an annual rate of -.51% as compared to the State annual growth rate of .70%. The median age of the population in this service area was 42.3 in 2000

and likely will be 47.5 by 2015. Per capita income for the effective service area had been $20,548, and it is expected to be $28,104 in the year 2015. The median household income, projected at $53,915 by 2015, is expected to grow between 2010 and 2015 at an annual rate of 2.11% as compared to the California rate of 2.59% and the national rate of 2.36%.

The primary expected change in the race/ethnicity mix in this effective service is that the White Alone group is forecast to drop from being 81 percent of the area population in 2000 to becoming 67 percent of the area population in 2015. The second largest group, Native American, will remain at 10% of the population. Within the city of Bishop the population of Hispanic descent was 17% in 2000 and is projected to increase to 25% by 2015. Throughout Inyo County the U.S. Census surveys from 2005-2009 indicate that 17.1% of the population age 5 or more speak some language other than English at home.[9] These data suggest the need for English as a Second Language instruction.

For the year 2010, the highest educational attainment among the population age 25 and older, within the effective service area, is shown below. Approximately 46% of the adult population is a high school graduate or less. Those residents who have no college degree (either Associate's or Bachelor's) comprise 73 percent of the young adult or older population in the effective service area. Many of these adults would likely gain access to a broader range of employment opportunities upon completing a community college education.

2010 Educational Attainment, Age 25+, Effective Service Area



Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

[9] U.S. Census Bureau. *State and County Quick Facts Derived from Population Estimates through the American Community Survey.* Retrieved 11/15/11 from www.quickfacts.census.gov/qfd/states

Within the effective service area, the senior age groups 65+ are forecast to increase their share of the population between 2010 and 2015 by 12%. In the immediate future, now through the year 2015, the 20 to 24 year age group in the effective service area is forecast to decrease by -14%, and their percentage of the population will drop to 4.6%. The number of students in the 15 to 19 year age group is projected to decrease by -18% between 2010 and 2015, and their percentage of the population will also decline to 5.4% by 2015.

However, in 2010 the combined 15 to 19 and 20 to 24 year old groups is 11.7 percent of the population. Throughout the state those two groups combined are 14.9 percent of the population. Looking forward to 2015 the combination of the two age groups in the effective service area declines to 10.0 percent of the population but throughout the state it the combined groups are 13.9 percent of the population. Young people of prime college-going age are a smaller percentage of the population in the effective service area than is the case throughout the state.

The four high schools that provide students to the Center have been contributing an annual average of 20 students per year since 1996.

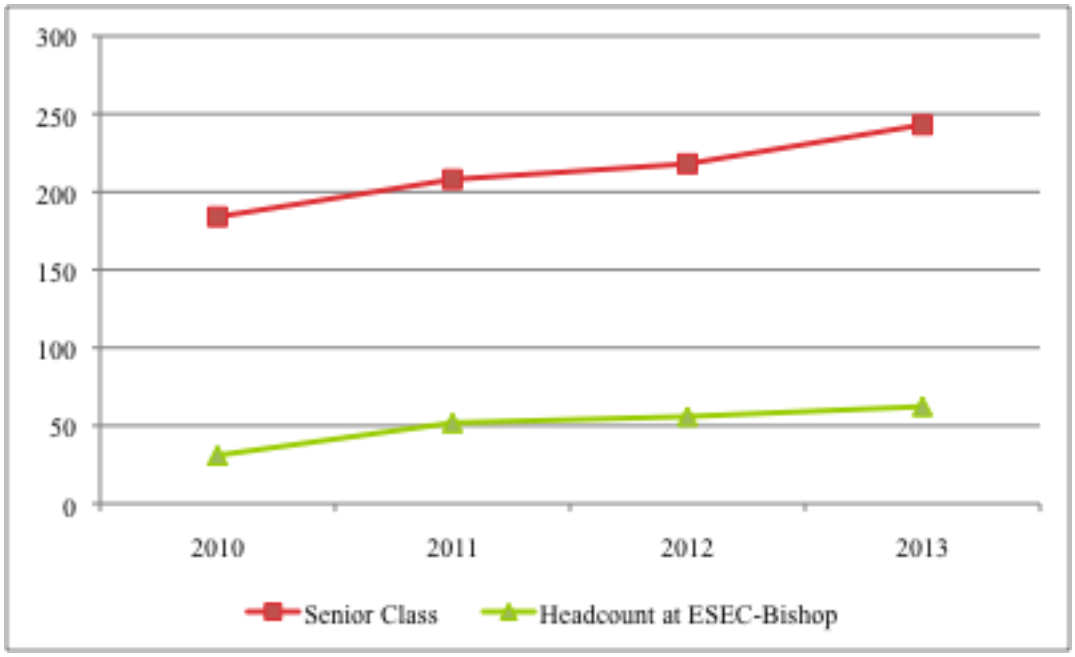
Table 22: High Schools Supporting Eastern Sierra Educational Center-Bishop & Average Headcounts

High School	District	Location	2005-10 Av Yield Ratio	Annual Average	Last 3 Yrs Average	% Change 1996 to 2010
ESEC-Bishop						
Bishop Union High	Bishop Unified	Bishop	26.80%	14.2	19.7	31.30%
Lone Pine High	Lone Pine Unified	Lone Pine	14.60%	2.9	5.3	166.70%
Big Pine High	Big Pine Unified	Big Pine	33.50%	1.5	4	100.00%
Owens Valley High	Owens Valley Unified	Independence	41.70%	1.5	0.7	-100.00%
				20.1	29.7	

Source: California Postsecondary Education Commission, Detailed Data, Freshman Pathways and California Department of Education, Data Quest; analysis by Cambridge West Partnership, LLC

The average high school admissions yield rate from 2005 to 2009 was 29%. Based on 2010-11 headcounts in grades nine through twelve and the campus admission yield rate, a set of projections for possible future high school participation at the campus has been illustrated in the graphic below. However, an aggressive recruiting strategy might improve the yield rate.

High Schools Headcount Projection



Source: California Department of Education and California Postsecondary Education Commission; analysis by Cambridge West Partnership, LLC

South Kern Educational Center- Edwards Air Force Base

The vast majority of students attending the South Kern Education Center site at Edwards Air Force Base (EAFB) are from that community or California City, although some students come from Boron and Rosamond. The Center is the only community college located on EAFB. Between 2007 and 2011 there has been a steady decline in the numbers of students

attending at this site. An increasing number of students are enrolling in online classes while other students in the military have been deployed out of the area.[10]

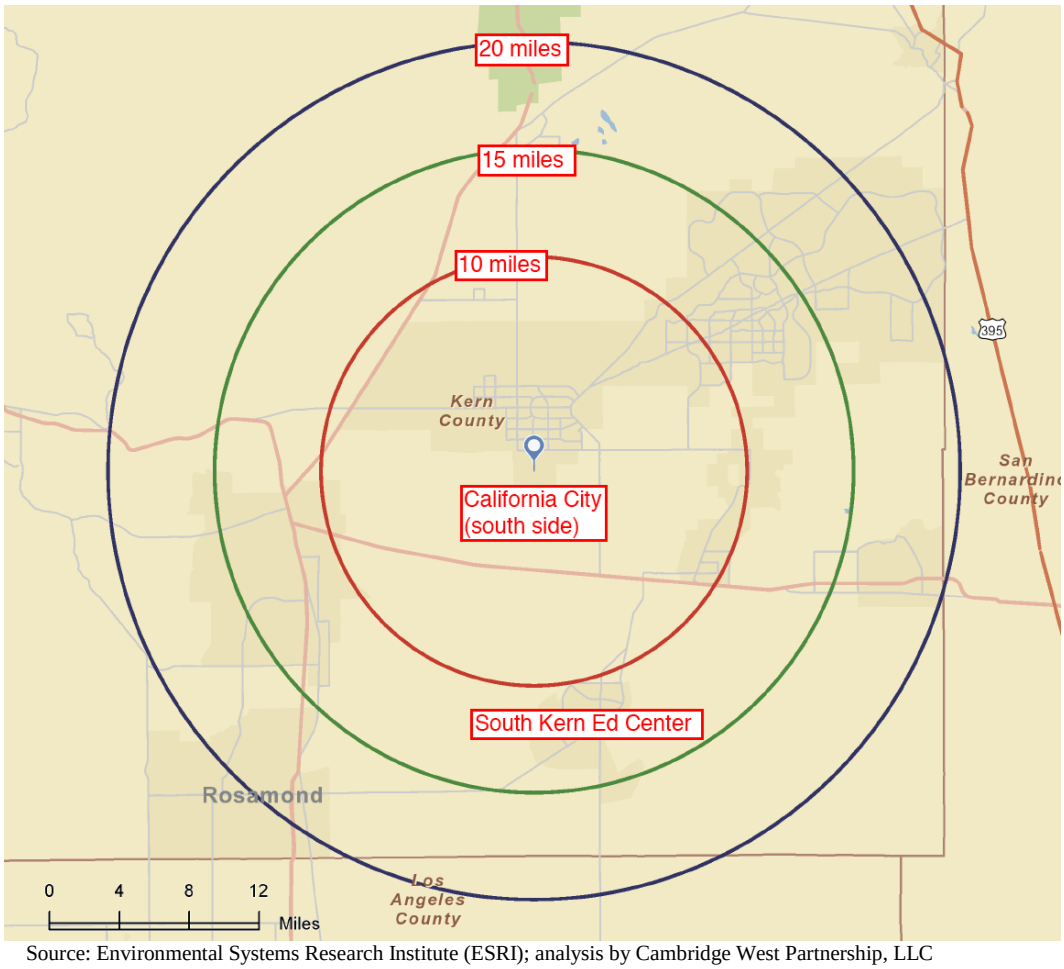
Table 23: South Kern Education Center Unduplicated Headcounts

Site	Total	Headcount Fall Term Average	2006	2007	2008	2009	2010	2011
South Kern	653	108.8	187	99	102	93	80	92

Source: KCCD Research and Planning

Based on an analysis of residential zip codes reported by enrolled students, a 20-mile radius originating from a point in the southern portion of California City comprises the effective service area of the campus and is illustrated in the graph below. Included in this area are the cities of Mojave, California City, Boron, North Edwards, EAFB and Rosamond.

South Kern Effective Service Area



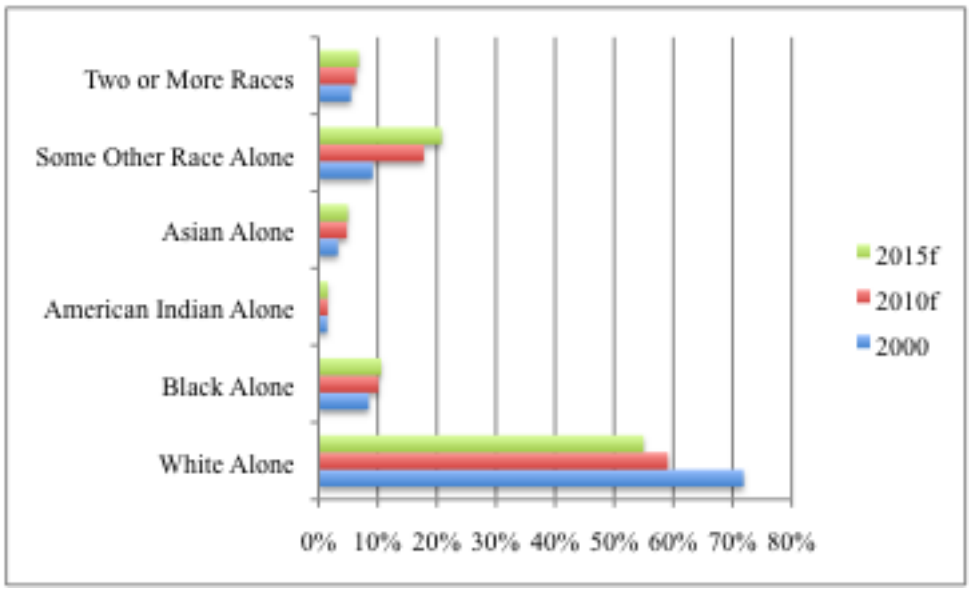
Source: Environmental Systems Research Institute (ESRI); analysis by Cambridge West Partnership, LLC

[10] John, Erie. *Employment Linked Education and Training Center for the South kern, Kern River Valley and Tehachapi Areas of East Kern County.* Undated.

The population in this effective service area was 33,838 in the year 2000 but is projected to be at 42,419 by 2015. The area is expected to increase at an annual rate of .93% as compared to the State annual growth rate of .70%. The median age of the population in this service area was 30.7 in 2000 and likely will be down to 31.2 by 2015. Per capita income for the effective service area had been a $16,689, and it is expected to be $22,806 in the year 2015. The median household income, projected at $55,517 by 2015, is expected to grow between 2010 and 2015 at an annual rate of 2.15% as compared to the California rate of 2.59% and the national rate of 2.36%.

The primary expected change in the race/ethnicity mix in this effective service is that the White Alone group is forecast to drop from being 72 percent of the area population in 2000 to becoming 55 percent of the area population in 2015. The residents who identify themselves as Some Other Race Alone are projected to increase from 9% in 2000 to 21% of the population by 2015.

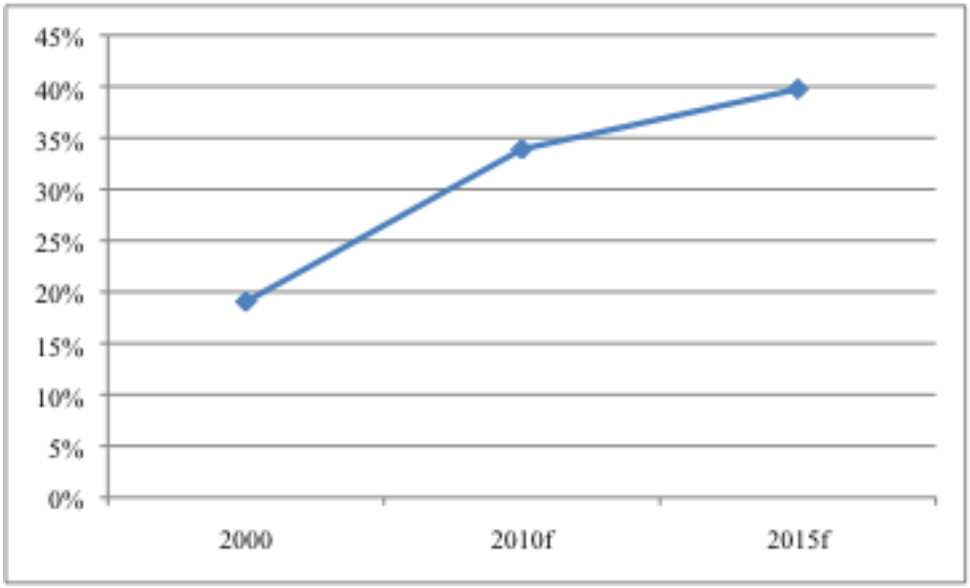
Changes in Ethnicity Distribution, Effective Service Area



Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

The residents who claim to be of Hispanic descent are anticipated to increase from being 19% of the population in the year 2000 to becoming 40% of the population by 2015.

Residents of Hispanic Origin, Effective Service Area

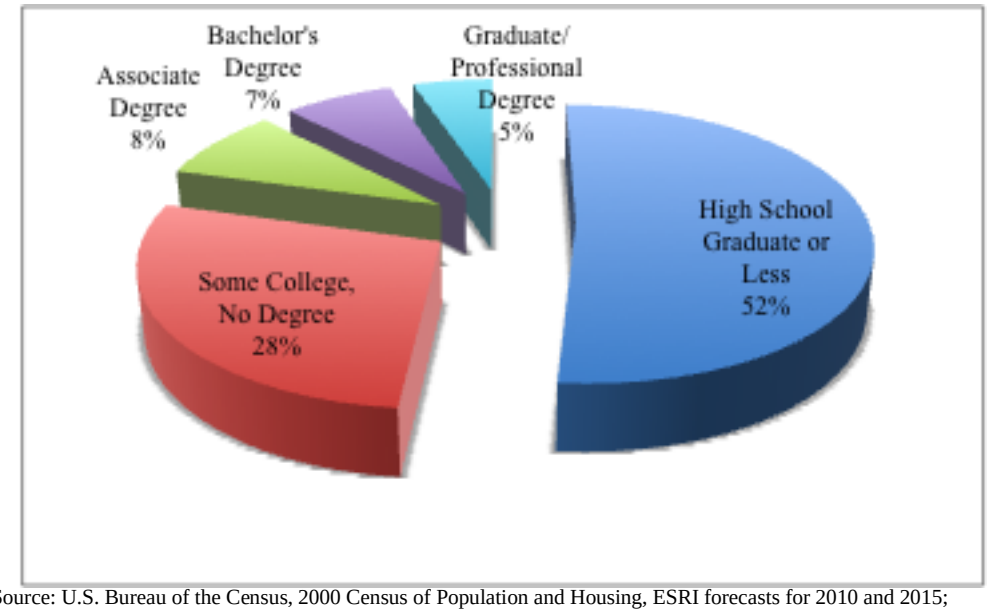


Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Given the traditional rates of participation in higher education, these shifts in ethnicity/race within the effective service area have implications for future enrollments at the College. As the Hispanic population increases, the College may need to increase outreach efforts to encourage college attendance.

For the year 2010, the highest educational attainment among the population age 25 and older, within the effective service area, is shown below. Approximately 53% of the adult population is a high school graduate or less. Those residents who have no college degree (either Associate's or Bachelor's) comprise 80 percent of the young adult or older population in the effective service area. Many of these adults would likely gain access to a broader range of employment opportunities upon completing a community college education.

2010 Educational Attainment, Age 25+, Effective Service Area

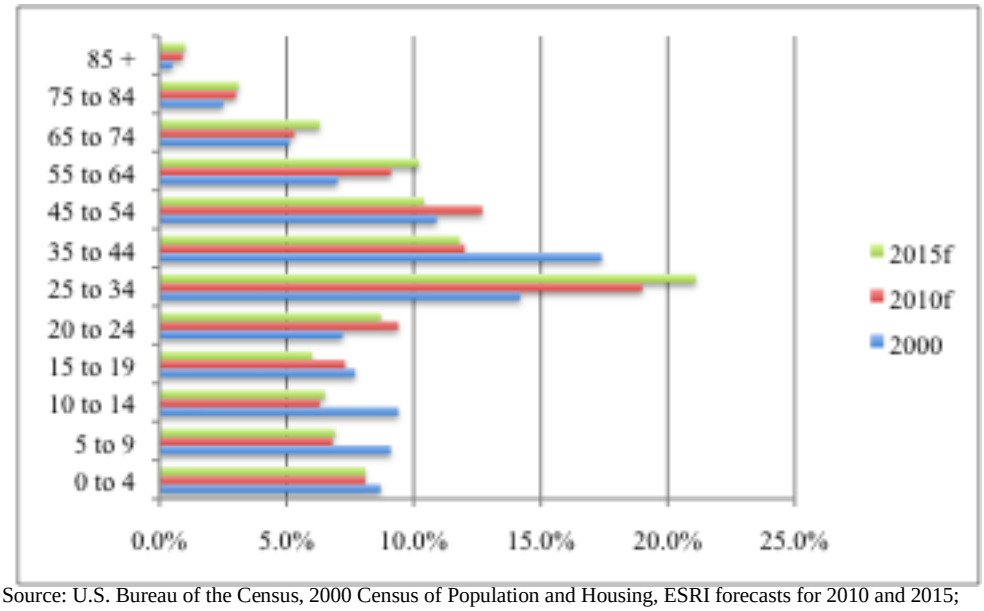


Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Between the year 2000 and 2015 the 25 to 34 age group will increase 48.6%, more than any other age group. Within the effective service area, the senior age groups 65+ are forecast to increase their share of the population between 2010 and 2015 by 13%. In the immediate future, now through the year 2015, the 20 to 24 year age group in the effective service area is forecast to decrease by -4%, and their percentage of the population will drop to 8.7%. The number of students in the 15 to 19 year age group is projected to decrease by -13% between 2010 and 2015, and their percentage of the population will also decline to 6.0% by 2015.

However, in 2010 the combined 15 to 19 and 20 to 24 year old groups is 16.7 percent of the population. Throughout the state those two groups combined are only 14.9 percent of the population. Looking forward to 2015 the combination of the two age groups in the effective service area declines to 14.7 percent of the population but throughout the state it the combined groups are only 13.9 percent of the population. Young people of prime college-going age are a greater percentage of the population in the effective service area than is the case throughout the state.

Projected Age Group Changes in the Effective Service Area



Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Combined, the five high schools that provide students to the Center have been contributing an annual average of only 18 students per year since 1996. A sixth high school had its first graduating class in June, 2011. It is expected to contribute students to the Center.

Table 24: High Schools Supporting South Kern Educational Center & Average Headcounts

High School	District	Location	2005-10 Av Yield Ratio	Annual Average	Last 3 Yrs Average	% Change 1996 to 2010
South Kern						
Boron Junior-Senior High	Muroc Joint Unified	Boron	5.70%	1.7	2	0.00%
Desert Junior-Senior High	Muroc Joint Unified	Edwards	2.40%	4.7	0	-100.00%
California City High	Mojave Unified	California City	10.9%*			
Mojave Jr./Sr. High	Mojave Unified	Mojave	10.90%	4.5	6.3	20.00%
Rosamond High	Southern Kern Unified	Rosamond	1.20%	1.2	1	200.00%
Tehachapi High	Tehachapi Unified	Tehachapi	0.90%	5.7	3.7	150.00%
*anticipated rate				17.8	13	

Source: California Postsecondary Education Commission, Detailed Data, Freshman Pathways and California Department of Education, Data Quest; analysis by Cambridge West Partnership, LLC

The average high school admissions yield rate from 2005 to 2009 has been only 4.2%. With the addition of graduates from California City High School the overall yield rate is expected to increase to 5.3%. Based on 2010-11 headcounts in grades nine through twelve and the campus admission yield rate, a set of projections for possible future high school participation at the campus has been illustrated in the graphic below. However, an aggressive recruiting strategy might improve the yield rate.

High Schools Headcount Projection

Source: California Department of Education and California Postsecondary Education Commission; analysis by Cambridge West Partnership, LLC

Kern River Valley Educational Center- Lake Isabella

The vast majority of students attending the Kern River Valley Education Center site at Lake Isabella are from that community, although some students do come from the cities of Bodfish, Wooford Heights, Kernville, Weldon and Onyx. Between 2007 and 2011 there has been a steady decline in the numbers of students attending at this site.

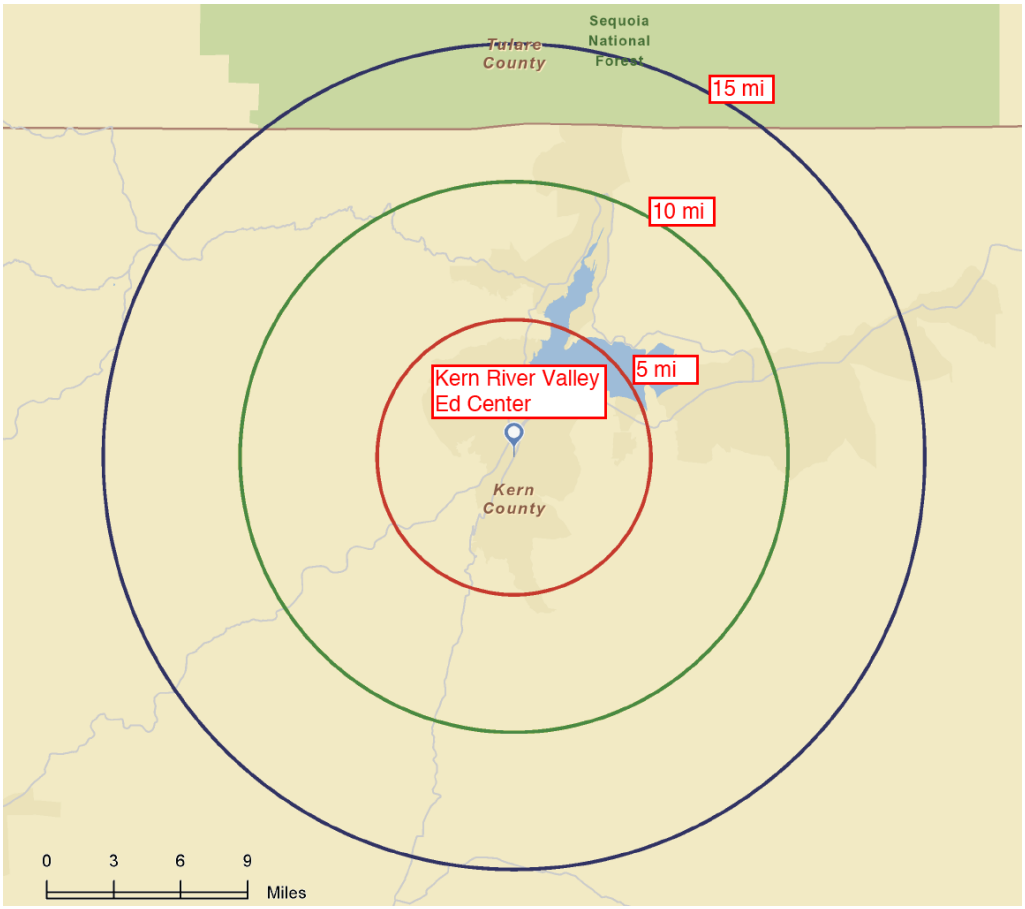
Table 25: Kern River Valley Education Center Common Cities of Residence

City	Total	Headcount Fall Term Average	%	Running Total %	2006	2007	2008	2009	2010	2011
Lake Isabella	1,388	231.3	51%	51%	217	247	243	243	231	207
Bodfish	461	76.8	17%	68%	85	74	91	83	70	58
Wofford Heights	367	61.2	13%	81%	71	69	69	50	57	51
Weldon	336	56	12%	93%	56	55	56	60	60	49
All Others	179	29.8	7%	100%	52	31	52	21	13	10
Total	**2,731**	**455.2**			**481**	**476**	**511**	**457**	**431**	**375**

Source: KCCD Research and Planning; analysis Cambridge West Partnership, LLC

Based on an analysis of residential zip codes reported by enrolled students, a 15-mile radius originating from the site of the Center comprises the effective service area of the campus and is illustrated in the graph below.

Kern River Valley Educational Center Effective Service Area

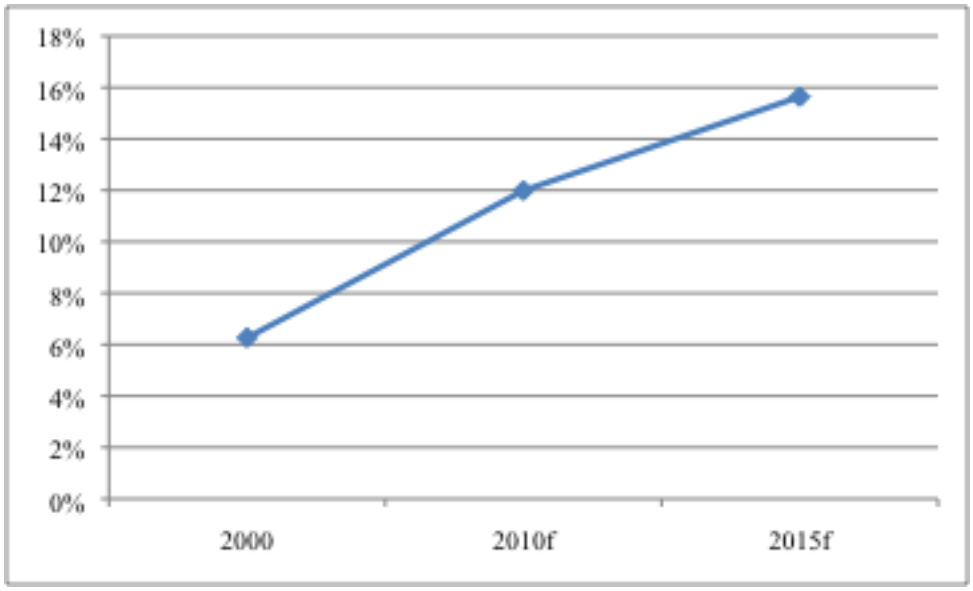


Source: Environmental Systems Research Institute (ESRI); analysis by Cambridge West Partnership, LLC

The population in this effective service area was 14,266 in the year 2000 but is projected to be at 18,313 by 2015. The area is expected to increase at an annual rate of 1.33% as compared to the State annual growth rate of .70%. The median age of the population in this service area was 51.5 in 2000 and likely will be up to 58.4 by 2015. Per capita income for the effective service area had been a $15,891, and it is expected to be $20,563 in the year 2015. The median household income, projected at $30,217 by 2015, is expected to grow between 2010 and 2015 at an annual rate of 2.30% as compared to the California rate of 2.59% and the national rate of 2.36%.

There are no dramatic changes in the race/ethnicity mix projected in this effective service. The White Alone group is forecast to drop from being 91 percent of the area population in 2000 to becoming 85 percent of the area population in 2015. The residents who claim to be of Hispanic descent are anticipated to increase from being 6.3% of the population in the year 2000 to becoming 15.6% of the population by 2015.

Residents of Hispanic Origin, Effective Service Area

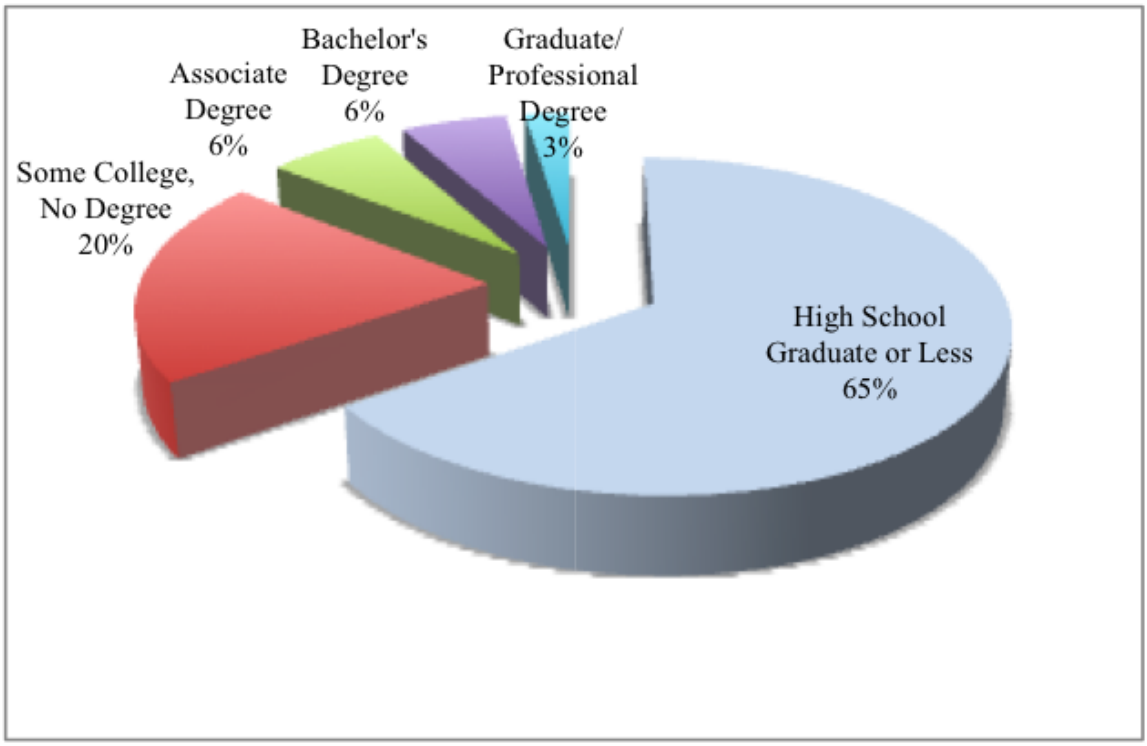


Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Given the traditional rates of participation in higher education, these shifts in ethnicity/race within the effective service area have implications for future enrollments at the College. As the Hispanic population increases, the College may need to increase outreach efforts to encourage college attendance.

For the year 2010, the highest educational attainment among the population age 25 and older, within the effective service area, is shown below. Approximately 65% of the adult population is a high school graduate or less. Those residents who have no college degree (either Associate's or Bachelor's) comprise 85 percent of the young adult or older population in the effective service area. Many of these adults would likely gain access to a broader range of employment opportunities upon completing a community college education.

2010 Educational Attainment, Age 25+, Effective Service Area

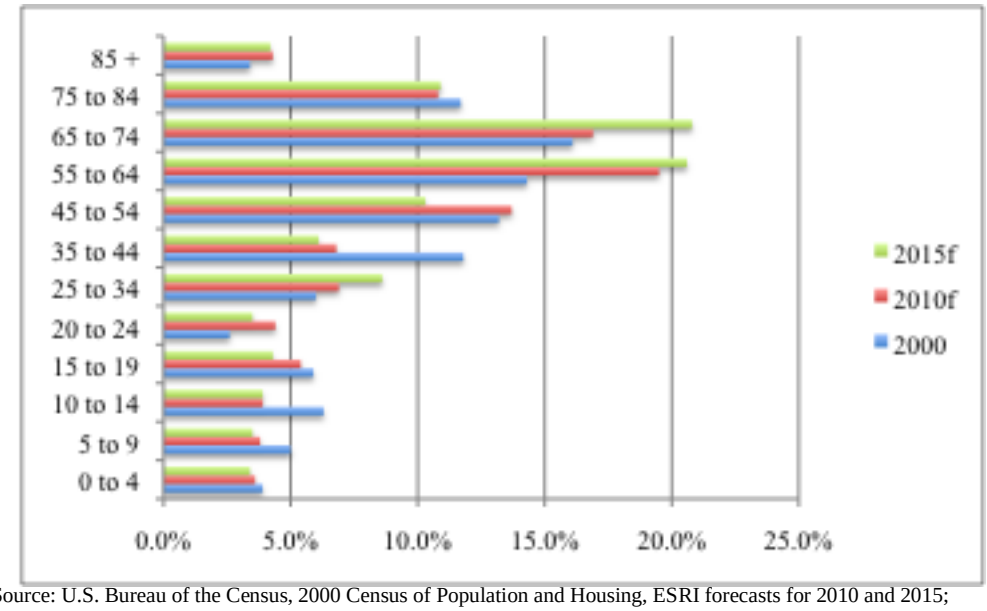


Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

Between the year 2000 and 2015 the 25 to 34 age group will increase 43.3% and the 55 to 64 age group will increase 44.1%, more than any other age groups. Within the effective service area, the senior age groups 65+ are forecast to increase their share of the population between 2010 and 2015 by 12%. In the immediate future, now through the year 2015, the 20 to 24 year age group in the effective service area is forecast to decrease by -14%, and their percentage of the population will drop to 3.5%. The number of students in the 15 to 19 year age group is projected to decrease by -15% between 2010 and 2015, and their percentage of the population will also decline to 4.3% by 2015.

However, in 2010 the combined 15 to 19 and 20 to 24 year old groups is 9.8 percent of the population. Throughout the state those two groups combined are 14.9 percent of the population. Looking forward to 2015 the combination of the two age groups in the effective service area declines to 7.8 percent of the population but throughout the state it the combined groups are 13.9 percent of the population. Young people of prime college-going age are a smaller percentage of the population in the effective service area than is the case throughout the state.

Projected Age Group Changes in the Effective Service Area



Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2010 and 2015; analysis by Cambridge West Partnership, LLC

The one high school that provides students to the Center has been contributing an annual average of 15 students per year since 1996.

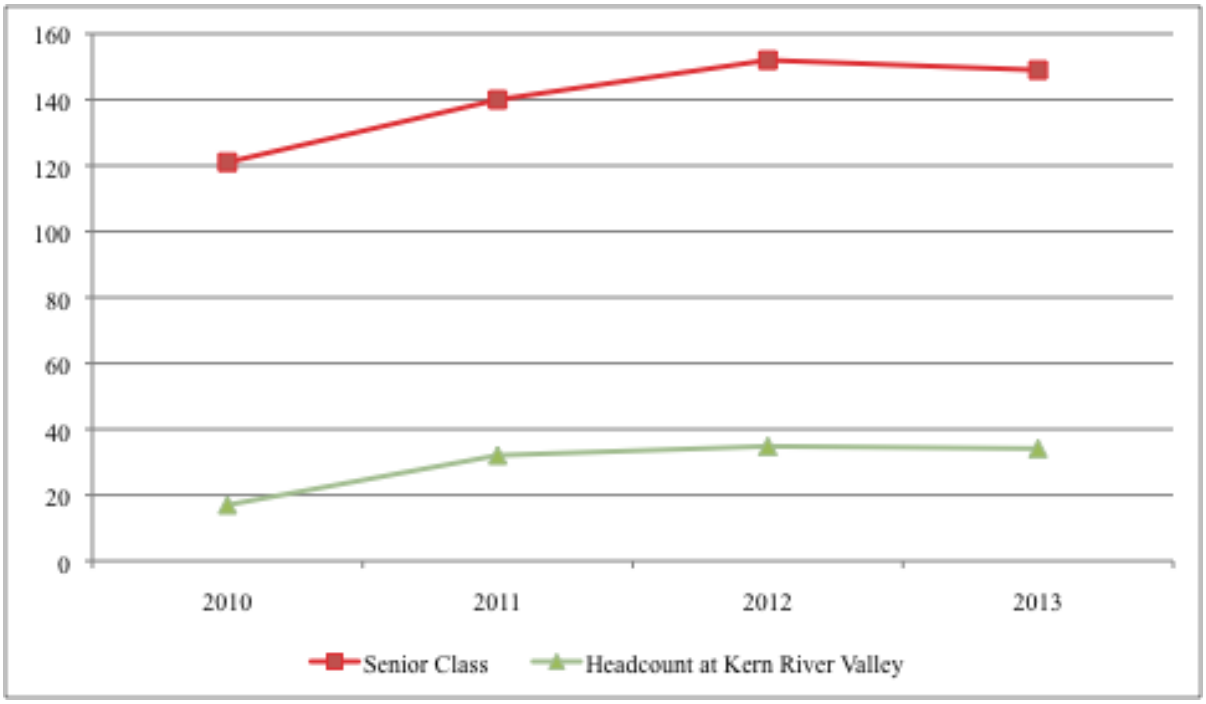
Table 26: High Schools Supporting Kern River Valley Educational Center & Average Headcounts

High School	District	Location	2005-10 Av Yield Ratio	Annual Average	Last 3 Yrs Average	% Change 1996 to 2010
Kern River Valley						
Kern Valley High	Kern HS District	Lake Isabella	22.9%	15.2	17	-10.5%

Source: California Postsecondary Education Commission, Detailed Data, Freshman Pathways and California Department of Education, Data Quest; analysis by Cambridge West Partnership, LLC

The average high school admissions yield rate from 2005 to 2009 was only 22.9%. Based on 2010-11 headcounts in grades nine through twelve and the campus admission yield rate, a set of projections for possible future high school participation at the campus has been illustrated in the graphic below. However, an aggressive recruiting strategy might improve the yield rate.

High Schools Headcount Projection



Source: California Department of Education and California Postsecondary Education Commission; analysis by Cambridge West Partnership, LLC

VIII. Opportunities for the Future

Future Labor Markets

The U.S. Chamber of Commerce has estimated that 90% of all jobs in the future will require some form of postsecondary education. The U.S. Department of Labor has estimated that one-third of future jobs will demand skills in the science, technology, engineering and mathematics (STEM) disciplines. These observations are stimulating the calls for more students to complete their college degrees and for increased efforts to attract more students to major in the STEM disciplines. These national trends are echoed in California.

The Public Policy Institute of California (PPIC) has pointed to a mismatch between the level of education the future population is likely to possess and the level of education that will be demanded by the future state economy. In their analysis the supply of college-education workers will not meet the projected demand. These estimates portend an opportunity for the College to contribute to the economic vitality of the society and to secure future employment for its graduates. In this longer-term view to 2025, the two industries with the greatest growth (state and local government and health care and social assistance) both require a significant portion of the prospective employees to be college educated. Collectively, those occupational areas where 60% or more of the individuals employed have a college degree are anticipated to represent 29% of the workforce in California. In this longer-term view to 2025, the two industries with the greatest growth (state and local government and health care and social assistance) both require a significant portion of the prospective employees to be college educated. Collectively, those occupational areas where 60% or more of the individuals employed have a college degree are anticipated to represent 29% of the workforce in California. Some of the details from the PPIC analysis are illustrated in the two tables below.

Table 27: California Growth Industries & Education

	Industry Share of State Employment (%)			College-Educated Workers Within Industry (%)		
High-growth Industries*	**1990**	**2006**	**2025**	**1990**	**2006**	**2025**
Administration & support	3.7	6.5	8.3	14	17	21
Accommodation & food services	4.4	8.1	8.2	15	15	16
Health care & social assistance	7.1	8.8	9.8	37	41	46
Professional & scientific services	4.7	6.2	7.2	52	67	87
Construction	4.6	5.7	5.9	13	11	10
Arts, entertainment & recreation	0.4	1.6	1.7	23	38	57
Education services	1.5	1.8	2.1	56	64	74
Other services	2.7	3.4	3.3	16	20	26
Local & state government	13.8	14.4	14.3	46	52	59
Finance, insurance	3.6	4.2	3.8	32	46	64
* Those growing as a share of overall employment						

Source: Public Policy Institute of California. *California's Future Workforce*. 2008

Table 28: California Growth Occupations & Education

	Occupations Share of State Employment (%)			College-Educated Workers Within Occupation (%)		
High-growth Occupations*	**1990**	**2006**	**2025**	**1990**	**2006**	**2025**
Construction & maintenance	3.8	5.8	6	7	7	6
Computer & mathematical science	1.2	2.5	3.3	65	69	75
Building & grounds cleaning & maintenance	1.9	3.8	3.9	4	5	6
Business operations	1.1	2.6	3	31	53	80
Transportation & material moving	4.9	6.6	6.7	8	8	7
Education, training & library	5.4	6	6.9	78	77	76
Health care practitioner & technical	3.3	3.8	4.3	59	64	70
Community & social services	0.5	1.3	1.4	64	63	61
Personal care & service	2.1	3	3	10	15	22
Management	5.6	6.4	6.4	42	54	70
Heath care support	1.9	2.1	2.6	12	16	21
Food preparation & service	6.8	7.2	7.4	7	10	13
Protective service	1.9	2.2	2.3	20	26	33
Legal	0.6	0.8	0.8	82	79	75
Arts, design, entertainment, sports & media	2.5	2.5	2.6	48	60	74
*Those growing as a share of overall employment.						

Source: Public Policy Institute of California. *California's Future Workforce*. 2008

Several leading occupations can be identified that will require educated workers in the future, if the entire state economy is considered with a focus on the high demand/high wage STEM occupations. The occupational family with the greatest projected demand that commonly requires an Associate Degree for entry is healthcare. The healthcare support job family is the second largest group, followed by computer and math science, and engineers and technicians. Students educated in these fields will have the most opportunities for relocating to areas throughout the State where there will be more available jobs.

Table 29: Where the California Jobs Will be in 2018 (in thousands of jobs)

Occupation Group	Occupation	Some College	%	Associate Degree	%	Bachelor's Degree	%	Total
STEM	Computer & Math Science	89	16%	45	8%	242	44%	545
STEM	Architects & technicians	13	20%	9	14%	25	38%	65
STEM	Engineers & technicians	34	11%	28	9%	141	44%	317
STEM	Life and Physical Scientists	9	6%	6	4%	45	32%	140
STEM	Social Scientists	5	6%	3	4%	27	33%	82
Healthcare	Healthcare Practitioners	109	13%	160	19%	239	29%	836
Healthcare	Healthcare Support	148	33%	51	11%	49	11%	448

Source: Carnival, Anthony; Smith, Nicole; and Strohl, Jeff (2010). *Help Wanted: Projections of Jobs and Educational Requirements Through 2018*. Center on Education and the Workforce, Georgetown University.

The pubic-private partnership known as the California Partnership for the San Joaquin Valley has identified five industry clusters that they believe should be targeted as part of the efforts to support a highly skilled workforce and promote a competitive economy in the Valley. The identified clusters are: (1) Agribusiness, including Food Processing, Agricultural Technology, and Biotechnology; (2) Manufacturing; (3) Supply Chain Management and Logistics; (4) Health and Medical Care; and (5) Renewable Energy. The Partnership envisioned high quality vocational training and academic institutions in the Valley that would educate the workforce.[11]

The Centers for Excellence have completed a series of environmental scans and studies to further document the occupational opportunities and related educational requirements in several of these targeted clusters. For example, the agriculture value chain is defined using four clusters: (1) support; (2) production; (3) processing and packaging; and (4) distribution statewide. Agriculture employs close to 2.5 million individuals with more than 800 job titles within the agriculture value chain. With the exception of production, employment opportunities are positive in the other three clusters over the next five years. However, agriculture production employers are concentrated in the Central Valley. Distribution and processing employers are located in the LA/Orange, Central Valley and Inland Empire regions. When surveyed, a majority of the employers indicated an interest in on-site, customized training for current employees and a certificate specific to an occupation. Employers indicated some interest in two and four-year degree programs specific to each occupation. Two-thirds of the employers were interested in potential partnerships with colleges and in creating internship opportunities. The concluding recommendations in the study stress the creation of partnerships and consideration for contract education as the mode of service delivery.[12]

[11] California Partnership for the San Joaquin Valley. *Strategic Action Proposal.* October, 2006
[12] Centers of Excellence. *Agriculture Value Chain for California*. June, 2011

Table 30: Agriculture Value Chain Occupation Projections by Sector

Sector	2011 Jobs	5-Year Growth	Average Hourly Wage
Support	1,446,232	183,018	$24.56
Production	206,303	-36,364	$23.34
Processing/Packaging	226,216	5,137	$23.49
Distribution	585,014	29,913	$24.04
Totals	**2,463,765**	**181,704**	**$23.87**

Source: Centers for Excellence. *Agriculture Value Chain in California*. June, 2011

In their study of the bio-energy industry the Centers defined the industry as consisting of five clusters: (1) agriculture, forestry, fishing and hunting; (2) manufacturing; (3) professional, scientific and technical services; (4) public administration; and (5) utilities. Surveys of employers indicated that most experienced difficulty in finding qualified candidates for bio-energy occupations. Employers in the Central Valley expect to increase hiring in seven key occupations over the next three years. The associate degree was identified as an appropriate preparation for three of the occupations that will account for 210 of the 350 projected new jobs[13].

Table 31: Bio-Energy Occupations in the Central Valley

Occupation	2010 Jobs	3-Yr Projected Growth	Growth Rate	Ed Level
Bio-energy Manager or Supervisor	105	0	0%	
Biomass Plant Technician	455	35	8%	
Bio-energy Engineering Technician	525	0	0%	
Bio-energy Instrument and Controls Technician or Operator	595	35	6%	AA
Methane Gas Generation System Technician or Operator	420	140	33%	AA
Bio-Energy Research Assistant or Analyst	70	105	150%	
Biofuels Processing Technician	875	35	4%	AA
Totals	**3,045**	**350**	**11%**	

Source: Centers of Excellence. *Bio-energy Occupations in California*. January, 2011

The Centers also studied medical imaging occupations in 14 counties that comprise the Central Valley. They project a need for 987 medical imaging positions over the next three years in those counties. Among the five occupations, employers had the greatest difficulty hiring cardiovascular technicians and radiologic technician subspecialties. Employers expressed a strong preference for associate degree preparation to enter these occupations. The study findings support the creation, adaptation and expansion of medical imaging programs throughout the region.[14]

Table 32: Medical Imaging Occupations in the Central Valley

[13] Centers of Excellence. *Bio-Energy Occupations in California.* January, 2011
[14] Centers of Excellence. *Medical Imaging Occupations in the Central Region.* March, 2011

Occupation	2010 Jobs	3-Yr Projected Growth	Growth Rate	Average Annual Openings	Hourly Wage*
Cardiovascular Technologist	379	494	30%	165	$29.47
Diagnostic Medical Sonographer	616	837	36%	279	$28.53
Nuclear Medicine Technician	205	265	29%	88	$35.97
Radiation Therapist	169	259	53%	86	$34.41
Radiologic Technologist	1,505	1,761	26%	587	$27.31
Total	**2,874**	**3,616**	**26%**	**1,205**	**$31.14**
*entry level					

Source: Centers of Excellence. *Medical Imaging Occupations in the Central Region*. March, 2010

In 2009 the Centers of Excellence completed a study of Energy Efficiency Occupations in the Central Valley region. These occupations are commonly found in three different industry sectors: (1) public or private utilities; (2) building design and construction; and (3) building or facility operations and maintenance. With the help of survey responses from 214 firms, the study focused on eight occupations, which totaled 3,200 jobs, based on the survey responses, but could be as high as 10,800 jobs. All eight occupations showed growth over the projection period of three years and employers reported having difficulty finding qualified applicants for openings. Employers also expressed great interest in training programs that could be offered by community colleges.[15]

Table 33: Energy Efficiency Occupations in the Central Valley

Occupation	2009 Jobs	3-Yr Projected Growth	Growth Rate
Resource conservation or energy efficiency managers	2,000	440	22%
Project managers for construction or design work	1,890	520	28%
HVAC mechanics, technicians or installers	1,780	820	46%
Building performance or retrofitting specialists	1,290	460	36%
Building operators or building engineers	1,140	220	19%
Energy auditors or home energy raters	1,000	420	42%
Compliance analyst or energy regulation specialists	870	260	30%
Building controls systems technician	820	280	34%
Total	**10,790**	**3,420**	**32%**

Source: Centers of Excellence. *Energy Efficiency Occupations in the Central Region.* October 2009

Given the geography, geology, common weather conditions and alternative energy firms that are developing in Kern District service area, this study may be most pertinent to the educational program planning activities of the College.

Representatives from the Centers of Excellence recently addressed the question, "Where should community colleges invest resources to support "green" employment?"[16] They concluded that the solar industry has a sufficient supply of programs and courses offered by

[15] Centers of Excellence. *Energy Efficiency Occupations in the Central Region.* October 2009

[16] Centers of Excellence. "Green Job Opportunities," Presentation to the California Community College Association for Occupational Education (CCCAOE) Conference, October, 2011

the community colleges. These programs are considered most successful when instruction is informed by industry certificate standards. Wind industry employers present limited instructional program opportunities for the colleges. The colleges could consider forming partnerships with employers near college facilities, or developing strategies to incorporate wind turbine technician training into existing programs. Two-thirds of the jobs in the energy efficiency industry are traditional occupations, not new occupations. Colleges are advised to invest in new content for existing courses, build relationships with employers to create apprenticeships, and "pipeline" training programs, and direct the instruction to industry certification standards. The bio-energy industry, which is strongly tied to the agriculture industry, is projected to have slow growth, and therefore, few new employment opportunities. For the present, the colleges are advised to monitor state and federal policy or legislation that may support the industry in California. Alternative transportation as an industry is located within large vehicle fleet operations. Where these are near a college, the recommended strategy is to embed alternative fuels education into existing electrical and automotive instructional programs. The compliance and sustainability employment opportunities span across several industries and affect both public and private employers. The greatest need in compliance and sustainability is knowledge of regulations and policy.

These state and regional highlights of occupations for the future provide opportunities for those students willing and able to relocate. There are opportunities for students with different levels of education from industry certification to an Associate Degree or a Bachelor's Degree. As noted below, there are some future employment opportunities in the local county economy as well.

Through the year 2018, the California Employment Development Department (EDD) expects the fastest growing industry sectors in Kern County to be Education Services, Health Care and Social Assistance, each with an annual growth rate of about 4%. Several other sectors will exceed the average annual growth rate of 1.4%. These include Wholesale Trade (3.3% annual growth), Professional and Business Services (2.5% annual growth), and Leisure and Hospitality (2.1% annual growth). Between 2008 and 2018, approximately 43,100 new jobs are expected from industry growth while 71,200 job openings are anticipated from net replacements. That is a combined total of more than 114,300 job openings.[17]

In Kern County, 50 occupations with *the most job openings* are expected to make up 57% of all job openings. The occupations with the highest growth numbers are predicted to be farm workers and laborers (crop, nursery, and greenhouse), cashiers, and retail salespersons. None of these are particularly high paying occupations and all usually require only short-term on-the-job training. Occupations requiring little to moderate amounts of on-the-job training (up to 12 months) make up 35 of the 50 occupations with the most openings. Therefore, there are opportunities for the College to contribute to the economic development of the County by providing education and skill development experiences that will lead to higher-wage jobs. Occupations with growth expectations, and which require an associate degree or higher include management analysts, registered nurses, general and operations managers, elementary and secondary school teachers, farm, ranch and other agricultural managers and

[17] State of California, Employment Development Department "2008-2018 Kern County Projection Highlights," *Labor Market Information* Retrieved November 2, 2011 from http://www.labormarketinfo.edu.ca.gov

accountants and auditors.[18] The list of the Kern County occupations with the most anticipated openings with selected education levels is found in the table below.

Table 34: Kern County Most Openings 2008-2018 & Selected Education Level

Occupational Title	Total Job Openings	Annual Job Openings	2010 Median Hourly	2010 Median Annual	Education
Accountants and Auditors	500	50	$30.17	$62,756	Bachelor's
Elementary School Teachers, Except Special Education	2,640	264		$60,351	Bachelor's
Middle School Teachers, Except Special and Vocational Education	620	62		$55,556	Bachelor's
Secondary School Teachers, Except Special and Vocational Education	980	98		$62,712	Bachelor's
Registered Nurses	1,730	173	$38.49	$80,063	Associate
Licensed Practical and Licensed Vocational Nurses	660	66	$22.02	$45,794	Post-secondary Voc Ed.
Medical Secretaries	810	81	$12.24	$25,455	Post-secondary Voc Ed.
Electricians	660	66	$28.50	$59,291	12 mos + OJT & formal ed

Source: State of California, Employment Development Department, "Kern County Occupations With The Most Growth Projected 2008-2018"; analysis by Cambridge West Partnership, LLC

Of the 50 *fastest-growing* occupations in Kern County that anticipate an annual growth rate of 2.5% or more, one-third are health related. Occupations with the highest percentage of expected growth are home health aides (59%) and medical scientists (52%). Three occupations are tied for third place at 50% growth over ten years- physical therapists, network systems and data communications analysts, and dental hygienists. The list of the Kern County occupations with the most anticipated openings and the required education level for each is found in the table below.

[18] State of California, Employment Development Department "Occupational Projections for Kern County 2008-2018" *Labor Market Information* Retrieved November 2, 2011 from http://www.labormarketinfo.edu.ca.gov

Table 35: Kern County Fastest Growing Occupations 2008-2018 and Selected Education Level

Occupational Title	An Av 2008	An Av 2018	Empl Chg Percent	2010 Median Hourly	2010 Median Annual	Education
Computer Software Engineers, Applications	440	650	47.7	$44.66	$92,889	Bachelor's
Environmental Scientists and Specialists, Including Health	200	280	40	$34.66	$72,090	Bachelor's
Industrial Engineers	240	320	33.3	$42.27	$87,938	Bachelor's
Logisticians	350	480	37.1	$35.40	$73,622	Bachelor's
Network Systems and Data Communications Analysts	220	330	50	$34.10	$70,932	Bachelor's
Personal Financial Advisors	210	270	28.6	$18.92	$39,349	Bachelor's
Petroleum Engineers	290	390	34.5	$56.39	$117,295	Bachelor's
Sales Engineers	200	280	40	$39.33	$81,790	Bachelor's
Dental Hygienists	220	330	50	$38.78	$80,679	Associate
Medical and Clinical Laboratory Technicians	240	330	37.5	$15.94	$33,157	Associate
Medical Records and Health Information Technicians	240	320	33.3	$13.58	$28,247	Associate
Paralegals and Legal Assistants	240	310	29.2	$25.25	$52,537	Associate
Radiologic Technologists and Technicians	350	470	34.3	$28.12	$58,491	Associate
Registered Nurses	3,290	4,440	35	$38.49	$80,063	Associate
Respiratory Therapists	220	310	40.9	$23.75	$49,401	Associate
Fitness Trainers and Aerobics Instructors	230	320	39.1	$18.25	$37,957	Post-secondary Voc Ed.
Licensed Practical and Licensed Vocational Nurses	980	1,320	34.7	$22.02	$45,794	Post-secondary Voc Ed.
Massage Therapists	280	370	32.1	$16.26	$33,821	Post-secondary Voc Ed.
Medical Secretaries	1,450	2,060	42.1	$12.24	$25,455	Post-secondary Voc Ed.
Coaches and Scouts	210	270	28.6	[2]	$39,911	12 mos + OJT & formal ed
Telecommunications Equipment Installers and Repairers, Except Line Installers	380	480	26.3	$28.70	$59,693	12 mos + OJT & formal ed

Source: State of California, Employment Development Department, "Kern County Fastest Growing Occupations Projected 2008-2018"; analysis by Cambridge West Partnership, LLC

The EDD has projected that approximately 11,000 job openings will be available in Kern County each year between 2008 and 2018. Only 8% of these jobs require an Associate Degree or some form of postsecondary vocational education. Preparation at the Bachelor's Degree level is the most common entry path for another 17% of these openings.[19]

Table 36: Kern County Average Annual Job Openings by Education or Training Level

Training Levels Bureau of Labor Statistics	2008-2018 Annual Average Total Job Openings	%
BA + work experience	430	4%
Bachelor's Degree	1,390	13%
Associate Degree	410	4%
Postsecondary Vocational Education	480	4%
Total	2,710	
Graduate education	370	3%
OJT	7,840	72%
Total	8,210	
Grand Total	**10,920**	**100%**

Source: State of California, Employment Development Department, "Kern County Occupational Projections 2008-2018"; analysis by Cambridge West Partnership, LLC

Through the year 2018, the California EDD expects the fastest growing industry sectors in Alpine, Inyo and Mono Counties to be Education Services, Health Care and Social Assistance, with an annual growth rate of about 2.7%. Several other sectors will exceed the average annual growth rate of .82%. These include Wholesale Trade (2% annual growth), Professional and Business Services (1.5% annual growth), and Government (1.2% annual growth). Between 2008 and 2018, approximately 1,560 new jobs are expected through industry growth, while 4,450 job openings are anticipated from net replacements. That is a combined total of more than 6,010 job openings.[20]

In these rural counties, the 50 occupations with *the most job openings* are expected to provide 60% of all job openings. The occupations with the highest growth numbers are in the Leisure and Hospitality industry. These include waiters and waitresses, hotel, motel and resort desk clerks, and maids and housekeepers. None of these are particularly high paying occupations, most are seasonal work opportunities, and all usually require only short-term on-the-job training. Occupations requiring low to moderate amounts of on-the-job training (up to 12 months) make up 31 of the 50 occupations with the most openings. Therefore, there are limited opportunities for the College to contribute to the economic development of the County by providing education and skill development opportunities that will lead to higher-

[19] State of California Employment Development Department, "2008-2018 Kern County Projection Highlights" *Labor Market Information* Retrieved November 2, 2011 from http://www.labormarketinfo.edu.ca.gov

[20] State of California, Employment Development Department "2008-2018 Eastern Sierra Counties Projection Highlights," *Labor Market Information* Retrieved November 2, 2011 from http://www.labormarketinfo.edu.ca.gov

wage jobs. Occupations, which are expected to grow and also require an Associate Degree or higher, include registered nurses and forest and conservation technicians.[21] The list of the Eastern Sierra County occupations with the most anticipated openings with selected education levels is found in the table below.

Table 37: Alpine, Inyo and Mono County Most Openings 2008-2018 and Selected Education Level

Occupational Title	Total Job Openings	Annual Job Openings	2010 Median Hourly	2010 Median Annual	Education
Civil Engineers	30	3	$42.63	$88,660	Bachelor's
Elementary School Teachers, Except Special Education	110	11	[3]	$61,322	Bachelor's
Kindergarten Teachers, Except Special Education	20	2	[3]	$63,933	Bachelor's
Recreation Workers	60	6	$11.59	$24,115	Bachelor's
Secondary School Teachers, Except Special and Vocational Education	120	12	[3]	$60,992	Bachelor's
Forest and Conservation Technicians	80	8	$14.93	$31,058	Associate
Registered Nurses	120	12	$38.51	$80,105	Associate
Licensed Practical and Licensed Vocational Nurses	50	5	$23.52	$48,916	Post-secondary Voc Ed.
Carpenters	30	3	$25.19	$52,392	12 mos + OJT & formal ed
Cooks, Restaurant	70	7	$12.62	$26,234	12 mos + OJT & formal ed
Maintenance and Repair Workers, General	90	9	$17.70	$36,824	12 mos + OJT & formal ed
Police and Sheriff's Patrol Officers	60	6	$35.11	$73,019	12 mos + OJT & formal ed

Source: State of California, Employment Development Department, "Eastern Sierra Counties Occupations With The Most Growth Projected 2008-2018"; analysis by Cambridge West Partnership, LLC

Of the 50 *fastest-growing* occupations in the Eastern Sierra Counties that anticipate an annual growth rate of 8.3% or more, several are health related. Occupations with the highest percentage of expected growth are nursing aides, orderlies and attendants, licensed practical or vocational nurses and registered nurses. The list of the Eastern Sierra County occupations with the most anticipated openings with selected education levels is found in the table below.

[21] State of California, Employment Development Department "Occupational Projections for Eastern Sierra Counties 2008-2018" *Labor Market Information* Retrieved November 2, 2011 from http://www.labormarketinfo.edu.ca.gov

Table 38: Eastern Sierra Counties Fastest Growing Occupations 2008-2018 and Selected Education Levels

Occupational Title	Annual Average 2008	Annual Average 2018	Empl Chg Percent	2010 Median Hourly	2010 Median Annual
Accountants and Auditors	80	90	12.5	$27.80	$57,836
Civil Engineers	90	100	11.1	$42.63	$88,660
Elementary School Teachers, Except Special Education	280	320	14.3	[2]	$61,322
Property, Real Estate, and Community Association Managers	60	70	16.7	$18.42	$38,316
Recreation Workers	140	170	21.4	$11.59	$24,115
Secondary School Teachers, Except Special and Vocational Education	300	330	10	[2]	$60,992
Registered Nurses	260	330	26.9	$38.51	$80,105
Automotive Service Technicians and Mechanics	50	60	20	$25.29	$52,595
Licensed Practical and Licensed Vocational Nurses	100	130	30	$23.52	$48,916
Medical Secretaries	50	60	20	$16.42	$34,150
Real Estate Sales Agents	50	60	20	N/A	N/A
Maintenance and Repair Workers, General	300	350	16.7	$17.70	$36,824

Source: State of California, Employment Development Department, "Eastern Sierra County Fastest Growing Occupations Projected 2008-2018"; analysis by Cambridge West Partnership, LLC

The EDD has projected that approximately 600 job openings will be available in Eastern Sierra Counties each year between 2008 and 2018. Only 6% of these jobs require an Associate Degree or some form of postsecondary vocational education. Preparation at the Bachelor's Degree level is the most common preparation for another 17% of these openings.[22]

Table 39: Eastern Sierra Counties Average Annual Job Openings by Education or Training Level

Training Levels Bureau of Labor Statistics	2008-2018 Annual Average Total Job Openings	%
BA + work experience	20	4%
Bachelor's Degree	60	13%
Associate Degree	20	4%
Postsecondary Vocational Education	10	2%
Total	110	
Graduate education	0	0%
OJT	340	76%
Total	340	
Grand Total	**450**	**100%**

Source: State of California, Employment Development Department, "Eastern Sierra Counties Occupational Projections 2008-2018"; analysis by Cambridge West Partnership, LLC

[22] State of California Employment Development Department, "2008-2018 Eastern Sierra Counties Projection Highlights" *Labor Market Information* Retrieved November 2, 2011 from http://www.labormarketinfo.edu.ca.gov

Planning Considerations for Potential New Programs

Bakersfield and Cerro Coso Colleges are the only public providers of post-secondary education in Kern County. The Educational Center at Lake Isabella, operated by Cerro Coso College, is less than a one-hour drive from the main campus of Bakersfield College. Antelope Valley College, located in Los Angeles County, is a 30-minute drive to the Lancaster campus and a 45-minute drive to the Palmdale campus from the South Kern Educational Center at Edwards AFB. Combined, Antelope Valley College, Bakersfield College, and Cerro Coso College offer 311 degrees and/or certificates in fields of study described by the California Community College Chancellor's Office Taxonomy of Programs manual.[23] Before new career and technical instructional programs are implemented, care should be taken to analyze the existing programs offered by these institutions.

The enactment of the Student Transfer Achievement Reform (STAR) Act (aka SB 1440) provided the College with an opportunity to "retool" some of its current transfer-oriented programs and to introduce new ones. The legislation requires a community college district to grant an associate degree for transfer to a student in his/her field of study once the student has met degree and transfer requirements for a particular major. Upon completion of the transfer associate degree, the student is eligible to transfer with junior standing into a local California State University (CSU) campus. STAR students will be given priority when applying to a particular program that is similar to his/her community college field of study. The bill prohibits a community college district or campus from adding local course requirements in addition to requirements of the STAR Act, and prohibits the CSU from requiring a transferring student to repeat courses similar to those taken at the community college that counted toward their associate degree for transfer.

The statewide strategy to implement the STAR Act is to develop transfer model curriculums (TMC) through inter-segmental faculty dialogue using the structure of the course identification numbering system (C-ID) as much as possible so that common course descriptions will be used as building blocks. The initial focus of the project is on the top 20 transfer majors within the CSU. The goal is to reach agreements on a model curriculum that all community colleges could adopt for each particular major. Sixteen TMCs have been completed since the law was enacted. Another group of five model curriculums is almost finalized. The College has two disciplines approved among the sixteen available. A program in Art, following the approved TMC, is pending Board approval in lieu of two existing programs. The physical education and English faculty are poised to propose a transfer program using the already approved TMC. Currently, the has the authority to offer additional programs of study that align with the initially approved TMCs.

The College also offers one additional program that potentially aligns with one of the established CSU Lower Division Transfer Preparation (LDTP) patterns, but is not yet aligned to a prospective TMC.[24] A complete analysis of the extent to which current College programs

[23] California Community College Chancellor's Office, *Program Inventory* Retrieved November 11, 2011 from http://www.cccco.edu/ChancellorsOffice/Divisions/Academic Affairs/inventory of programs

[24] Academic Senate for the California Community Colleges, *SB1440 Update* Retrieved November 19, 2011 from http://www.asccc.org and California State University System Office, *Lower Division Transfer Preparation* Retrieved March 30, 2011from http://www.calstate.edu/acadaff/ldtp/agreements

of instruction align with the TMCs and the 42 major fields of study included in the LDTP program can be found in the appendices.

In an effort to identify new program areas that would meet labor market needs in Kern and the three Eastern Sierra counties (Alpine, Mono and Inyo), an analysis was completed of the occupations expected to have 20 or more job openings annually through the year 2018. The list was filtered using the Bureau of Labor Statistics training level definitions with a focus on those occupations requiring a Bachelor's or Associate Degree, some post-secondary vocational education, or long-term on-the-job-training of more than twelve months (either of which might culminate in a certificate). Those occupations that qualified were mapped through the Standard Occupational Classification (SOC) codes to Associate Degree and Certificate of Achievement instructional programs offered by the public community colleges in Kern and adjacent counties. Because the occupations map to one or more Taxonomy of Programs (TOP) code used by the community college system, there can be multiple programs, even within the same community college, offered for each occupation. For that reason some of the values in the "Total CC Programs" column show a count higher than the number of the colleges in the study area.

The table below identifies Kern County occupations commonly requiring a college degree. For each occupation the EDD has projected 20 or more annual job openings through the year 2018. An initial course of study for some of these occupations might begin in a community college; therefore, the transfer degree initiative may be a starting point for instructional programs that lead to those occupations. Realistically, most of these openings likely will be found in the western portion of Kern County.

Table 40: Kern County Occupations That Require a College Degree and the Extent of Neighboring Community College Programs Related to Those Occupations

Educational Preparation	Standard Occupational Classification Title	Annual Average Total Jobs	2010 Median Hourly Wage	2010 Median Annual Wage	Total CC Programs
Bachelor's	Accountants and Auditors	50	$30.17	$62,756	4
Bachelor's	Business Operations Specialists, All Other	86	$31.87	$66,295	0
Bachelor's	Computer Software Engineers, Applications	26	$44.66	$92,889	10
Bachelor's	Computer Systems Analysts	22	$37.85	$78,722	6
Bachelor's	Construction Managers	27	$44.65	$92,874	13
Bachelor's	Elementary School Teachers, Except Special Education	264	N/A	$60,351	0
Bachelor's	Engineers, All Other	24	$50.70	$105,464	3
Bachelor's	Logisticians	21	$35.40	$73,622	0
Bachelor's	Middle School Teachers, Except Special and Vocational Education	62	N/A	$55,556	0
Bachelor's	Purchasing Agents, Except Wholesale, Retail, and Farm Products	21	$30.73	$63,905	4
Bachelor's	Secondary School Teachers, Except Special and Vocational Education	98	N/A	$62,712	0
Bachelor's	Special Education Teachers, Preschool, Kindergarten, and Elementary School	30	N/A	$77,000	0
Bachelor's	Teachers and Instructors, All Other	40	N/A	$50,558	0
Associate	Computer Specialists, All Other	20	$40.28	$83,769	4
Associate	Computer Support Specialists	26	$22.15	$46,071	0
Associate	Engineering Technicians, Except Drafters, All Other	22	$33.75	$70,194	1
Associate	Registered Nurses	173	$38.49	$80,063	3

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies occupations in the Eastern Sierra Counties (Alpine, Mono, Inyo) that commonly require a college degree. For each occupation the EDD has projected one or more annual job openings through the year 2018. An initial course of study for some of these occupations might begin in a community college; therefore, the transfer degree initiative may be a starting point for instructional programs that lead to those occupations.

Table 41: Eastern Sierra Counties, Occupations That Require a College Degree and the Extent of Neighboring Community College Programs Related to Those Occupations

Educational Preparation	Occupational Title	Annual Average Total Jobs	2010 Median Hourly Wage	2010 Median Annual Wage	Total of CC Programs
Bachelor's	Accountants and Auditors	2	$27.80	$57,836	4
Bachelor's	Business Operations Specialists, All Other	5	$23.53	$48,940	0
Bachelor's	Civil Engineers	3	$42.63	$88,660	0
Bachelor's	Community and Social Service Specialists, All Other	2	$13.83	$28,769	0
Bachelor's	Elementary School Teachers, Except Special Education	11	N/A	$61,322	0
Bachelor's	Environmental Scientists and Specialists, Including Health	2	$33.86	$70,429	0
Bachelor's	Graphic Designers	1	$14.44	$30,024	10
Bachelor's	Property, Real Estate, and Community Association Managers	2	$18.42	$38,316	7
Bachelor's	Public Relations Specialists	2	$26.32	$54,744	0
Bachelor's	Purchasing Agents, Except Wholesale, Retail, and Farm Products	2	$21.20	$44,109	4
Bachelor's	Recreation Workers	6	$11.59	$24,115	0
Bachelor's	Secondary School Teachers, Except Special and Vocational Education	12	N/A	$60,992	0
Bachelor's	Social and Community Service Managers	1	$28.29	$58,842	16
Bachelor's	Special Education Teachers, Preschool, Kindergarten, and Elementary School	2	N/A	$48,076	0
Bachelor's	Wholesale and Retail Buyers, Except Farm Products	1	$13.87	$28,850	4
Associate	Computer Support Specialists	1	$23.04	$47,939	0
Associate	Dental Hygienists	2	$23.26	$48,373	0
Associate	Forest and Conservation Technicians	8	$14.93	$31,058	4
Associate	Medical Records and Health Information Technicians	1	$18.75	$38,984	1
Associate	Registered Nurses	12	$38.51	$80,105	3

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies Ken County occupations with 20 or more annual openings through 2018 that commonly require some post-secondary vocational education or formal training plus OJT lasting more than twelve months. Realistically, most of these openings likely will be found in the western portion of Kern County.

Some of these occupations may be accessed through formal apprenticeship programs offered by various trade unions. Employment preference may go to the graduates of those programs. While information from the Federal Bureau of Labor Statistics may show that police and sheriff's patrol officers enter the occupation through extensive on-the-job training, the tradition in California is to hire graduates from a formal Peace Officer Standards and Training (POST)-certified academy program. A similar preference is found for California fire fighters.

Table 42: Kern County Occupations Commonly Requiring Some Post-secondary Vocational Education and the Extent of Neighboring Community College Programs Related to Those Occupations

Educational Preparation	Standard Occupational Classification Title	Annual Average Total Jobs	2010 Median Hourly Wage	2010 Median Annual Wage	Total CC Programs
Post Sec Voc Ed	Automotive Service Technicians and Mechanics	46	$15.92	$33,110	10
Post Sec Voc Ed	Bus and Truck Mechanics and Diesel Engine Specialists	27	$22.57	$46,945	0
Post Sec Voc Ed	Licensed Practical and Licensed Vocational Nurses	66	$22.02	$45,794	4
Post Sec Voc Ed	Medical Secretaries	81	$12.24	$25,455	0
Post Sec Voc Ed	Welders, Cutters, Solderers, and Brazers	43	$26.06	$54,206	6
					0
>12 mos. OJT & Formal Trgn	Carpenters	36	$23.40	$48,676	2
>12 mos. OJT & Formal Trgn	Cooks, Restaurant	45	$10.97	$22,810	2
>12 mos. OJT & Formal Trgn	Electrical Power-Line Installers and Repairers	37	$41.34	$85,989	0
>12 mos. OJT & Formal Trgn	Electricians	66	$28.50	$59,291	4
>12 mos. OJT & Formal Trgn	Maintenance and Repair Workers, General	84	$17.81	$37,045	0
>12 mos. OJT & Formal Trgn	Plumbers, Pipefitters, and Steamfitters	23	$21.27	$44,225	2
>12 mos. OJT & Formal Trgn	Police and Sheriff's Patrol Officers	28	$31.52	$65,563	0
>12 mos. OJT & Formal Trgn	Telecommunications Line Installers and Repairers	31	$16.71	$34,760	0

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies occupations in the Eastern Sierra counties (Alpine, Mono, Inyo) with one or more annual openings through 2018 that commonly require some post-secondary vocational education or formal training plus OJT lasting more than twelve months. Some of these occupations may be accessed through formal apprenticeship programs offered by various trade unions. Employment preference may go to the graduates of those programs. While information from the Federal Bureau of Labor Statistics may show that police and

sheriff's patrol officers enter the occupation through extensive on-the-job training, the tradition in California is to hire graduates from a formal Peace Officer Standards and Training (POST)-certified academy program. A similar preference is found for California fire fighters.

Table 43: Eastern Sierra Counties, Occupations Commonly Requiring Some Post-secondary Vocational Education and the Extent of Neighboring Community College Programs Related to Those Occupations

Educational Preparation	Occupational Title	Annual Average Total Jobs	2010 Median Hourly Wage	2010 Median Annual Wage	Total of CC Programs
Post Sec Voc Ed	Automotive Service Technicians and Mechanics	2	$25.29	$52,595	10
Post Sec Voc Ed	Emergency Medical Technicians and Paramedics	1	$22.11	$45,986	0
Post Sec Voc Ed	Licensed Practical and Licensed Vocational Nurses	5	$23.52	$48,916	4
Post Sec Voc Ed	Medical Secretaries	2	$16.42	$34,150	0
Post Sec Voc Ed	Mobile Heavy Equipment Mechanics, Except Engines	1	$21.51	$44,755	0
Post Sec Voc Ed	Real Estate Sales Agents	2	N/A	N/A	7
>12 mos. OJT & Formal Trgn	Bakers	1	$13.75	$28,595	
>12 mos. OJT & Formal Trgn	Carpenters	3	$25.19	$52,392	2
>12 mos. OJT & Formal Trgn	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	1	$27.31	$56,810	0
>12 mos. OJT & Formal Trgn	Cooks, Restaurant	7	$12.62	$26,234	2
>12 mos. OJT & Formal Trgn	Electricians	1	$29.93	$62,249	4
>12 mos. OJT & Formal Trgn	Maintenance and Repair Workers, General	9	$17.70	$36,824	0
>12 mos. OJT & Formal Trgn	Photographers	1	$14.41	$29,959	7
>12 mos. OJT & Formal Trgn	Plumbers, Pipefitters, and Steamfitters	1	$20.30	$42,223	2
>12 mos. OJT & Formal Trgn	Police and Sheriff's Patrol Officers	6	$35.11	$73,019	0
>12 mos. OJT & Formal Trgn	Water and Liquid Waste Treatment Plant and System Operators	2	$27.92	$58,076	0

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

Embry-Riddle Aeronautical University, one private accredited college, operates from the Naval Air Weapons Station in China Lake. It offers an Associate in Science for two technical fields of study: (1) Technical Management; and (2) Professional Aeronautics.

The discussion of competing institutions above is limited to those with a physical presence near the College. However, the California Virtual Campus (CVC) lists 173 post-secondary institutions that are providing one or more online courses throughout the state. The CVC list contains four four-year institutions and eighteen California community colleges that collectively offer an associate degree in 48 different fields of study.[25] A chart of those programs can be found in the appendices. Another source, Associate Degrees Online, identifies 78 different associate degrees that are available to California residents from the various institutions that provide online instruction throughout the United States.[26]

Curricular Opportunities for Improvement and Expansion

With these labor market considerations as a backdrop, the College has been discussing adding some new instructional programs. In that regard, the general philosophy of the College is to focus on a *limited number* of instructional programs and services that the College can do well. In the long run, there will be a commitment to continue growing the College in ways that can be *sustained.*

On the transfer side of instruction, the emphasis is on developing articulation agreements so that students can transfer with a minimal loss of units.

With respect to the basic skills courses, there is interest in consolidating the curriculum where possible, and facilitating the students' rapid completion of those foundational courses. Some discussion has been occurring within the English and math faculty as to how students might be accelerated through those offerings. Presently, the faculty intend to embed instruction in the "soft skills" and basic skills instruction in other courses. The strategy is to help students learn how to be college students. Related instructional strategies will flow from the work that Bakersfield College faculty are doing in the redesign of basic skills instruction that is funded by the TAACCCCT grant.[27] These efforts will be evaluated in a few years.

On the CTE side of instruction, the focus is on continuing to offer programs that meet community needs to help people find and retain employment or start successful businesses. Several initiatives are under way including:

- The College has collaborated with the Sierra Sands Unified School District and the NAWCD to create an engineering technology program, which is taught in part at the high school but includes opportunities for an apprenticeship at the Air Weapons Center.

[25] California Virtual Campus *Programs Offered by College* Retrieved November 17, 2011from http://www.cvc.org

[26] Associate Degrees Online *List of Participating Schools* Retrieved November 17, 2011 from http://www.associatedegreeonline.com

[27] Grant Narrative Retrieved 1/22/12 from http://westhillscollege.com/district/about/partnerships/c6/taaccct/

- The College is proposing several new degree and certificate programs that will be forwarded to the Chancellor's Office for approval this academic year.
    - Emergency medical service (degree). This program will be articulated with Loma Linda University were a similar Bachelor's level program exists.
    - Emergency medical technology (certificate of achievement)
    - Performance wind turbine technology (certificate of achievement)
    - Renewable energy technology (degree and certificate of achievement)

The two energy programs had been a part of the industrial technology program. However, after conducting a Day of Curriculum (DACUM) exercise and some gap analysis in the fall of 2010 both programs were redesigned to meet growing industry expectations. In September 2011 College officials traveled to Laramie County Community College (WY) to review their nationally well-known renewable energy programs. Curriculum ideas were also obtained from Iowa Lakes Community College (Estherville, IA), Columbia Gorge Community College (Hood River, OR) and Texas Tech University (Lubbock, TX). These programs are being established as independent instructional programs.

- In response to learning outcomes assessment information the College has enhanced the solar installation certificate by adding curriculum that will better enable the students to pass state licensing examinations.
- In the wind energy field the College will be developing a national curriculum model for a two-year program in that discipline. Some of that curriculum development work will be completed through the National Science Foundation CREATE Center consortium (11 colleges) grant.
- The recently awarded TAACCCCT grant will be used to develop two programs. One will be a transition program from Certified Nurse Assistant (CAN) to Licensed Vocational Nurse (LVN) while the other will be in Medical Assisting.
- The College has scheduled a March 2012 articulation conference for all the high schools in the service area to discuss pathways and curriculum alignment. There will be a focus on the best preparation for the high school students to complete before they exit high school and come to college. This conference is part of a larger effort to formalize the relationships the College has with the many small high schools in its vast service area.

The new program ideas being discussed and considered include those listed below. The list is an unranked set of conversation notes gathered from multiple sources. In sales talks, these would be listed as leads or potential prospects for development. The College will need a great deal more exploration and dialog before pursuing any of these ideas. However, that is part of what a futures plan does, it represents stated dream ideas or stepping off points in an adventure. It is a value added discussion that takes for granted that much of what you already do is worthwhile and important, while asking what's next or what could be added, what flavor should be tried next, what's just over the next horizon?

- The College has been discussing some curriculum ideas for geothermal and solar thermal technologies. There are two geothermal plants operating in the service area at

this time and a third is to be built. Also, there are a number of solar thermal plants being designed for the service area while others are located in western Kern County.

- Because the Welding at IWV is impacted further development of that program and related trades programs is under consideration.
- The coming changes to create electronic medical records will be important driver of change in the health care industry. The three colleges in the Kern District, plus Taft College, have been discussing a health information technology program in which all four schools would offer components of the curriculum. Cerro Coso would deliver currently established instruction via the internet but students could rotate around the other three colleges to take the balance of the courses on campus.
- Discussions have begun to consider a transfer program in Psychology that would follow the SB 1440 curriculum model.

Although there are many good ideas emerging from these discussions, the College as a whole is not always able to move forward with new ideas or the development of current initiatives. Currently there is a critical shortage of funds, full-time faculty, and support personnel. The College, however, can ill afford to ignore future growth opportunities. It must continue to look forward with a "can do" attitude that will position the College for a brighter future that grows programs to prepare future workers for a vibrant California economy and its College service area with a competent workforce. It is within this framework that the College should continue to engage in these conversations regarding its future.

Programs that Need Strengthening

The enrollment volume and numbers of program awards conferred might be used by the College to distinguish strong programs from those that might need to be strengthened. A ten-year analysis (2001-02 to 2010-11) and a six-year analysis (2005-06 to 2010-2011) of the degrees and certificates awarded in each program by the College were completed. In focusing on the more recent past six years, one liberal arts program offered by the College stood out as being very strong. This program was likely the major of choice for those students preparing to transfer to a four-year institution.

Given the size of the College a second group of programs appear to be strong as shown in the table below.

Table 44: Cerro Coso College Strong Programs 2005-06 to 2010-11
(six-year award period 2005-06 to 2010-11)

Unique Code	Title	TOP	Year Approved	Status	Award Code	Description	Annual Average Awards
18559	Liberal Arts: Social & Behavioral Sciences	490100	2008	Updating	A	AA	94.4
1930	Management	50600	1970	Updating	S	AS	12.7
18915	Human Services	210400	2009	Active	S	AS	12.5
10976	Business	50500	1970	Updating	S	AS	10.0
18557	Liberal Arts: Arts & Humanities	490310	2008	Updating	A	AA	9.6
1969	Administration of Justice	210500	1970	Active	S	AS	8.5
18558	Liberal Arts: Mathematics & Science	490100	2008	Updating	A	AA	7.8
11577	Child Development	130500	1998	Updating	S	AS	7.7
1928	Business Administration	50100	1970	Updating	A	AA	6.5
1957	Vocational Nursing	123020	1974	Active	T	Certificate 30 to <60	6.5
10976	Business	50500	1970	Updating	A	AA	5.0
1969	Administration of Justice	210500	1970	Active	T	Certificate 30 to <60	4.7
10977	Computer Information Systems	70200	1996	Updating	S	AS	3.3
14426	Web Design	61430	2003	Updating	S	AS	3.0
1980	General Sciences	490200	1970	Updating	A	AA	2.8
1938	Engineering	90100	2009	Historical	A	AA	2.8
1938	Engineering	90100	2009	Active	A	AA	2.8
1930	Management	50600	1970	Updating	T	Certificate 30 to <60	2.7
1957	Vocational Nursing	123020	1974	Active	S	AS	2.5
1933	Administrative Office Assistant	51400		Pending New Submission	S	AS	2.0
1928	Business Administration	50100	1970	Updating	S	AS	2.0
1933	Business Office Technology	51400	1970	Updating	S	AS	2.0
1933	Office Clerk	51400		Pending New Submission	S	AS	2.0
10976	Business	50500	1970	Updating	T	Certificate 30 to <60	1.5
18915	Human Services	210400	2009	Active	A	AA	1.5

Source: Kern District Annual Program Award Files; analysis by Cambridge West Partnership, LLC

Most of these programs appear to be performing within expectations. Most are solid but are not yet excelling. It is unreasonable to expect every instructional program to be "stellar" but there may be steps for improvement that some of the programs could take to continually make improvements. As noted in the status column, many of these programs are currently in the process of being updated and some are pending a new submission for a substantive change to the program requirements. Most, but not all, of these programs have been established for a considerable period of time.

The College is expected to set program performance expectations, systematically collect evidence, reflect upon that evidence to reach conclusions regarding program improvement initiatives, and to make those changes supported by resource allocations where appropriate.

Programs that Might be Reconsidered

The College has notified the Chancellor's Office that they wish to inactivate several previously approved programs: (1) Automotive Technology; (2) Engineering Drafting Technology; (3) Engineering Technology; (4) Natural Resource Management; (5) Digital

Animation; (6) Computer Technology; (7) Electronics Technology; and (8) Physical Sciences Technology.

In the six-year analysis of program awards, several programs were identified that conferred one award a year or less, in some cases no awards had been granted during that time. These programs are grouped into two categories. Many are being updated and others are new and pending an approval. The list of the programs in this category (those that are currently being reconsidered and changed) is located in the appendix.

A second category of programs were marked as active in the program inventory, had few awards conferred, and were not marked as being changed. As noted in the "year approved" column, ten of these programs are relatively new and have not had an opportunity to "gain traction" just yet. It is sometimes the case in career and technical programs that students become early leavers with marketable skills (ELMS). In short, they do not remain to complete the program as the faculty had designed the curriculum. With the current emphasis on increasing the numbers of students who complete a college degree or a certificate that will launch them into employment, there may be opportunities that the College should pursue to strengthen or redesign these programs. A detailed list of these programs to watch or reconsidered is found in the table below.

Table 45: Cerro Coso College Programs to Watch and Reconsider (six-year award period 2005-06 to 2010-11)

Unique Code	Title	TOP	Year Approved	Status	Award Code	Description	Annual Average Awards
1969	Administration of Justice	210500	1970	Active	F	Certificate 60+	0.0
1969	Administration of Justice	210500	1970	Active	L	Certificate 18 to <30	1.0
20641	Administration of Justice	210500	1970	Active	L	Certificate 18 to <30	0.0
30766	Administration of Justice	210500		Active	S	AS-T	0.0
16622	Central Valley Higher Ed. Consortium Transfer	490110	2005		A	AA	0.2
1972	Fire Technology	213300	1970	Active			0.0
20642	Fire Technology	213300	1970	Active	S	AS	0.2
18915	Human Services	210400	2009	Active	L	Certificate 18 to <30	0.5
18917	Human Services Worker	210400	2009	Active	L	Certificate 18 to <30	0.5
18917	Human Services Worker	210400	2009	Active	F	Certificate 60+	0.5
19148	Industrial Technology	95600	2009	Active	S	AS	0.0
19149	Industrial Technology	95600	2009	Active	L	Certificate 18 to <30	0.0
19150	Industrial Technology: Electronics Technician	95600	2009	Active	L	Certificate 18 to <30	0.0
19151	Industrial Technology: Engineering Technician	95600	2009	Active	S	AS	0.5
19156	Industrial Technology: Solar Technician	95600	2009	Active	E	Certificate 6 to <18	0.0
19157	Industrial Technology: Wind Technician	95600	2009	Active	E	Certificate 6 to <18	0.0
1945	Machine Tool Technology	95630	1970	Active	S	AS	0.0
1945	Machine Tool Technology	95630	1970	Active	T	Certificate 30 to <60	0.0
20639	Machine Tool Technology	95630	1970	Active	L	Certificate 18 to <30	0.0
22920	Mathematics	170100	2010	Active	A	AA	0.0
30793	Mathematics	170100		Active	S	AS-T	0.0
16909	Theatre: Acting	100700	2006	Active	A	AA	0.2
20640	Vocational Nursing Certificate	123020	1974	Active	T	Certificate 30 to <60	0.0
1946	Welding Technology	95650	1970	Active	S	AS	0.3
1946	Welding Technology	95650	1970	Active	E	Certificate 6 to <18	0.2
19735	Welding Technology Certificate	95650	1970	Active	L	Certificate 18 to <30	0.0

Source: Kern District Annual Program Award Files; analysis by Cambridge West Partnership

Program Changes and Adjustments

A comparison of the instructional programs listed in the 2011-2012 College catalog and the official inventory of instructional programs authorized to the College by the Chancellor's Office revealed a potential discrepancy. An accounting of degrees and certificates awarded by the College from 2005-06 to 2010-11 supported the same conclusion. The College catalog lists six Job Skills Certificates (JSC). However, the College may report those program awards to the state and receive a certain amount of "credit" for those awards. Very few Job Skills Certificates awarded to students have been reported to the State in the last ten years. These awards, submitted in the annual program data, are counted as successes for completions in both the Carl Perkins Act vocational programs accountability and in the Integrated Postsecondary Education Data System (IPEDS) reports of student program completion. However, unless the College has consistent resources to make sure the awards

get into the annual program award data it may be counterproductive to submit them. Having these awards appear one year and not the next may be a bigger problem than not having them at all.

The College has acquired approval from the District Board of Trustees to offer such programs, but the College cannot record a student's accomplishment of the curriculum requirements on a transcript. Two programs on the list could be submitted to the Chancellor's Office for approval as a Certificate of Achievement, a third program would require a few additional units to qualify. Were that done the College could record the award on the student's transcript. Unless the required units are brought up to at least 18 semester credits, the awarded certificates, even if reported to the State, would not be credited to the College in the Accountability Reporting for Community Colleges (ARCC) framework. The current list of JSCs is detailed in the table below with the units required to complete the certificate.

Table 46: Cerro Coso College Job Skills Certificates

Job Skills Certificate Title	Units Required
Assistant Teacher Certificate of Proficiency	6
Associate Teacher Certificate of Proficiency	12
Administrative Medical Assisting Certificate of Proficiency	9
Clinical Medical Assisting Certificate of Proficiency	10
Medical Assisting Externship Certificate of Proficiency	3
Digital Media Skills Certificate of Proficiency	12

Source: Cerro Coso Catalog 2011-12

Four of the JSC programs have been or will be converted to a Certificate of Achievement. In doing so the College may now note the award on the student's transcript and may start to report awards to the Chancellor's Office. These changed programs are listed below.

Table 47: Job Skills Certificates Converted to Certificates of Achievement

JSC to Certificate of Achievement	Units Required
Converted to Certificate of Achievement	
Solar Technician Certificate of Achievement	12
Wind Technician Certificate of Achievement	12
Pending Approval as a Certificate of Achievement	
Office Clerk Certificate of Proficiency	12
Welding Technology Certificate	12

Source: Cerro Coso Catalog 2011-12

There is another consideration that has arisen recently. A number of policy papers have been published in the past year that suggest that only certificates of 30 units or above have economic value. This may be due, in part, to the small number of certificates requiring fewer units being recorded, and thus being available for analysis in the evaluation of a student's

return on investment. With these recent research papers, California public policy makers might advocate for elimination of lower unit certificates.

The College may wish to consider changes to career and technical education programs that would lead to immediate entry-level employment. For example, an effort might be made to place programs into related knowledge groups and thereby build upon the pathways concept that the public school district has adopted and is being advocated in federal circles. These efforts might be undertaken in conjunction with articulation discussions between the College and public school districts.

In the current fiscal environment the College may want to redouble efforts to ensure that programs are sustainable, i.e. economically viable and responsive to employers needs. One strategy toward that end is to anchor the instruction in industry-endorsed standards and third-party certification of learning outcome accomplishments. Where appropriate, programs should be articulated with local four-year universities.

IX. Projections for Future Growth

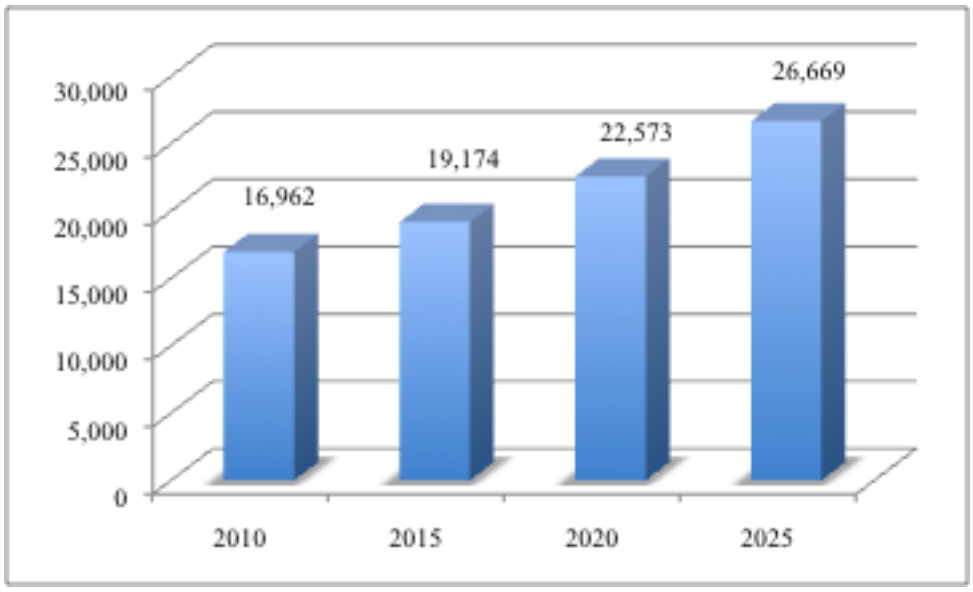
Determination of the Future Capacity for Growth

Linking the Educational Master Plan's internal and external analysis to space quantification completes the process. It balances the current and future curriculum, instructional delivery modes, learning environment, and necessary support structures with providing a comprehensive program of campus development.

As a dynamic process, Educational Master Planning involves a mixture of methods and a variety of assessments. Looking to the future, a master plan must provide for sufficient facilities to accommodate higher enrollment numbers, to improve the teaching/learning environment, to address new program development, to integrate the latest technological innovations, and to provide adequate space configuration permitting flexible teaching methods.

Considering the economic and fiscal factors, the growth projection for the on-campus Weekly Student Contact Hours (WSCH) at the Indian Wells Valley site was established at an annual 3.82% for benchmark years 2015, 2020 and 2025. This growth represents a reasonable forecast for on-campus instruction at this College at this time. In any planning cycle, the proposed facilities are time specific and address future needs for increased capacity that may or may not materialize. The strategic goal is to plan for sufficient facilities that are flexible enough to accommodate additional enrollments.

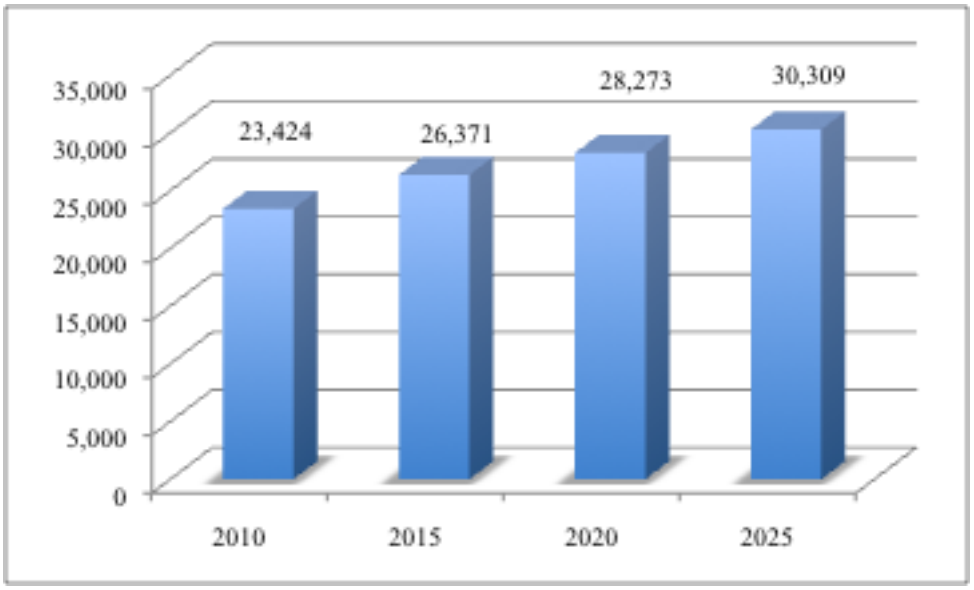
Indian Wells Valley On-Campus only
Fall Term Weekly Student Contact Hours (WSCH) Forecast



Source: Cambridge West Partnership, LLC

In addition to the on-campus WSCH activity, the online instructional efforts are quite robust. The online WSCH growth projection was established at an annual 1.96% for benchmark years 2015, 2020, and 2025. This growth represents a reasonable forecast for online instruction at this College; however, the College might elect to curtail the extent of offerings in an effort to stimulate additional on-campus activity.

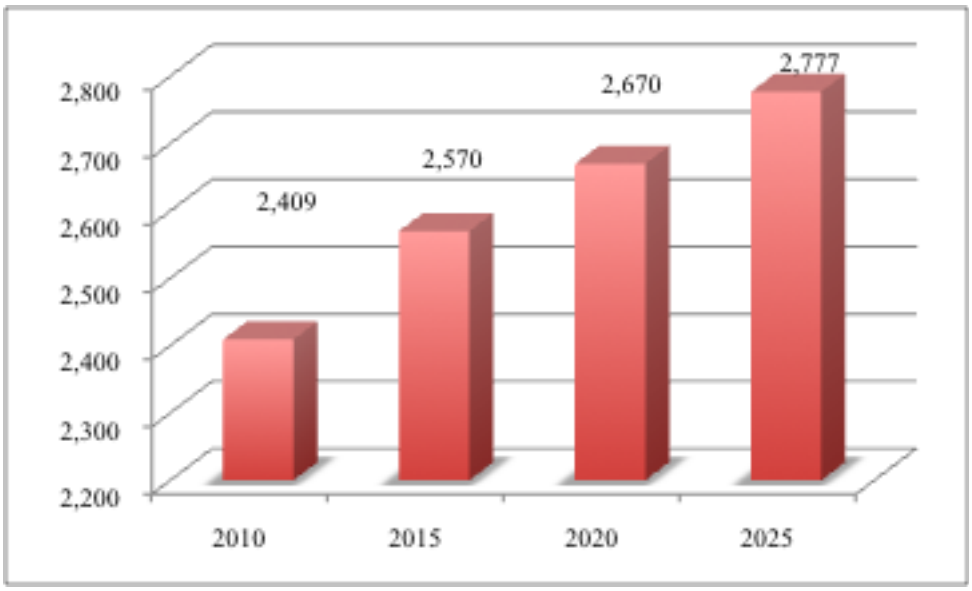
Indian Wells Valley Online only
Fall Term Weekly Student Contact Hours (WSCH) Forecast



Source: Cambridge West Partnership, LLC

Consideration was given to tangible trends such as changes in student origins, population growth rate and changes in demographics for establishing the growth projection for future headcounts. The rate of growth in headcount for the on-campus Indian Wells Valley site was established at an annual 1.02% for benchmark years 2015, 2020 and 2025. This growth also represents a reasonable forecast for the on-campus headcount at this College at this time. In any planning cycle, the proposed facilities are time specific and address future needs or capacities that may or may not materialize. The strategic goal is to plan for sufficient facilities that are flexible enough to accommodate additional headcounts.

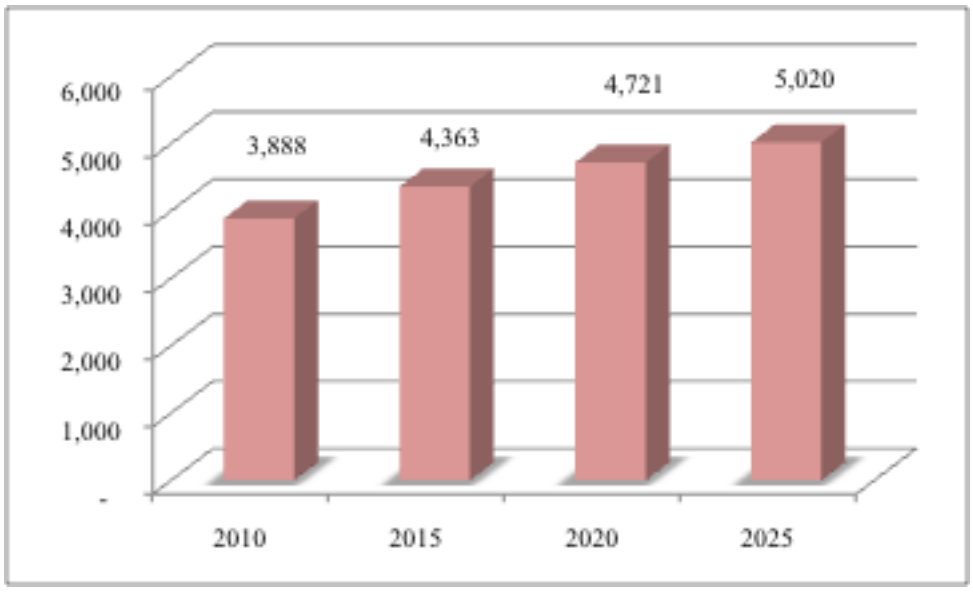
Indian Wells Valley On-Campus only
Fall Term Headcount Forecast



Source: Cambridge West Partnership, LLC

Unduplicated headcounts in online classes have been even greater than the on-campus counts. The rate of growth in headcount for the online Indian Wells Valley site was established at an annual 1.94% for benchmark years 2015, 2020 and 2025.

Indian Wells Valley Online only
Fall Term Headcount Forecast



Source: Cambridge West Partnership, LLC

Growth as Applied to the Future Program of Instruction

WSCH Projections

State standards for construction and renovation of facilities basically focus on *capacity*. Capacity, as outlined in the Facilities Planning Manual is correlated with the production of WSCH. WSCH represents the average number of hours of student instruction in a week per class (i.e. 30 students enrolled in a class that meets 3 hours per week is 90 WSCH). Estimating growth in headcounts produces a factor of increased WSCH. This WSCH is then transformed into instructional space or assignable square feet (ASF). Each space type, in this case lecture and/or laboratory, WSCH generates an "appropriate" instructional facility addressed as ASF. While these calculations are established through state standards, other factors must be considered in planning facilities. An additional factor in all planning is *adequacy*. Adequacy in this context assumes sufficient and/or suitable capacity to provide for an effective learning environment.

WSCH Projections and the Future Program of Instruction

The following table projects future WSCH and FTES in benchmark years of 2015, 2020, and 2025. The forecast is in summary form by educational centers and main campus of the College. The actual forecasting process, however, was conducted at the discipline/program level. A comprehensive analysis by discipline/program can be found in the Appendix.

Cerro Coso College - Indian Wells Valley WSCH/FTES
Projections Summary 2010-2025

Cerro Coso College - Indian Wells Valley WSCH/FTES Projections 2010-2025

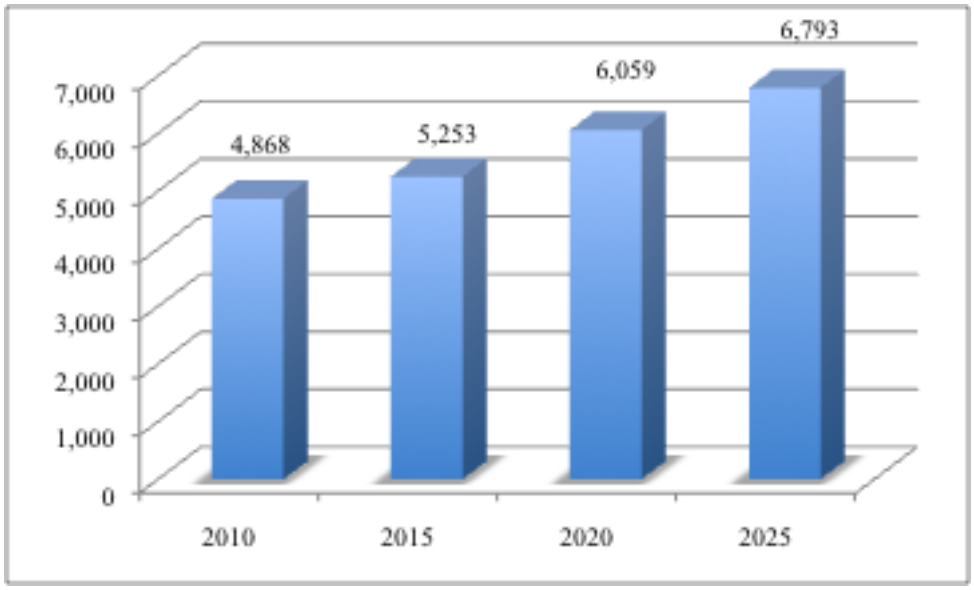
Profile	Actual			Projected								
	Fall Sem 2010			2015			2020			2025		
Department	# of Sec	WSCH	FTES	# of Sec	Total WSCH	FTES	# of Sec	Total WSCH	FTES	# of Sec	Total WSCH	FTES
Liberal Arts												
Academic Development	17	2,288.8	71.1	20	2,574.9	79.9	24	3,044.1	94.5	29	3,600.3	111.8
English	7	807.15	25.1	8	908.1	28.2	9	1,073.5	33.3	11	1,269.6	39.4
Humanities	8	1012.4	31.4	8	1,218.8	37.8	8	1,346.6	41.8	12	1,592.6	49.5
Counseling/Library Research	5	292.0	9.1	5	328.5	10.2	6	388.4	12.1	7	459.3	14.3
Mathematics	11	1,413.18	43.9	11	1,589.8	49.4	11	1,879.6	58.4	13	2,223.0	69.0
Social Sciences	13	1,232.1	38.3	13	1,386.1	43.0	13	1,638.7	50.9	15	1,938.4	60.2
Physical Education	26	2,337.9	72.6	26	2,630.3	81.7	27	3,109.5	96.5	32	3,677.5	114.2
Science	13	1,834.2	56.9	15	2,063.7	64.1	17	2,439.4	75.7	18	2,885.3	89.6
Visual & Performing Arts	9	975.9	30.6	9	1,109.1	34.4	10	1,311.3	40.7	12	1,550.8	48.1
Career & Technical Education												
Business & Computer Science	10	721.96	22.4	10	812.1	25.2	10	960.2	29.8	13	1,135.6	35.3
Child Development	3	73.34	2.5	3	83.6	2.9	3	108.3	3.7	3	128.1	4.4
Industrial Arts	13	1330.2	41.29	15	1,496.4	46.5	17	1,769.2	54.9	21	2,092.6	65.0
Media Arts	3	237.86	7.4	3	267.6	8.3	3	316.4	9.8	3	375.0	11.6
Public Services	76	2404.7	74.66	76	2,705.0	84.0	76	3,198.3	99.3	77	3,782.7	117.4
Campus Total	**214**	**16,962**	**527.0**	**222**	**19,174**	**595.0**	**234**	**22,573**	**700.8**	**266**	**26,669**	**829.1**
Online Program	**212**	**23,424.0**	**727.3**	**222**	**26,371.4**	**818.8**	**242**	**28,273**	**877.8**	**255**	**30,309.3**	**941.0**
Grand Total	**426**	**40,386**	**1,254.3**	**444**	**45,537**	**1,414.0**	**476**	**50,846**	**1,679.0**	**521**	**56,978**	**1,770.0**

CAMPUS		ONLINE	
2015 - WSCH 19,174		**2015 - WSCH 26,371**	
a) Net Class Sections Offered	222	a) Net Class Sections Offe	222
b) Enrollments	2,570	b) Enrollments	4,369
c) Full-time Equivalent Students	595	c) Full-time Equivalent St	819
d) WSCH/Enrollment	7.46	d) WSCH/Enrollment	6.04
2020 - WSCH 22,573		**2020 - WSCH 28,273**	
a) Net Class Sections Offered	234	a) Net Class Sections Offe	242
b) Enrollments	2,670	b) Enrollments	4,721
c) Full-time Equivalent Students	701	c) Full-time Equivalent St	878
d) WSCH/Enrollment	8.46	d) WSCH/Enrollment	5.99
2025 - WSCH 26,669		**2025 - WSCH 30,309**	
a) Net Class Sections Offered	266	a) Net Class Sections Offe	255
b) Enrollments	2,777	b) Enrollments	5,020
c) Full-time Equivalent Students	829	c) Full-time Equivalent St	941
d) WSCH/Enrollment	9.62	d) WSCH/Enrollment	6.04

Source: Cambridge West Partnership, LLC

Considering the economic and fiscal factors, the growth projection for the on-campus Weekly Student Contact Hours (WSCH) at the Kern River Valley-South Kern Center was established at an annual 2.64% for benchmark years 2015, 2020 and 2025.

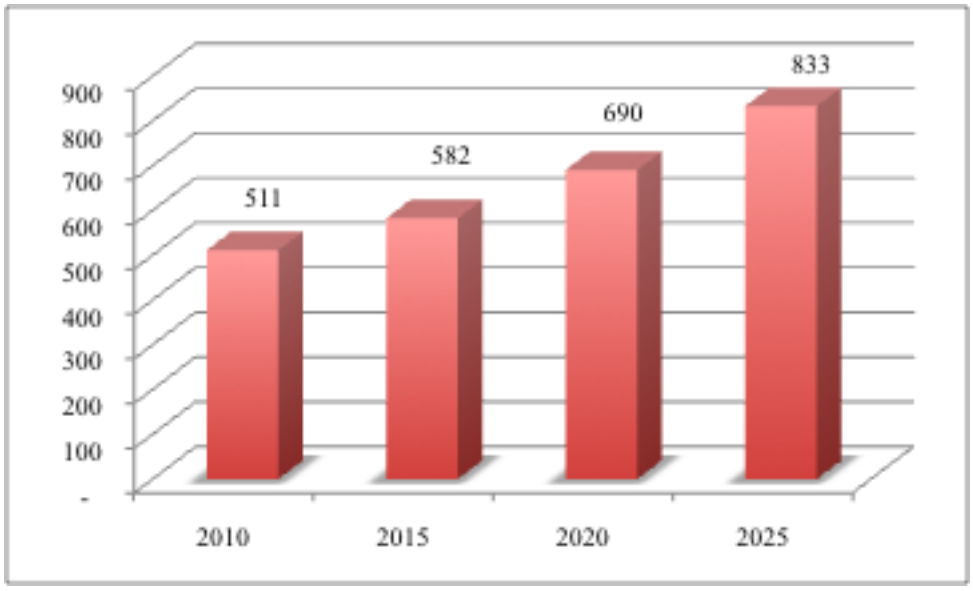
Kern River Valley-South Kern Center Fall Term
Weekly Student Contact Hours (WSCH) Forecast



Source: Cambridge West Partnership, LLC

The rate of growth in headcount for the Kern River Valley-South Kern Center was established at an annual 4.19% for benchmark years 2015, 2020 and 2025.

Kern River Valley-South Kern Fall Term Headcount Forecast



Source: Cambridge West Partnership, LLC

Cerro Coso College - Kern River Valley-South Kern
WSCH/FTES Projections Summary 2010-2025

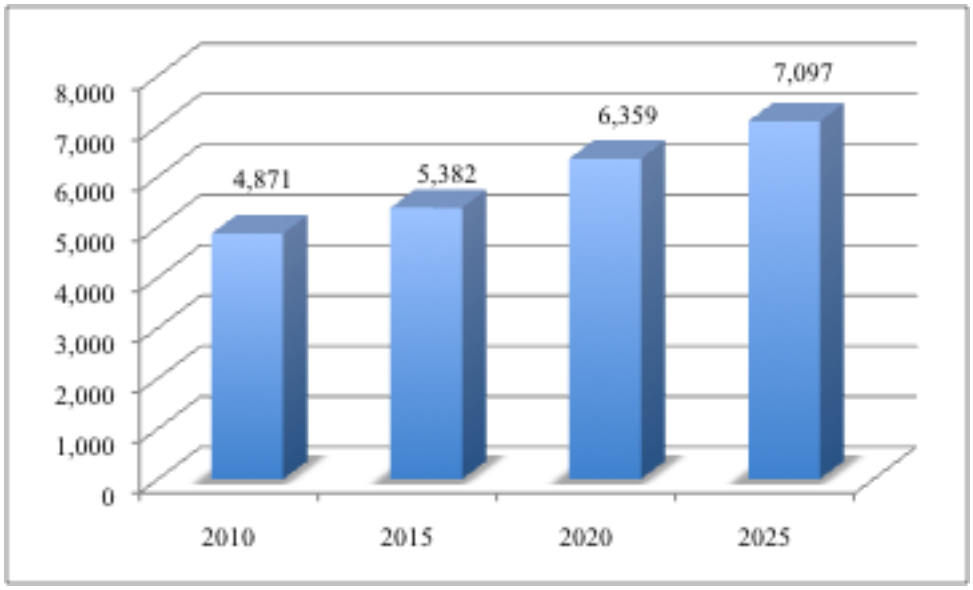
Profile	Actual			Projected								
	Fall Sem 2010			2015			2020			2025		
Location	# of Sec	WSCH	FTES	# of Sec	Total WSCH	FTES	# of Sec	Total WSCH	FTES	# of Sec	Total WSCH	FTES
KRV/South Kern												
Kern River Valley	49	4,424.5	137.4	53	4,725.8	146.7	62	5,297.0	94.5	65	5,765.1	179.0
South Kern	5	443.30	13.8	5	526.9	16.4	9	762.4	33.3	11	1,028.1	31.9
Center Total	**54**	**4,868**	**151.2**	**58**	**5,253**	**163.1**	**71**	**6,059**	**127.8**	**76**	**6,793**	**210.9**

CAMPUS	
2015 - WSCH 5,252	
a) Net Class Sections Offered	58
b) Enrollments	582
c) Full-time Equivalent Students	163
d) WSCH/Enrollment	9.02
2020 - WSCH 6,059	
a) Net Class Sections Offered	71
b) Enrollments	690
c) Full-time Equivalent Students	188
d) WSCH/Enrollment	8.78
2025 - WSCH 6,793	
a) Net Class Sections Offered	76
b) Enrollments	833
c) Full-time Equivalent Students	211
d) WSCH/Enrollment	8.16

Source: Cambridge West Partnership, LLC

Considering the economic and fiscal factors, the growth projection for the on-campus Weekly Student Contact Hours (WSCH) at the Eastern Sierra Center was established at an annual 3.05% for benchmark years 2015, 2020 and 2025.

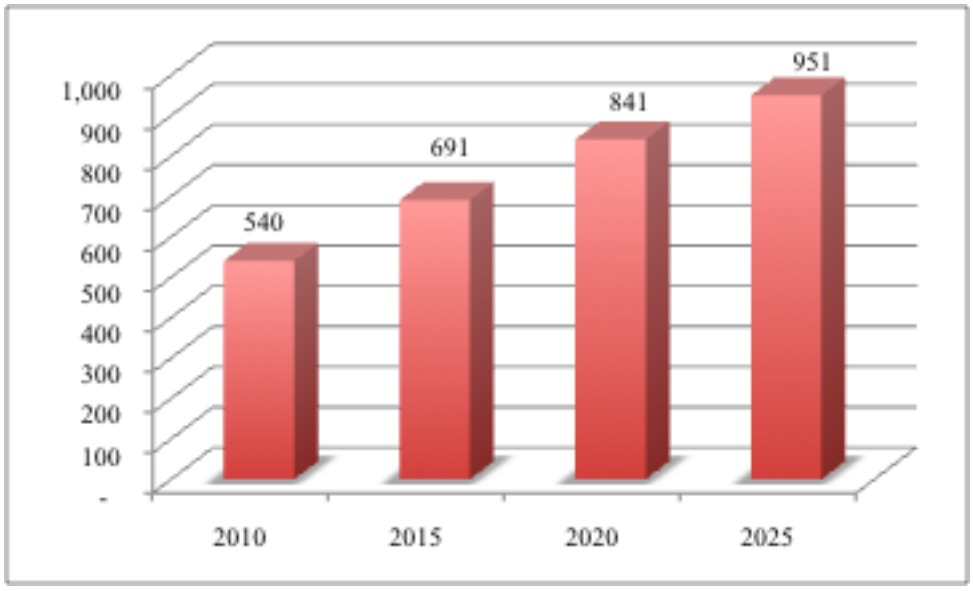
Eastern Sierra Center Fall Term
Weekly Student Contact Hours (WSCH) Forecast



Source: Cambridge West Partnership, LLC

The rate of growth in headcount for the Eastern Sierra Center was established at an annual 5.07% for benchmark years 2015, 2020 and 2025.

Eastern Sierra Center Fall Term Headcount Forecast



Source: Cambridge West Partnership, LLC

Cerro Coso College - Eastern Sierra Center WSCH/FTES
Projections Summary 2010-2025

Profile	Actual Fall Sem 2010			Projected 2015			2020			2025		
Location	# of Sec	WSCH	FTES	# of Sec	Total WSCH	FTES	# of Sec	Total WSCH	FTES	# of Sec	Total WSCH	FTES
Eastern Sierra Center												
Bishop	35	2,524.5	78.4	38	2,776.8	86.2	44	3,490.7	108.4	48	3,852.1	119.6
Mammoth Lakes	24	2,346.5	72.9	28	2,604.7	80.9	33	2,868.0	89.0	37	3,244.7	100.7
Center Total	**59**	**4,871.0**	**151.3**	**66**	**5,381.5**	**167.1**	**77**	**6,358.7**	**197.4**	**85**	**7,096.8**	**220.3**

CAMPUS	
2015 - WSCH 5,382	
a) Net Class Sections Offered	66
b) Enrollments	691
c) Full-time Equivalent Students	167
d) WSCH/Enrollment	7.78
2020 - WSCH 6,359	
a) Net Class Sections Offered	77
b) Enrollments	841
c) Full-time Equivalent Students	197
d) WSCH/Enrollment	7.56
2025 - WSCH 7,097	
a) Net Class Sections Offered	85
b) Enrollments	951
c) Full-time Equivalent Students	220
d) WSCH/Enrollment	7.46

Source: Cambridge West Partnership, LLC

X. Determination of Future Space Needs

Space Requirements for the Academic Program

WSCH and Space Projections

State standards for construction and renovation of facilities basically focus on *capacity*. Capacity, as outlined in the Facilities Planning Manual is correlated with the production of WSCH. WSCH represents the average number of hours of student instruction in a week per class (i.e. 30 students enrolled in a class that meets 3 hours per week is 90 WSCH). Estimating growth in headcounts produces a factor of increased WSCH. This WSCH is then transformed into instructional space or assignable square feet (ASF). Each space type, in this case lecture and/or laboratory, WSCH generates an "appropriate" instructional facility addressed as ASF. While these calculations are established through state standards, other factors must be considered in planning facilities. An additional factor in all planning is *adequacy*. Adequacy in this context assumes sufficient and/or suitable capacity to provide for an effective learning environment.

Space Projections

An assessment of the current facilities includes the capacity of the instructional program to meet programmatic needs, it reviews the condition of the facilities, and it addresses their adequacy to provide for an effective learning environment. The projections are not intended to dictate curricular content but rather to provide a perspective of what the current curriculum would look like if extended forward. The most important outcome of the forecasting process is to ensure that when a certain level of WSCH is achieved, the College will have in place designated and/or newly constructed facilities to meet demands in both academic and support services.

Space Projections and the Future Program of Instruction

The following table projects future space needs (ASF) in benchmark years 2015, 2020, and 2025. The forecast is in summary form by instructional divisions of the College. The actual forecasting process, however, was conducted at the discipline/program level. A comprehensive analysis by discipline/program can be found in the Appendix of the Facilities Master Plan.

Cerro Coso College – Indian Wells Valley, Main Campus
Space Allocation Summary Projections 2010-2025

	Current				Projected								
	Fall Sem 2010				2015			2020			2025		
Department	Lec ASF	Lab ASF	Other ASF	Total ASF	Lec ASF	Lab ASF	Total ASF	Lec ASF	Lab ASF	Total ASF	Lec ASF	Lab ASF	Total ASF
Liberal Arts													
Academic Development					1,155	245	1,400	1,366	236	1,602	1,615	279	1,894
English					372	183	555	440	216	656	520	256	776
Humanities					426	820	1,246	459	969	1,428	542	1,148	1,690
Counseling/Library Research					155	0	155	184	0	184	217	0	217
Mathematics					752	0	752	889	0	889	1,052	0	1,052
Social Sciences					656	0	656	775	0	775	917	0	917
Physical Education					235	6,848	7,083	278	8,095	8,373	329	9,574	9,903
Science		2,480	3,027	5,507	442	2,718	3,160	523	3,213	3,736	618	3,800	4,418
Visual & Perform Arts		5,753	4,264	10,017	483	0	483	571	0	571	675	0	675
Career & Technical Education							0			0			0
Business & Comp Sci		1,441		1,441	205	635	840	243	751	994	287	888	1,175
Child Development					36	0	36	40	0	40	55	0	55
Industrial Arts		6,065	2,100	8,165	426	2,149	2,575	504	2,541	3,045	596	3,004	3,600
Media Arts					127	0	127	150	0	150	177	0	177
Public Services		1,993		1,993	1,030	1,131	2,161	1,217	1,415	2,632	1,440	1,673	3,113
General Lecture Rms	7,174		1,848	9,022									
Campus Total	**7,174**	**17,732**	**11,239**	**36,145**	**6,500**	**14,729**	**21,229**	**7,639**	**17,436**	**25,075**	**9,040**	**20,622**	**29,662**

CERRO COSO - MAIN CAMPUS	
2010 - Current ASF Available for Instruction	
a) Total ASF	36,145
b) Lecture ASF	7,174
c) Laboratory ASF	17,732
d) Other	11,239
2015 - Assignable Square Feet	
a) Total ASF	21,229
b) Lecture ASF	6,500
c) Laboratory ASF	14,729
2020 - Assignable Square Feet	
a) Total ASF	25,075
b) Lecture ASF	7,639
c) Laboratory ASF	17,436
2025 - Assignable Square Feet	
a) Total ASF	29,662
b) Lecture ASF	9,040
c) Laboratory ASF	20,622

Source: Cambridge West Partnership, LLC

Cerro Coso College – Eastern Sierra Center
Space Allocation Summary Projections 2010-2025

	Current				Projected								
	Fall Sem 2010				2015			2020			2025		
Location	Lec ASF	Lab ASF	Other ASF	Total ASF	Lec ASF	Lab ASF	Total ASF	Lec ASF	Lab ASF	Total ASF	Lec ASF	Lab ASF	Total ASF
Bishop	1,169	4,273	2,760	8,202	835	2,198	3,033	1,042	2,903	3,945	1,158	3,159	4,317
Mammoth Lakes	1,228	3,512	3,109	7,849	843	1,880	2,723	928	2,095	3,023	1,049	2,369	3,418
Campus Total	**2,397**	**7,785**	**5,869**	**16,051**	**1,678**	**4,078**	**5,756**	**1,970**	**4,998**	**6,968**	**2,207**	**5,528**	**7,735**

EASTERN SIERRA CENTER	
2010 - Current ASF Available for Instruction	
a) Total ASF	16,051
b) Lecture ASF	2,397
c) Laboratory ASF	7,785
d) Other	5,869
2015 - Assignable Square Feet	
a) Total ASF	5,756
b) Lecture ASF	1,678
c) Laboratory ASF	4,078
2020 - Assignable Square Feet	
a) Total ASF	6,968
b) Lecture ASF	1,970
c) Laboratory ASF	4,998
2025 - Assignable Square Feet	
a) Total ASF	7,735
b) Lecture ASF	2,207
c) Laboratory ASF	5,528

Source: Cambridge West Partnership, LLC

Cerro Coso College – KRV/South Kern Center
Space Allocation Summary Projections 2010-2025

	Current				Projected								
	Fall Sem 2010				2015			2020			2025		
Location	Lec ASF	Lab ASF	Other ASF	Total ASF	Lec ASF	Lab ASF	Total ASF	Lec ASF	Lab ASF	Total ASF	Lec ASF	Lab ASF	Total ASF
Kern River Valley	2,200	2,696	725	6,621	1,786	2,196	3,982	2,001	2,462	4,463	2,178	2,679	4,857
South Kern (Edwards)	0	0	0	0	195	262	457	282	379	661	380	510	890
Campus Total	**2,200**	**2,696**	**725**	**6,621**	**1,981**	**2,458**	**4,439**	**2,283**	**2,841**	**5,124**	**2,558**	**3,189**	**5,747**

KRV/South Kern	
2010 - Current ASF Available for Instruction	
a) Total ASF	6,621
b) Lecture ASF	2,200
c) Laboratory ASF	2,696
d) Other	725
2015 - Assignable Square Feet	
a) Total ASF	4,439
b) Lecture ASF	1,981
c) Laboratory ASF	2,458
2020 - Assignable Square Feet	
a) Total ASF	5,124
b) Lecture ASF	2,283
c) Laboratory ASF	2,841
2025 - Assignable Square Feet	
a) Total ASF	5,747
b) Lecture ASF	2,558
c) Laboratory ASF	3,189

Source: Cambridge West Partnership, LLC

Space Requirements for the Support Services of the College