Educational Master Plan

December 2017

Table of Contents

Purpose of the Educational Master Plan

The primary purpose of Cerro Coso Community College Educational Master Plan is to provide the philosophical foundation and necessary data upon which the instructional, student services, and facility needs of the college for the next five academic years are based. The master plan provides guidelines not only for decision-making but also a plan of action. Additionally, it provides a context for the formulation of other critical plans for the college, including those of facilities and capital expenditures, technology, and strategic goals. It consists of three parts: 1) an introduction to and overview of the college organizational structure and the college's integrated planning efforts, 2) an environmental scan of the college's external environment, and 3) projections for growth and future program of instruction.

The Cerro Coso Community College Educational Master Plan is consistent with emerging educational developments in fields of study, demographic trends of the communities the college serves, and the needs of students. Inherent in its logic is the understanding that an institution like Cerro Coso Community College is a dynamic entity continually undergoing focused change and that this change can sometimes take time, and that change is driven by internal and external factors.

Intent of the Master Plan

1. To provide a reference point and framework for the college for the next five years.
2. To anticipate the needs of the community for instructional programs.
3. To provide a context for decision-making regarding academic affairs, student services, and administrative services.
4. To maximize efficiency and productivity of the instructional programs.
5. To drive the planning of capital expenditures in the areas of facilities.
6. To establish a vision and projections for near-term institutional goal-setting.

Educational Master Plan Planning Process

Setting realistic objectives that can be achieved in a timely manner is essential to successful planning. Good planning addresses the multiple issues currently facing the College and those likely to impact the college in the future. Consideration of current economic, demographic and legislative conditions allows the college to successfully plan for the future needs of the community it serves.

In summer 2016, the college retained the services of Maas Companies to assist the college in the development of the external environmental scan for the college. This included conducting an overview and assessment of each of Cerro Coso Community College's six campus locations, provide data that can be used for analysis of regional and demographic trends and projections, provide data and analysis on future educational trends within the college's regions, conduct a labor market study that identifies current regional trends, and finally define the capacities for enrollment growth in the future and determine academic space needs in assignable square footage for a period of ten years. Securing the services of a third party to complete this kind of environmental scan, future educational projections, and facilities capacity is considered a best practice to ensure the college bases its planning on an objective analysis.

The results of the environmental scan and future projections were received in the summer of 2017. Community forums were scheduled and conducted in Mammoth, Bishop, Ridgecrest, Lake Isabella, Tehachapi, and the city of Mojave during the months of October and November. At the same time, a draft of the entire educational master plan, including future educational projections and visions for mid-term goal-setting, were presented and discussed within the college community.

The final plan was compiled in early November and submitted to the Kern Community College District (KCCD) board of trustees for approval at its December meeting.

Relation of the Educational Master Plan to Other College and District Planning Efforts

A comprehensive or master plan is a requirement of California Education Code. As explained in Title 5 Regulations, "the governing board of a community college district shall establish policies for, and approve, comprehensive or master plans which included academic master plans and long range master plans for facilities" (section 51008). The practice in KCCD is that each college of the district develops its own educational master plan for a period of five years.

A comprehensive or master plan as such is not, however, a specific requirement of the college's regional accreditor, the Accrediting Commission of Community and Junior Colleges (ACCJC). Accreditation standards require only that the college engages in continuous, broad based, systematic evaluation and planning. The institution is to provide evidence that it integrates program review, planning, and resource allocation into a comprehensive process that leads to accomplishment of its mission and improvement of institutional effectiveness and academic quality. Institutional planning, in turn, must demonstrate it addresses short- and long-range needs for educational programs and services and for human, physical, technology, and financial resources.

It is in this spirit that Cerro Coso Community College's educational master plan serves both roles: it exists to fulfill the requirement of state law as practiced in KCCD and also the accreditation requirement of addressing short- and long-range needs for educational programs and services.

At the college, the educational master plan aligns with other planning efforts. Cerro Coso Community College's **strategic goals** are established once every three years through a process that includes a mandatory review and revision of the college's **mission statement**, as well as its **vision**, **values**, and **institution-set standards**. The educational master plan's data gathering, analysis, and projections provide a context for this narrower three-year goal setting—particularly the community profiles and labor market analyses contained in the external environmental scan. On a yearly basis, the college creates even shorter-term goal-setting during the annual integrated planning cycle, in which units, sections, and divisions plan, implement, and assess specific action items to continuously improve their effectiveness. These are thus done in context both of the three-year strategic goals and of the five-year educational master plan. It is important to state that while data is gathered and assessed at all levels, the specific value of the educational master plan in this process is the opportunity for an objective, third-party corroboration of community profiles, labor market needs, and future areas of program growth.

A second layer of planning done at the college is through **program reviews**. At Cerro Coso Community College, program reviews are completed for all instructional degrees and certificates, all student services, and all administrative services operational units. Program reviews are also completed for information technology, marketing and public relations, and college human resources. Program reviews are similar to the educational master plan in being on a five-year cycle; they are different in that they are focused on the operations of individual units and departments. As above, the educational master plan plays an important role in providing recent

objective data that departments and units can use as a context for designing and implementing strategies for improved effectiveness.

At the district level, the educational master plan serves as a basis for KCCD's **plan for capital construction**. This once-every-five-year plan is required by Education Code, section 81820, and is submitted at a district level. At KCCD, it is created for and submitted to the Chancellor's Office after all three colleges have completed their master plans and received approval from the board of trustees.

Cerro Coso Community College Background and History

Cerro Coso Community College was established in 1973 as one of three colleges within the Kern Community College District. However, educational programs and services have been present in Ridgecrest, where the Indian Wells Valley campus is presently located, since 1951. Cerro Coso provides educational services to a population of about 85,000 distributed over a service area of over 18,000 square miles – the largest community college service area in California. Such a large area requires multiple physical sites in order to provide quality learning. Cerro Coso Community College has met this requirement by offering instruction and services to an approximate FTES of 2,850 students at six campus locations and through distance education.

The 320 acre Indian Wells Valley Campus (IWV), at Ridgecrest, California is located in the upper Mojave Desert, 160 miles northeast of Los Angeles and 120 east of the District Office in Bakersfield, and serves a population of about 28,000. This campus serves about half of the student population of the college and houses most of the college administration. The Eastern Sierra College Center is north of the IWV campus and serves the communities of Inyo and Mono counties. The center operates two campuses, one in Bishop 120 miles north of Ridgecrest, and another in Mammoth Lakes which is an additional forty miles north. Forty-five miles west of the IWV campus, the Kern River Valley campus serves communities near Lake Isabella. The East Kern campus is seventy miles south of the IWV campus and is housed on Edwards Air Force Base. This center provides educational services to military and civilian personnel on the base and to the residents of nearby communities. The college's most recent campus location, Tehachapi, was established in 2014 and received official status with ACCJC in 2016. Finally, the college serves inmates in two correctional facilities within its service area: California City Correctional Facility (CAC) and the California Correctional Institution (CCI) in Tehachapi.

In an effort to respond to the needs of individuals who cannot attend classes at one of the College's five physical locations, the College established CC Online. This program has been fully reviewed by the regional accrediting agency. It currently provides 46 online degree and certificate programs and over 160 courses distributed over 350 sections each year with complete online support services, including matriculation, textbook purchasing, and library support.

College Guiding Principles

Mission

The mission of Cerro Coso Community College is to provide tailored programs and equitable services to the students in the communities and rural areas we serve. We demonstrate a conscious effort to produce and support student success and achievement through traditional and distance delivery. To accomplish this mission we will provide:

- Degrees and certificates in transfer and career technical education,
- Remedial instruction
- Comprehensive support services
- Learning opportunities that develop ethical and effective citizenry, and
- Continuing education that is compatible with the institution's primary mission

Vision

Cerro Coso Community College will be recognized as a leader in higher education, a source of programs and services for tomorrow's workforce, a model for student learning, and a partner with its diverse clientele and communities.

Values

The Values at Cerro Coso Community College provide the foundation for all student, academic, and community activities.

Educate

- We are committed to student's learning and achievement;

Innovate

- We encourage individual and collective creativity in a rapidly changing world:
- We implement best practices that facilitate and encourage innovation and success;

Inspire

- We model a culture of life-long learning;

Serve

- We celebrate the diversity of each individual: student, staff, and faculty;
- We strive to deliver equitable services to all students at all sites; and
- We foster community partnerships and the relationships we build with them

Institution-Set Standards

Institution-Set Standards

Successful Course Completion	64%
Degrees	175
Certificates	55
Transfer to 4-yr Colleges	150
Basic Skills Course Success	50%
Online Course Success	57%

Performance on Institution-Set Standards

.	Standards Set in 2014	2014	Standards Set in 2015	2015	2016	2017
Successful course completion	66%	66.1%	64%	71.0%	70.2%	
Degrees	225	270	175	343	307	381
Certificates	55	122	55	183	145	149
Transfer	75	185	150	184	158	
Persistence – fall to fall	35%	34%				
Basic skills course success			50%	56.2%	55.8%	
Online course success			57%	61.7%	62.0%	
Examination Pass Rates						
Licensed Vocational Nurse	60%	77%	65%	78%	84%	
Emergency Med Technician	60%	80%	65%	86%	63%	
Job Placement Rates						
Business	50%	53.9%	50%	45.8%	50.0%	
Business Office Technology	50%	36.4%	50%	36.4%	38.5%	
Web Design	50%	50.0%	50%	42.9%	38.5%	
Computer Information Systems	50%	28.6%	50%	28.6%	0%	
Welding Technology	50%	65.8%	50%	65.0%	52.0%	
Medical Assisting	50%	68.8%	50%	66.7%	0%	
Licensed Vocational Nurse	50%	72.8%	50%	72.7%	63.6%	
Emergency Med. Technician	50%	100%	50%	50.0%	46.2%	
Child Development	50%	61.0%	50%	61.0%	56.8%	
Paralegal	50%	50.0%	50%	50.0%	50.0%	
Human Services	50%	60.0%	50%	60.0%	43.8%	
Administration of Justice	50%	77.3%	50%	77.3%	78.7%	

Source: Cerro Coso Community College 2018 Institutional Self-Evaluation Report, draft

Cerro Coso Community College 2015-2018 Strategic Goals

Strategic Goal #1: Student Success

Increase Completion

- Improve just-in-time communication to students
- Improve CTE completion rate

Improve Milestone Achievements

- Increase persistence at KRV and among CTE students
- Improve basic skills achievement

Increase Student Engagement

- Increase scope and use of ESCC Learning Assistance Center
- Expand EOPS opportunities supportive of educational goals

Improve online student engagement

Strategic Goal #2: Equity

Close Achievement Gaps

- Narrow gaps in access for underrepresented groups
- Narrow gaps in matriculation completion by underrepresented groups
- Narrow gaps in performance by underrepresented groups
- Improve success rates for DSPS and EOPS students, particularly in basic skills
- Review and analyze equity gaps at the campus level

Strategic Goal #3: Access

Optimize Student Enrollment

- Grow enrollments
- Increase assistance with prospective and first year students in Financial Aid and Admissions and Records
- Expand student enrollment in engineering pathway to CSULB

Be the Higher Education Option of First Choice

- Optimize strategies for recruitment and outreach
- Improve public awareness and participation in the college programs, services, and activities
- Increase high school yield

Strategic Goal #4: Community Connections

Provide Workforce and Economic Development Programs that Respond to Local Industry

- Increase college prominence in local workforce development
- Implement Adult Education Plan (AB86)

Reflect the Communities We Serve

- Promote a diverse workforce and provide specific plans for ensuring equal employment opportunity
- Increase the percentage of available child care opportunities going to student families

Strategic Goal #5: Organization Effectiveness

Provide Effective Professional Development

- Provide targeted professional development for faculty to support goals, objectives, strategies, and actions in this Strategic Plan
- Establish an infrastructure for ongoing professional development
- Improve employee understanding of board policies and procedures

Meet and Exceed Internal and External Standards and Requirements

- Meet External Standards for SLO Assessment and Internal Standards for Program Review Completion
- Improve the effectiveness of the Continuing Education program
- Improve the effectiveness of the Budget Development committee

Increase Trust and Create a Collaborative Culture

- Improve communication internally

Improve Facilities and Maintenance

- Complete the main building modernization project
- Complete Kern River Valley campus renovation project
- Improve M&O response time for work requests
- Improve grounds
- Keep technology current

Improve Institutional Effectiveness

- Increase opportunities for ongoing feedback to Financial Aid and Admissions and Records
- Increase automated processes in Admissions and Records
- Ensure consistency of HR functions
- Foster Fiscal Responsibility

Generate Revenue

- Actively pursue CTE grants that align with the mission of the district and the college
- Improve alumni base, interactions, and relationships
- Strengthen CCCC Foundation, Inc. through providing vision, leadership, strategic direction, and administrative oversight

Overview of the External Environmental Scan

A vital component of a College's Educational Master Plan is a scan of the external environment. The scan gives a perspective of conditions that occur in the exterior surroundings that are out of the control of the College. These include conditions at the national, state, regional and local levels. These conditions will have an impact on the development, planning and the direction of the College. The sections below outline the results from the scan analysis. The fundamental framework of the scan is to take an in-depth look at the characteristics and trends that presently exist and identifying the opportunities or threats that are revealed. These areas are referred to in the scan as the "Effective Service Areas" (ESA's). A detailed "ESA" was conducted for each of the Cerro Coso Community College campus and centers.

Numerous data resources were referenced to generate the information contained in this section. These resources included:

- The California Department of Finance (CA)
- Environmental System Research Institute (ESRI)
- California Employment Development Department (EDD)
- California Community College Chancellor's Office, Data Mart
- City of Ridgecrest Finance Department
- Kyser Center for Economics
- Bureau of Economic Analysis
- Kern County Economic Development Corporation
- Bureau of Labor Statistics
- State Board of Equalization

- U.S. Department of Commerce
- Construction Industry Research Board
- California Home Builders Foundation
- The 2012 Cerro Coso Community College Educational Master Plan

Scan at the National Level

The scan at the National level focused on the element that will have the greatest impact on the College as it moves into the future – the economy. The condition of the National economy sets the parameters for every government and business entity, every institution, every family. This reality was illustrated in dramatic form in 2008 when a chain of events that led to the collapse of Lehman Brothers triggered the worst economic crisis since the Great Depression. Funds flowing from federal sources, normally available to the States, were held in abeyance and dominos began to fall. Colleges within the state of California were not spared or immune. Cuts in curricular offerings, staff and student services were the result. Consequently, colleges dependent on State funding are still trying to gain back ground lost to this great economic downturn. Following is a current perspective on the key economic indicators that will guide and influence the National economy going forward.

Employment

Throughout 2015, job gains in most sectors of the economy contributed to a decline in the unemployment rate. In 2014, nonfarm jobs increased at a rate of 1.9% annually. This is the fastest annual growth rate since the year 2000. This modest but consistent rate of job creation was responsible for bringing the annual unemployment rate down from 6.7% in 2013 to 5.6% in 2014. For the month of January 2015, the unemployment rate was 5.7%, which was within striking distance of the "natural" (normal) rate of unemployment. Notably, the 2016 December unemployment rate was 4.7%. Although these numbers give the impression that the labor market is nearly back to normal, there is also a word of caution. The share of part-time workers was at 19% in 2014. This is still high compared to an average of 18% since 1990. Furthermore, wages barely rose above the rate of inflation last year, and it is not yet clear whether the drop in the labor force participation rate was due to demographics (i.e. the retiring *Baby Boomers*) or to recurring forces that must still play out.

Inflation

Inflation has been low in recent years, a trend that is expected to continue for the next two years. This has been in part to a plunge in oil prices and weakness in the prices of other commodities. With the labor market approaching full employment, wages are projected to rise more quickly. However, wages are not projected to be a factor in creating an inflationary environment. Additionally, there is still slack in the national economy. Capacity utilization, which measures the share of the industrial production in use, was 79.7% in December of 2014, still under the 83% to 85% range that corresponds to full utilization of the nation's productive capacity. Inflation based on the Consumer Price Index (CPI) was 1.6% in 2014 and was projected to reach 2.3% for 2016 when all the numbers are finally equated. Other measures of inflation are also projected to present a low risk for inflation.

The Road Ahead

With the change of administrations in Washington D.C., it is still uncertain what impact there will be on government policy in general. Spending on higher education at the federal level for 2017 and beyond has not yet been defined. All things being equal, however, the U.S. economy should see somewhat faster growth over the next two years. This will be in part due to the anticipated acceleration in housing and construction and improvement in the financial picture for states and local government. The GDP is projected to accelerate from a 2.4% growth rate in 2014 to over 3.0% in 2016 when the final tallies are recorded. Broad-based job growth is projected to continue across most sectors of the economy and the labor market should approach full employment. Risks to the economic forecast mainly come from elsewhere in the world. Europe and Japan have struggled to create sustained growth within their economies, while China's economy has dropped from double-digit growth to single digit growth. Political and security concerns in the Middle East and other parts of the world have raised both political and economic uncertainty, both of which have the potential to stifle economic activity.

Scan at the State Level

In 2016, California's economic productivity reached $2.46 trillion, surpassing France. According to Forbes Magazine, only five Countries have a greater Gross Domestic Product (GDP) than California. These countries that can claim a higher GDP than California include, the United States, China, Japan, Germany and the United Kingdom. For 2015, the GDP for the State was ranked number one in the nation at $2.48 billion with a relative growth rate of 3.8%. It closed 2014-2015 with a year-over change of 2.5%. It is presently growing faster than the nation. Overall, California accounts for over 13% of U.S. GDP, by far, the greatest percentage of any state.

KEY U.S. ECONOMIC INDICATORS

	2009	2010	2011	2012	2013	2014	2015f	2016f
Real GDP	-2.8%	2.5%	1.6%	2.3%	2.2%	2.4%	3.0%	3.0%
Nonfarm Employment	-4.3%	-0.7%	1.2%	1.7%	1.7%	1.9%	1.9%	1.8%
Unemployment Rate	9.3%	9.6%	8.9%	8.1%	7.4%	6.2%	5.6%	5.4%
Consumer Price Index	-0.4%	1.6%	3.2%	2.1%	1.5%	1.6%	1.3%	2.3%
Fed Budget Balance (in billions of dollars)	-1413	-1294	-1300	-1087	-680	-483	-468	-467

SOURCES: Bureau of Economic Analysis; Bureau of Labor Statistics; Congressional Budge Office - through 2014, Keyser Center for Economic Research

According to the Kyser Center for Economic Research, nearly every industry sector added jobs in 2014. The gains, however, were mainly concentrated in five sectors. Over the past year, more than seventy percent of California's new jobs occurred in the industrial sectors of Health Care and Social Assistance; Leisure and Hospitality; Administration, Support Services and Waste Services; Professional, Scientific and Technical Services; and Construction. In percentage terms, Construction added jobs at the fastest rate (5.6%). It was followed by Administration, Support Services and Waste Services (5.0%). Information and Professional, Scientific and Technical

U.S. INTERESTS RATES

	2009	2010	2011	2012	2013	2014	2015f	2016f
Fed Fund Rate	0.16%	0.18%	0.10%	0.14%	0.11%	0.10%	0.40%	1.60%
20-Year Treasury Note	3.26%	3.22%	2.78%	1.80%	2.35%	2.40%	2.70%	3.50%
30-Year Fixed Mortgage	5.04%	4.69%	4.45%	3.66%	3.98%	4.20%	4.30%	5.20%

SOURCES: Federal Reserve Board; Statistics through 2014; Kyser Center for Economic Research

Services expanded their respective payrolls by 4.0% each. In absolute values, Health Care added the largest number of jobs at 67,900 while Administrative, Support and Waste Services recorded gains of 48,500 jobs and Leisure and Hospitality 46,000 jobs. The Kyser Center for Economic Research noted that only two sectors recorded job declines in 2014: Nondurable Goods and Financial Services.

STATE OF CALIFORNIA ECONOMIC INDICATORS								
	2009	2010	2011	2012	2013	2014	2015f	2016f
Population (thousands)	37,077	37,309	37,570	37,867	38,164	38,499	38,884	39,273
Nonfarm Employment (thousands)	14,372	14,210	14,358	14,706	15,148	15,484	15,824	16,157
Unemployment Rate (%)	11.3%	12.4%	11.8%	10.4%	8.9%	7.5%	6.7%	6.3%
Total Personal Income (billions)	1,537	1,579	1,686	1,805	1,857	1,943	2,029	2,133
Per Capita Income ($)	$41,587	$42,282	$44,749	$47,505	$48,434	$50,500	$52,200	$54,400
Total Taxable Sales (billions)	$457	$477	$521	$558	$591	$624	$650	$690
Value of Two-Way Trade (billions)	$413	$503	$586	$578	$596	$609	$616	$646
Housing Units Permits	36,421	44,762	47,090	57,628	82,283	85,310	110,000	135,600
Non-Res Bldg Permits (millions)	10,866	11,200	12,166	14,805	21,792	23,686	24,700	27,000

Sources: Kyser Center for Economic Research; State of California Dept of Finance; Employment Development Department; Board of Equalization; U.S. Dept of Commerce; Construction Industry Research Board, California Homebuilding Foundation

A Perspective from the Governor's Office

On January 10, 2017, Governor Brown released his 2017-2018 State Budget. "The trajectory of revenue growth is declining," the Governor announced in unveiling his State Budget. The Budget calls for focus and control. Governor Brown cautioned about potential declines in the state's coming years. However, this warning is more connected to quantity and timing.

By summer 2018, if no action is taken, he forecasts that the current spending path will lead to a $1.6 billion deficit. The Governor's Budget redirects this concern and provides what should be the ongoing resources as one-time funds only. Perhaps this will diminish the need for cuts in an economic downturn.

The Association of College Business Officers (ACBO) states that the overall Budget provides community colleges with slightly over $210 million in new ongoing resources and $220 million in one-time allocations. Nevertheless, there are concerns that the Proposition 98 split between K-12 and community college districts is not being preserved.

The January Budget provides that, community colleges will receive 10.87% of the Proposition 98 dollars. However, community colleges should receive 10.93%, which is a decrease of close to $45 million. Also, Governor Brown only funded 5 out of the 29 Capital Outlay Projects that were approved by the Board of Governors. Not one of the 5 budgeted construction projects included any from the Kern Community College District.

$150 million for the California Guided Pathways was also set aside in the Governor's budget. This initiative's main objective is to offer "gainful employment" for community college students by providing high-quality post-secondary credentials and careers that have value in the labor market. The standards to receive funding require the demonstration of present and integrated institutional wide planning practice that ensures student success at the college. The outline of this model is found at the AACC Pathways Project and seems appropriate for the College to pursue.

Moving forward, the Governor and the Legislature will discuss the proposals and possible changes over the next few months, with a final budget offered by the end of the year. For the purpose of this section, the information is

presented to recognize the annual budget process and examine the attention given by the Governor as it relates to California's economy in the near future.

Information for this section was derived from a number of sources: Chief among them were the U.S. Department of Education, the Accrediting Commission for Community and Junior Colleges, Board of Governors of the California Community College System, Community College Facility Coalition Community College League of California, California Community College Chancellor's Office, interpreted by MAAS Companies.

Policy and Key Initiatives for Higher Education

"In today's increasingly global, knowledge-based economy, education has never been more important. Students need to master important skills like problem-solving, critical thinking, creativity, and teamwork in order to be prepared for the jobs of today and tomorrow and to lead fulfilling, successful lives." This quote from the U.S Department of Education fact sheet could not ring truer than it does today. There is a great need for educational systems to continue to improve while heading towards the third decade of the 21 Century. If the nation is to flourish, there will be a need to develop and implement educational policy and initiatives that support the words of the U.S. Department of Education. Further, there will need to be effective partnerships with governments at the local, state and federal levels.

The role of the federal government in education is somewhat limited because of the tenth amendment. The most pertinent educational policies are most often generated at the state and local levels. However, there are some important federal initiatives that have set the standard for influencing community college education at all jurisdictional levels. Most recently, these include the 2015 Every Student Succeeds Act (ESSA) that was signed into law by President Obama. This legislation was somewhat of a revival of the original Elementary and Secondary Education Act (ESEA) of 1965. It targets expanding educational opportunities and improving student outcomes. It has close ties with the *No Child Left Behind (NCLB)* initiative.

One of the more significant initiatives to come from the federal level is the "Completion Agenda". This initiative has inspired changes in educational policies throughout the nation. The original thinking behind the "Completion Agenda" was simply to have students become more successful in their educational endeavors and to improve and increase graduation rates. Informed by the President Obama's American Graduation Initiative (AGI) to make America competitive in the global marketplace, the "Completion Agenda" identified a goal to increase the percentage of U.S. residents who earn high-quality degrees and credentials from the present rate of 39% to 60% by 2025. The Community College League of California (CCLC) took up the challenge in 2010, adopting goals to increase student achievement. To reach the national goal, graduation rates across the state will need to increase by 5.2% annually.

The "Completion Agenda" gained more traction in 2014, when the Board of Governors of the California Community College System (Board of Governors) adopted a goal to increase the number of students transferring to four-year colleges, earning degrees, or being awarded certificates by 250,000 over a ten-year period. The Board of Governors' additionally furthered the "Completion Agenda" when they supported a basic skills initiative that took aim at students overcoming their academic shortfalls. There was also SB 1440, Student Transfer Achievement Reform (STAR) of 2010. It advocated for a simplified process for transferring from a community college to a four-year college with full junior status. This legislation was amplified in 2013 to encourage students to attain a two-year associate's degree prior as part of their transfer process. The Student Success Act of 2012 was yet another measure that targeted criteria that would lead to a higher potential for student success.

From our state lawmakers, another spin-off from the "Completion Agenda" was SB 850 that was passed in 2014. This piece of legislation authorized a pilot program that allowed 15 Community Colleges the latitude to offer bachelor's degree programs in technical fields provided that degrees in these areas were not already offered within the California State University system. This pilot program is set to begin in the 2017/2018 academic year.

In 2014 / 2015, President Obama convened a series of meetings aimed at addressing change in educational policies and practices. These meetings took place to address the issues of access, the "Completion Agenda", outline performance measures, the cost of education and other topics pertinent to education at the postsecondary level. His mission was underscored in his 2015 State of Union address proposing that community college tuition be free, a measure that would be funded through changes in the federal tax code and increase taxes on the highest incomes. This proposed initiative was known as America's College Promise. Inherent in the proposal was that colleges offer fully transferable programs to four-year colleges or occupational programs that would lead to degrees or certificates that were relevant to employment opportunities. While this proposed measure was never acted upon by Congress, the energy and impact behind the message were not lost.

Initiatives and proposed actions were also generated at the regional level, where the focus was placed on improving student learning outcomes. In 2014, vis-à-vis the Accrediting Commission for Community and Junior Colleges (ACCJC) standards for operation, tied to the accreditation process, were adopted and set as targets for community colleges.

The most recent and far-reaching changes in the area of student success, however, came from the Student Success Task Force, California Community College Chancellor's Office. Recommendations from this report have been (and continue to be) the driving force for change and improvement in the area of student success. For 2014/2015, funding for Student Success and Support Programs received twice the amount of funding from the previous high point for matriculation funding. The Student Success Task Force also recommended a common assessment tool which has an implementation date of the 2016/2017 academic year. Other legislation that was associated with the Student Success Task Force includes SB 1456, a bill that combines student equity plans for students who need additional help and services to succeed. A sum of $70 million was approved in 2014 for this purpose. As a result, funding in increased amounts continues for the current academic year. On-line Education is another initiative of the Student Success Task Force that was funded to a level of $57 million to promote student completion using on-line instruction. The Career and Technical Education Initiative (2012, SB 1402), which was designed to reassess the economic and workforce division programs to better reflect regional workforce job markets, is yet another example of the work of the Task Force. The Chancellor's Office has translated this initiative into a program entitled "Doing What Matters" (DWM).

AB 288, legislation to promote collaboration, was signed into law in 2015, with an implementation date of January 2016. This Task Force inspired legislation addressed an opportunity for "dual enrollment" for students in high school. Effectively, it allows the governing board of a community college district to enter into a College and Career Access Pathways (CCAP) partnership with the governing board of a school district to offer or expand dual enrollment opportunities. It targets students who may not already be college bound or students who are underrepresented in higher education. The goal is to develop a pathway from high school to community college for career/technical education, for preparation for transfer or for helping students become academically prepared for college or careers. This piece of legislation has the potential to be a win-win for the high schools, increasing graduation rates, and for community colleges, by attracting students who might otherwise not attend college at all.

While the greatest emphasis in this review has been placed on the programmatic side of education, there have also been some legislative measures recently passed that address the facility side of education. In November 2016, the voters passed Proposition 51 (Public School Facility Bond). This measure will provide much-needed funding for capital construction projects at community college campuses across the state. The passing of this proposition allows for $9 billion in general obligation bonds for new constructions and modernization of K-12 public facilities, charter school vocational education and California Community Colleges facilities. More specifically, there will be $7 billion for K-12 public school facilities and $2 billion for community college facilities. The Governors 2017/2018 budget currently includes five capital outlay projects for community colleges. These are promising signs for all community colleges. Funding for capital improvement projects at the community college level has not been present since 2008.

It should be noted that Education Policy section of the external environmental scan targeted those initiatives, policies, pieces of legislation that have the greatest potential for impacting the College. Suffice it to say that there are more initiatives than there is money to fund them. Going forward, it will be important for the College to keep abreast of the policy matters and changes that are afforded through the state and/or the federal level.

Sources for information for this section were derived from a number of sources: Chief among them were the U.S. Department of Education, the Accrediting Commission for Community and Junior Colleges, Board of Governors of the California Community College System, Community College Facility Coalition Community College League of California, California Community College Chancellor's Office, the MAAS Companies data base.

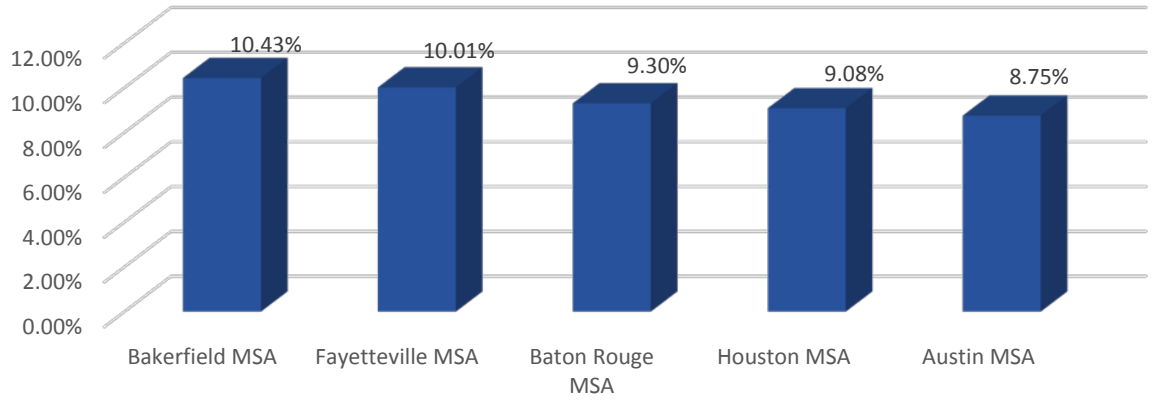
Cerro Coso Community College in Relation to the Region

Cerro Coso Community College includes the counties of Kern, Inyo, and Mono. However, it is Kern County that carries the greatest economic influence and the potential for the future of the College. For this reason, the regional perspective focused on Kern County, and not Inyo or Mono. The latter counties will be referenced in conjunction with campus sites that are located within their respective boundaries.

Kern County

Kern County's geographical area reaches north to Delano, east to Ridgecrest, to the western area of Derby Acres and the Southern area of the City of Rosamond. The regional economic base is driven by towns such as Arvin, Bakersfield, California City, Delano, Ridgecrest, Taft, Tehachapi, Wasco, and Shafter. According to the 2016 Kern Economic Development Corporation's Market Overview Report, Kern County is California's population center geographically, making this region accessible to 38 million consumers. Kern County is the number one Metro Area for the Fastest-Growing Workforce and ranks number two in Millennial job growth creation. The report also sites that the Bakersfield-Delano Metropolitan Service Area (MSA) had the second-fastest job growth in the nation for Millennials from 2007 to 2013, at 11%. The report also adds that, Kern's Bakersfield MSA is ahead of Seattle, WA for the prevalence of technical jobs: science, computer technology, engineering and math [S.T.E.M.]. Kern County has one of the fastest growing Metropolitan Gross Domestics Product (GDP). Kern County's GDP is driven by the agricultural and energy industries. In 2014, Kern County's GDP increased 0.7% bringing its GDP to $39.9 billion from $39.5 billion in 2013. This increase made the County the seventh Metropolitan Area in California for GDP. See the graph below of other comparable Metropolitan areas in our Nation:

Top Metropolitan Areas Gross Domestic Product (GDP) 2001-2014Source: Kern County Market Overview by Kern EDC, 2016



By 2021, Kern County is projected to have a population base that will approach almost one million. The County's population count as of 2016 exceeds 880,000. Kern County is also projected to have a 5-year annual population growth rate of 1.08%. The growth rate is higher than the State's projection of 0.87% for annual growth for the same timeframe.

Households in Kern County are growing at a steady rate. A five-year outlook through 2021 projects households to grow 0.94% annually. This projected rate of growth is higher than the state and national averages for the next five years. The average household size shows growth from the baseline year of 2010 to 2021, going from 3.15 to 3.24, with a 2016 household size of 3.21. The household size for the County was found to be noticeably greater than the 2016 State average of 2.93. The median age of the County is fairly young; in 2016 it was recorded to be 31.3 years of age. California's 2016 median age is higher at 35.8 years of age. The 2016 median household income for Kern County was $49,123 and the per capita income $21,178. Despite the positive growth for this region in population and household size, these figures are behind the respective state median income averages of $62,554 and $30,905.

DEMOGRAPHIC PROFILE: KERN COUNTY			
Summary	**2010**	**2016**	**2021**
Population	839,631	888,823	937,729
Households	254,610	267,211	279,992
Families	191,739	201,289	210,946
Average Household Size	3.15	3.21	3.24
Owner Occupied Housing Units	53.7%	52.0%	51.8%
Renter Occupied Housing Units	35.8%	37.4%	37.6%
Median Age	30.7	31.3	32.2
Trends: Annual Growth Comparisons	**Area**	**State**	**National**
Population	1.08%	0.87%	0.84%
Households	0.94%	0.79%	0.79%
Families	0.94%	0.79%	0.72%
Owner Households	0. 86%	0.69%	0.73%
Median Household Income	0.22%	2.73%	1.89%

Source: ESRI

A review of the 2016 level of unemployment, as provided by the United States Bureau of Labor Statistics, indicates that the unemployment rate within Kern County for the last three months of 2016 was over 9%. Even with this high unemployment rate, the percentage is down from 2015 of 10.4%, but still well above the State and National averages.

Cerro Coso Community College Main Campus

Overview

The Indian Wells Valley (IWV) campus is 160 miles northeast of Los Angeles in the city of Ridgecrest. The Campus is approximately 18,000 square miles of mountain, valley and desert community in eastern California. The IWV campus is located on a breathtaking site overlooking the Argus, Panamint, and Sierra Nevada mountain ranges. The Campus sits at an elevation of 2,800 feet. The rugged beauty of the IWV campus is the home to one of America's famous deserts, the upper Mojave Desert. With over 25 programs available, the Campus affords students a higher education in a large town setting positioned in a rural environment. The Campus also offers online classes and also has a well-established Child Development center. Two features that make the Campus unique amongst the other California Community College campuses are its Solar Photovoltaic Field and its Astronomical Observatory. The IWV campus accounts for the majority of on-campus students and is considered the primary Campus amongst the other Centers. The Campus serves the areas of China Lake, Trona, and Inyokern.

It is worthy to note that the IWV campus has recently created a new program, the *East Kern Educational Collaborative*. This Program was established to develop stronger collaborations with the Naval Air Weapons Station (NAWS) China Lake base and the IWV campus. The *East Kern Educational Collaborative* program was also organized to create awareness within the two groups of the opportunities that are available at the IWV campus and at the Base and to present these opportunities to the community. The IWV campus will need to establish the China Lakes NAWS base as a primary focus when developing and expanding its program of instruction and matriculation. The Campus will also need to consider any decline in the military base population at NAWS China Lake, as this will have an impact on both Ridgecrest and IWV campus.

Source: United States Board of Geographic Names; the City of Ridgecrest; CNIC Naval Air Weapons Station China Lake; The Daily Independent and California Community Colleges, Cerro Coso Community College

Ridgecrest

The city of Ridgecrest is robust with a population base of 27,000 and a thriving economy. Ridgecrest is located in the southern portion of the Indian Wells Valley. The Indian Wells Valley is surrounded on the west by Scottie, on the south by the Rand and El Paso Mountains, on the east by Searles Valley, and on the north by the Coso Range. Ridgecrest is the largest city in the Indian Wells Valley. Ridgecrest is in the northern corner of Kern County. The City is approximately 2 hours from Bakersfield, and 1 hour and 15 minutes from the Palmdale/Lancaster area. Air travel for the City is provided by the Inyokern Airport. Some of the City's points of interest are Leroy Jackson Park a 56-acre sports complex, The Maturango Museum and the Coso Range Wilderness trails. Ridgecrest is the business and shopping destination in northwestern Kern County. In support of this fact, Ridgecrest's focus on business expansion, "has streamlined licensing/permit procedures and has constructed a brand new 63-acre business park. These elements, combined with a highly-trained workforce and technologically-advanced naval base make Ridgecrest a great place to locate a business."

Military Influence

The city of Ridgecrest evolved into a growing and vibrant city as a support community to the vital mission of the US Navy. The mission included providing housing and services for federal employees and contractors in the area. The NAWS China Lake is located in Ridgecrest and is home to the Naval Air Warfare Center Weapons Division. "NAWS China Lake is part of the Navy Region Southeast, Commander, Navy Installation Command and is located in the Westerns Mojave Desert region of California, approximately 150 miles north of Los Angeles. The 19,000 square miles of restricted and controlled airspace at China Lake makes up 12 percent of California's total airspace and provides an unprecedented venue for integrated testing and training of today's warfighter." According to the KERNEDC, NAWS China Lake is a major source of employment for Ridgecrest. Essential to the success of the economy is Ridgecrest stabilizing itself as the service community for the NAWS China Lake. The fact remains that, Military brings to a community, jobs, growth and government. The relationship between the Ridgecrest

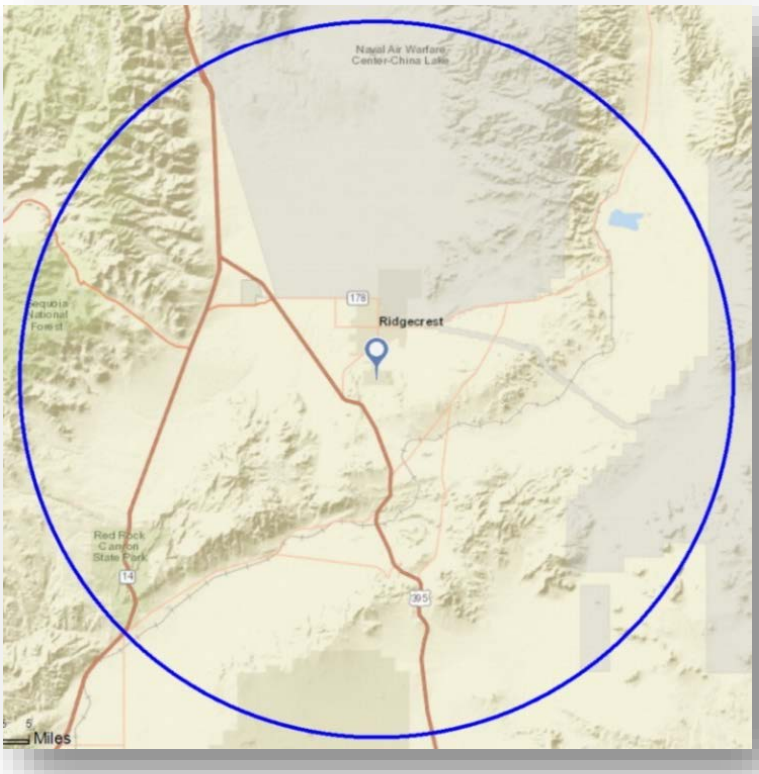
community and the Base is imperative for the growth of Ridgecrest and the IWV Campus. This is a fact that the NAWS Chins Lake base is aware of. For example, according to the base's website, the NAWS China Lake base values "community support and feels that community relations are necessary to maintain a positive relationship." The China Lake base builds community relations by providing installation tours to schools, sending their local Sailors, Marines, Fire Fighters and Policemen to schools and by hosting a variety of events.

In recent news, March 18-19, 2017 the China Lake Airshow event boasted of being an "extreme success." The weekend long China Lake Airshow was hosted and overseen by the U.S. Navy. This event had an estimate of 50,000 attendees. The article sites that, the community was booming, the largest hotels were sold out, and the restaurants were packed. The event "featured the U.S. Navy Blue Angles flight demonstration squadron, provided a boost for the local economy, according to local economic and tourism leaders."

Source: United States Board of Geographic Names; the City of Ridgecrest; CNIC Naval Air Weapons Station China Lake; The Daily Independent and California Community Colleges, Cerro Coso Community College

Geographical Areas Served – "Effective Service Area" Defined

The areas that surround the campuses of Cerro Coso Community College will be impacted by the trends and conditions at the national, state and regional levels. The campus service area was determined by an in-depth analysis of student enrollment by zip codes. Identified were the zip codes responsible for approximately 70% of the students attending the IWV Campus. A service radii with the IWV Campus address was then identified that incorporated the zip codes, from this, an Effective Service Area– the area that the Campus actually serves (ESA's) - was constructed. The ESA's reach across geographical boundaries to forms its own unique demographic and economic data and characteristics.



The Indian Wells Valley (IWV) ESA

Data gathered and analyzed for zip code origin of students enrolled for the 2015 fall semester was used as a baseline. The analysis revealed that a 25-mile radius utilizing the Campus' address to captured the most efficient population base for the area. A total of 68.84% of the student body at the IWV location came from a single zip code, 93555 which is the city of Ridgecrest. Adjacent is a graphic that supports the findings of enrolled students by zip code. The ESA for Indian Wells Valley is depicted in the graphic to the right.

Source: ESRI

Characteristics of the IWV ESA

The IWV location is the main campus of Cerro Coso Community College. The Campus is situated in the Indian Wells Valley/Ridgecrest area of the region. As mentioned above, the area's economy is heavily connected to the Naval Air Warfare Center Weapons Division (NAWCWD) at China Lake. The presence of NAWCWD contributes significantly to housing, schools, real estate development and the need for services from professional and technical occupations. China Lake is the primary economic driver of this community. The Campus supports the economies of Inyokern, Ridgecrest, Trona and China Lake. The Indian Wells Valley/Ridgecrest area is the second largest population base in Kern County.

Demographic Profile

The IWV Campus' ESA has a 2016 population of 37,902. By 2021, the area is projected to grow to 39,065. Over the next 5 years, the annual rate of growth of 0.61% for the population is projected to be relatively moderate. However, this growth rate is higher than in previous years. To illustrate, the annual growth rate in 2010 was 0.51%.

Overall, the ESA is relatively older, with a 2016 median age of 38.0. By 2021, the median age is projected to increase by only 0.1% to a median age of 39.0. The median household income for the service area was $56,783 and had increased from the average for 2010 of $51,292. By 2021, the growth projection for the median household income is set to increase to $60,360. As the data highlights, there has been an increase in the median household income for the IWV ESA. The 2016 unemployment rate for the area was 7.4%. This percentage was lower than the unemployment rate in Kern County, which was 9.9% for the same year. However, the unemployment rate for the IWV ESA is higher than the 2016 statewide average of 5.2% and the National unemployment percentage of 4.7%. This number has decreased from the 2010 unemployment rate of 9.5%. Historically, the 2016 unemployment rate was higher than the 2000 unemployment rate, which was 4.6%.

DEMOGRAPHIC PROFILE
INDIAN WELLS VALLEY: 25 MILE SERVICE AREA

Summary	2010	2016	2021
Population	37,167	37,902	39,065
Households	14,802	14,928	15,279
Families	9,797	9,841	10,054
Average Household Size	2.48	2.51	2.53
Owner Occupied Housing Units	57.4%	55.0%	54.5%
Renter Occupied Housing Units	30.9%	32.0%	32.3%
Median Age	37.1	38.0	39.0
Trends: Annual Growth Comparisons	**Area**	**State**	**National**
Population	0.61%	0.87%	0.84%
Households	0.47%	0.79%	0.79%
Families	0.43%	0.79%	0.72%
Owner Households	0.33%	0.69%	0.73%
Median Household Income	1.23%	2.73%	1.89%

Source: ESRI

Households by Income

A look at the income segmentation reveals the following:

INCOME PROFILE
INDIAN WELLS VALLEY: 25 MILE SERVICE AREA

	2016		2021	
Households by Income	Number	Percent	Number	Percent
<$15,000	2,033	13.6%	2,274	14.9%
$15,000 - $24,999	1,293	8.7%	1,153	7.5%
$25,000 - $34,999	1,295	8.7%	1,283	8.4%
$35,000 - $49,999	1,791	12.0%	1,877	12.3%
$50,000 - $74,999	2,922	19.6%	2,109	13.8%
$75,000 - $99,999	1,887	12.6%	2,211	14.5%
$100,000 - $149,999	2,415	16.2%	2,870	18.8%

$150,000 - $199,999		772	5.2%	913	6.0%
$200,000+		520	3.5%	589	3.9%
Median Household Income	$56,783		$60,360		
Average Household Income	$73,476		$79,061		
Per Capita Income	$29,083		$31,059		

Source: ESRI

Comparatively, for the IWV Campus ESA the median household income for 2016 was $56,783, and for Kern County, it is lower at $49,123. The 2016 household income within the ESA is characterized by having 19.6% of population base with incomes between $50,000 and $74,999 per year. Since 2010, historical data reveals that the figure has increased. To illustrate, in 2010 the IWV ESA had a $51,292 median household income, and in 2000 the median household income was $44,333. This segment is projected to continue increasing through 2021 to $60,360. Also, by 2021, 28.7% of the ESA population is projected to have a median household income of $100,000 or more. The 2016 per capita income for the IWV ESA is $29,083. This number was higher than the 2010 per capita income of $ 24,102 and by 2021 is expected to increase to $31,059.

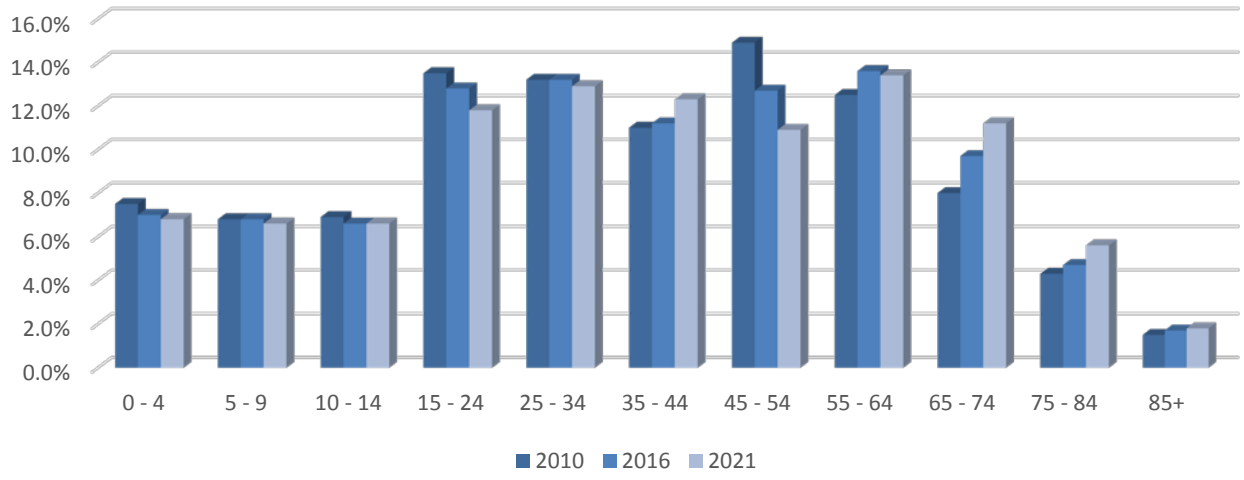
As a whole, most income levels are projected to rise for the IWV ESA. However, by 2021, the ranges of $15,000-$24,999, $25,000-$34,000 and $50,000-$74,999 will decrease. For example, $15,000-$24,999 will decrease by -1.2%, and $50,000-$74,999 by 5.8%. On a positive note, the IWV ESA population is projected to see growth in the higher income brackets of $75,000 up to $200,000. This increase of incomes will have a positive impact on the IWV ESA's economy.

As a whole, these figures are indicative of the fact that the NAWS China Lake base is a major influence in the area bringing in a population with higher than normal incomes level. This shift is a positive sign for solid economic growth in the IWV ESA.

Age Segmentation

Pertinent to the future planning and direction of the IWV location, is a concentrated look at the population segmentation by age. The "up-and-comer" age groups (0-14 years) segmentation for the population is projected to remain relatively stable over the next five years. The findings for the entire age segmentation for the IWV ESA was analyzed and captured in the chart below:

Indian Wells Valley ESA: Population by Age



Source: ESRI

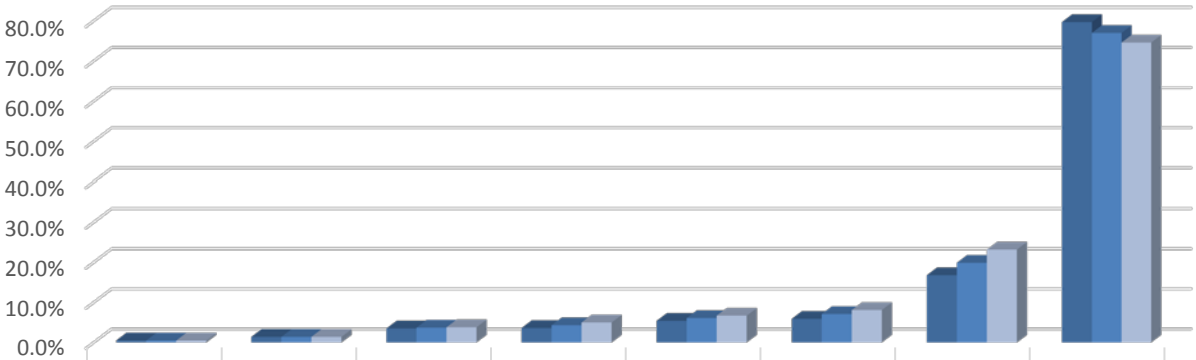
For 2016, the "up-and-comer" age group (0-14 years) has a combined raw number of 7,744 and accounts for 20.4% of the population. As mentioned above, the "up-and-comer age groups" (0-14 years) is projected to remain stable, with 2021 projected at 20.0% and will have a raw number that is slightly higher at 7,836. Assuming there is no unplanned migration from the ESA, this should go well for the IWV ESA for the next 10 to 15 years. With an unchanging younger age population, and assuming that future graduation rates are similar to the present, the IWV Campus should not lose ground in its quest to recruit more high school graduates to the Campus.

To the contrary, the IWV ESA has a growing older population base. To illustrate, in 2016 29.7% of the ESA population was 55+ years old. By 2021, the percentage of 55+ year old segment is projected to increase to 32% of the IWV ESA population base. With this projection of a 2.3% increase, the Campus must evaluate and consider any changes that might need to be made to the current course offerings and/or the matriculation process. These considerations and changes would ensure that the Campus is servicing the older IWV ESA age segment.

Ethnicity Segmentation

The Race and ethnicity segmentation of the College's ESA has the following profile:

Indian Wells Valley ESA: Race/Ethnicity Distribution



	Pacific Islander	American Indian	African American	Asian	Two or More Races	Some Other Race	Hispanic Orgin	White
2010	0.5%	1.4%	3.5%	3.6%	5.4%	5.9%	16.8%	79.7%
2016	0.5%	1.4%	3.7%	4.3%	6.1%	7.1%	19.9%	77.0%
2021	0.5%	1.4%	3.8%	5.0%	6.7%	8.1%	23.2%	74.6%

*As stated by ESRI, Hispanic Origin may be of any race. Therefore, race and ethnicity percentages will total more than 100%

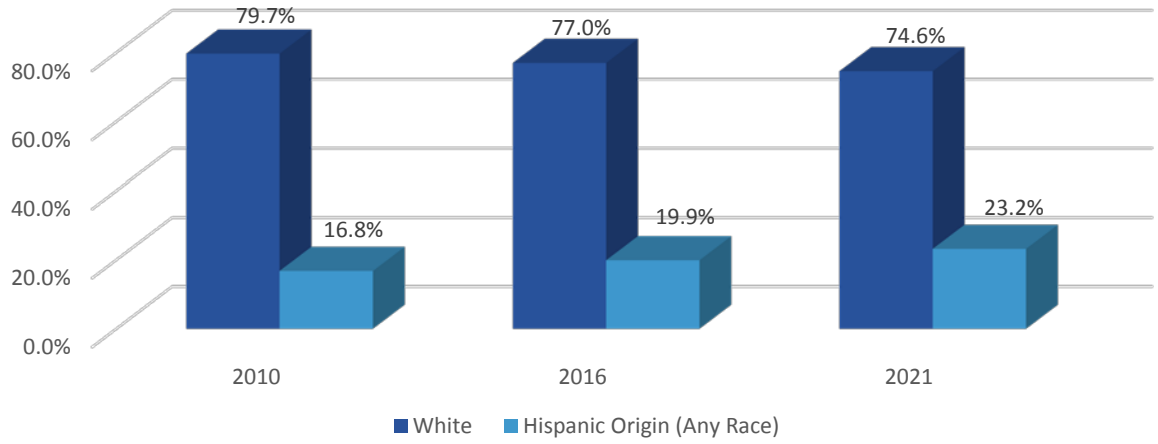
Source: Census Bureau, ESRI; analysis MAAS Companies

The data exhibits that the IWV ESA is characterized by a primarily White population. There is a trend, however, of a slow decline in the White ethnic population. For 2016, the White ethnic population accounted for 77.0% of the IWV ESA. This percentage is lower than the 2010 percentage of 79.7% and by 2021 is projected to decrease to 74.6%. Conversely, there was an accelerated rate of growth for the Hispanic population. In 2016, the Hispanic ethnic population accounted for 19.9% which was a 3.1% increase from 2010 percentage of 16.8%. Amongst the other races, the data reveals that all Race/Ethnicity segments account for a small percentage of the IWV ESA population, but is set to increase; with the exception of American Indian and Pacific Islander which are projected to remain the same.

Comparison of Most Dominant Ethnicities

Comparisons of the two dominant Ethnicities reveals the findings below:

Indian Wells Valley ESA: Dominant Ethnicity Comparison



Source: ESRI

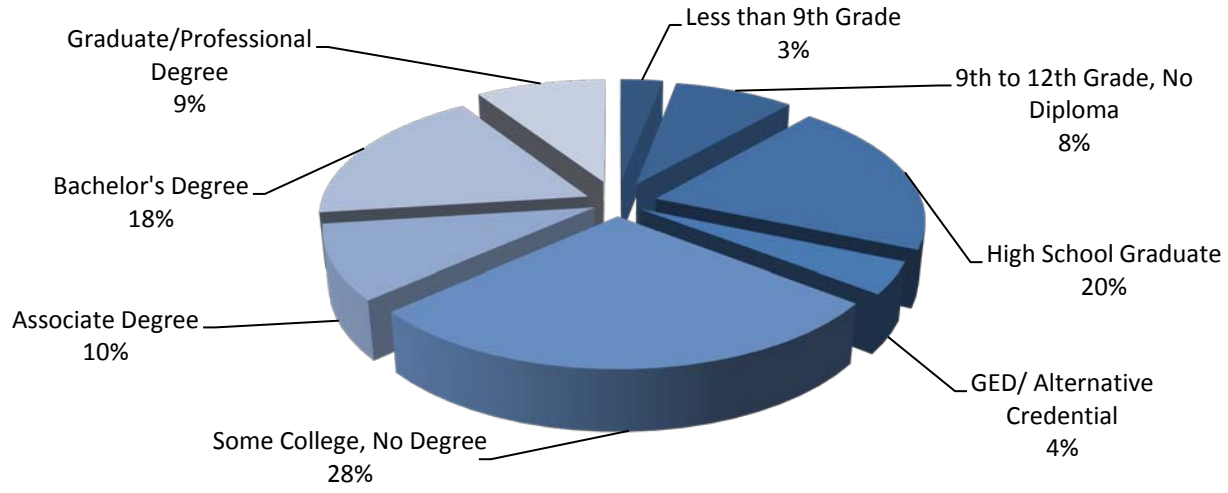
For 2016, the White ethnic segment represents 77.0% of the IWV ESA population. This is a decrease from 2010 in which, the White ethnic segment was almost 80% of the population. In comparison, for 2016 the Hispanic ethnic segment was 19.9% of the IWV ESA population; this was a 3.1% increase from the 2010 percentage of 16.8%. The Hispanic ethnic segment 2021 projection is 23.2% which is a 3.3% increase.

With the projected increase in the Hispanic population, the Campus may want to consider programs and/or incentives that will capture more of this segment of the IWV ESA population. The Campus would greatly benefit from encouraging more of the Hispanic population to enroll at the Campus.

Levels of Educational Attainment

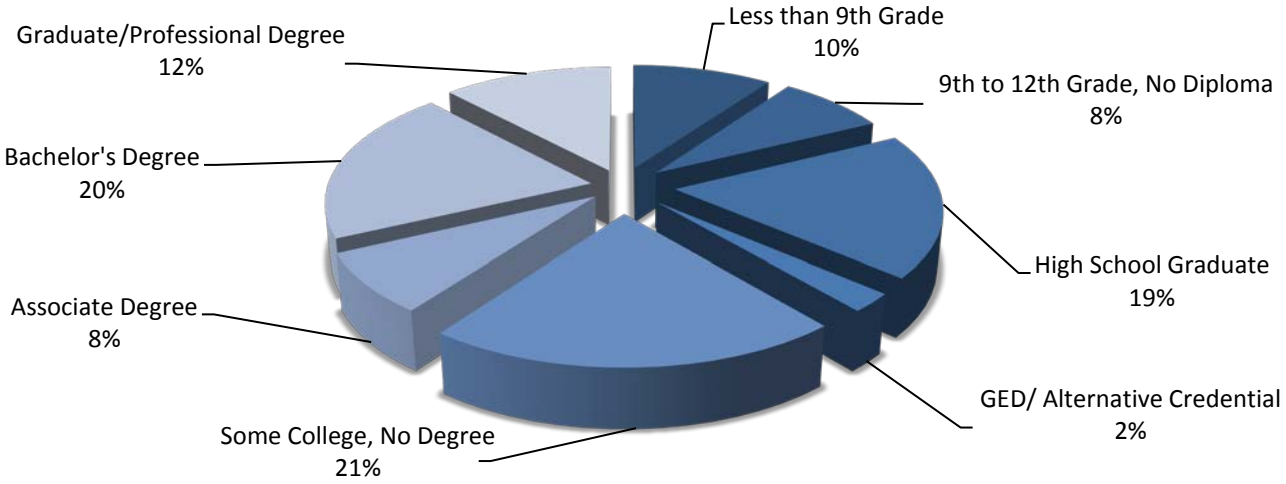
The level of educational attainment measures the population base 25+ years of age and older within the IWV ESA. The data provides an outlook of what the College can expect regarding the ESA's value for higher education. Following is a 2016 comparison of the level of educational attainment within the College's ESA and the average values statewide for the same.

Indian Wells Valley ESA: Educational Attainment (2016)



Source: ESRI

Statewide Averages: Educational Attainment (2016)



Source: ESRI

For 2016, approximately 28.0% of the IWV ESA population had *Some College, No degree*. The 2016 percentage of the ESA with a *High School Diploma or less* is 35.4%. For 2016, the IWV ESA had a population base where 18% held a *Bachelor's Degree*, which is slightly lower than the statewide average of 20%. For 2016, 28% of the IWV ESA had *Some College, No Degree,* this is higher than the statewide percentage of 21% for the same timeframe. The Campus should consider encouraging the IWV ESA adult population to complete a community college education or higher. The obtaining of a college degree would greatly increase the quality of the IWV ESA employment opportunities and this will have a positive impact on the IWV ESA economy.

K-12 Partnerships and High School Graduation Rates within the ESA

While all elements of the External Environmental Scan are important and will impact the IWV Campus going forward, one of the more important concerns is high school graduation rates. For this reason, it will be imperative for IWV Campus to continue their working efforts and strong partnerships with the high schools in their ESA. This is an effective tool to ensure college growth and a high student participation rate. The high schools in the IWV ESA

area that provide the largest number of high school graduates for the Campus are Burroughs High School, Immanuel Christian School, Mesquite Continuation High and Trona High. Burroughs High School is the main contributing high school for the area, followed by Mesquite Continuation High School.

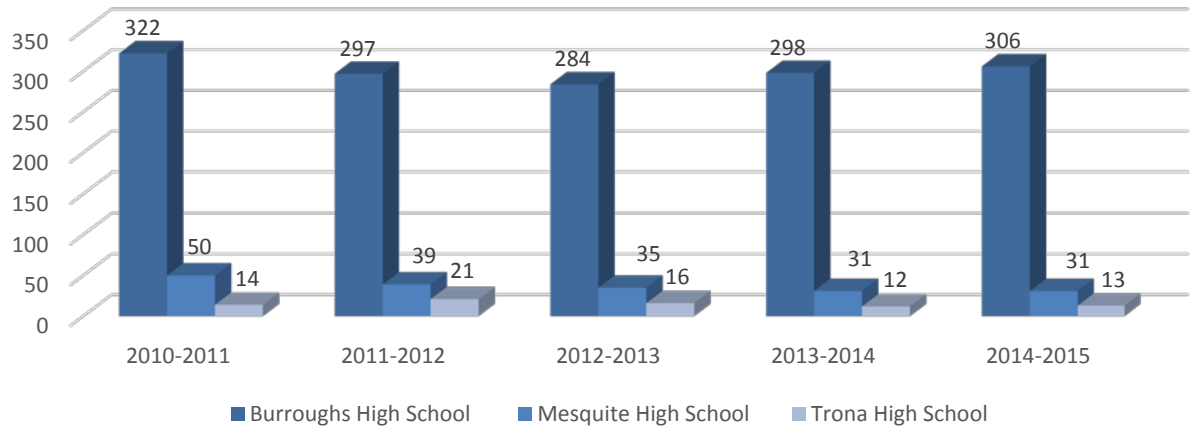
Indian Wells Valley ESA: High School Enrollments (2014-2015)

High School(s) in IWV ESA	Total High School Enrollments
Burroughs High	1,397
Immanuel Christian School	28
Mesquite Continuation High	97
Trona High	72

Source: U.S. Department of Educations, National Center for Education Statistics

The graduation rates presented shows the IWV ESA for High School graduates in their historical numbers through the academic years 2010-2015.

Indian Wells Valley ESA: High School Graduation Rates



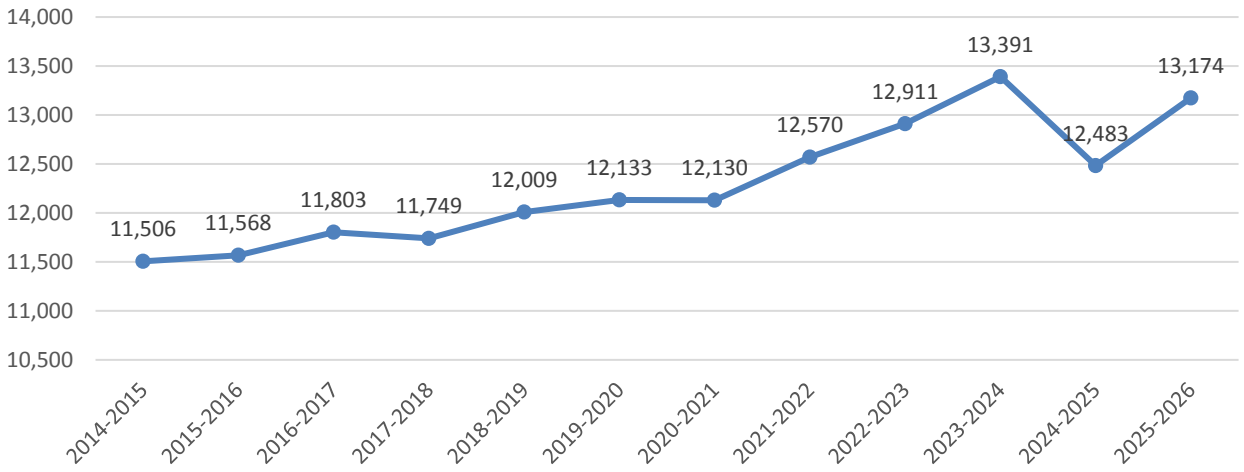
Source: U.S. Department of Educations, National Center for Education Statistics

In the 2014-2015 academic year, Burroughs High School had a graduating class of 306 graduates. This number was up slightly from the 2013-2014 academic year of 298 graduates. However, this number is lower than the 2010-2011 academic year of 322 graduates. Mesquite High School had a small graduating class of 31 graduates for the 2014-2015 academic year. Trona High School, located in San Bernardino County, had a smaller graduating class of 13 graduates for the 2014-2015 academic year. The IWV Campus will greatly benefit from maintaining and/or establishing Dual and/or Concurrent programs at the high schools in the ESA. These programs will greatly increase the student population and ensure growth for the Campus.

Graduation Rates in Kern County

For the purposes of this scan, the Kern County geographical area was also analyzed. The sum total of the graduate rates is presented below in their projected values.

Kern County: Projected High School Graduates by Academic year



Source: California Department of Finance

The graduation rates provided represent the sum total of high school graduates projected through the academic year 2025-2026. According to the California Department of Finance, the greater picture shows that future graduation rates will be impacted by the trends occurring in K-12 enrollments. Current trends for K-12 enrollments show the state experiencing a slight decrease (9,500 students) in the 2015-16 school year, with approximately 6.2 million enrolled students overall. Over the next ten years, a decline in total enrollment (163,000 students) is projected if current trends in fertility and migration remain as forecasted. By 2025, at the county level, the largest increases in K-12 enrollment are projected for Riverside County and Kern County. The biggest declines in enrollment are expected in Los Angeles County and Orange County. Overall, 29 Counties will have increases in public K-12 enrollment by 2025-26.

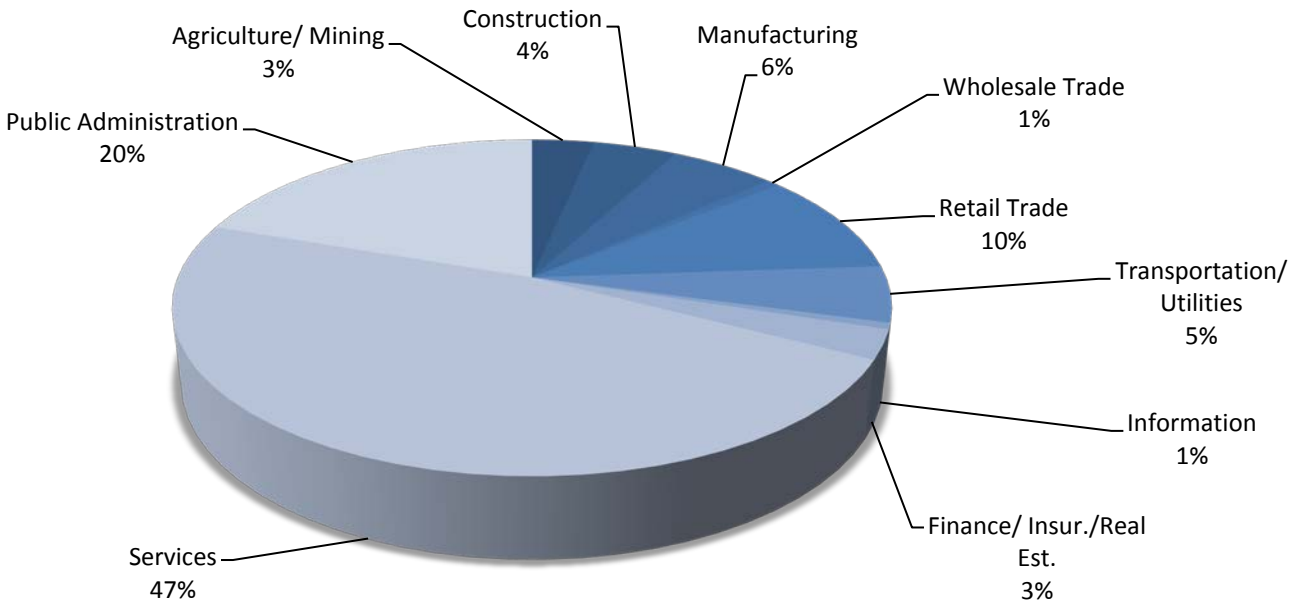
At the high school level statewide, graduates are projected to remain flat in the short term before increasing to a peak in excess of 445,000 in 2023-24. The largest increases in graduates are expected in Kern County. Overall 37 counties will see an increase in the number of high school graduates by 2025-2026. Based on the Department of Finance projections, Kern County's ten-year growth rate for K-12 Enrollment projections is projected to increase by 1606 students. This translates to a 1.31% growth rate. In numeric terms, Kern County will be second in California following Riverside County.

Workforce, Employment and Opportunities within the Sphere of Influence

Data drawn for the IWV ESA in relation to the workforce and employment opportunities indicates an available workforce of more than 15,000.

A look at employment by industry for the employed population, 16+ years and older within the ESA indicates the following:

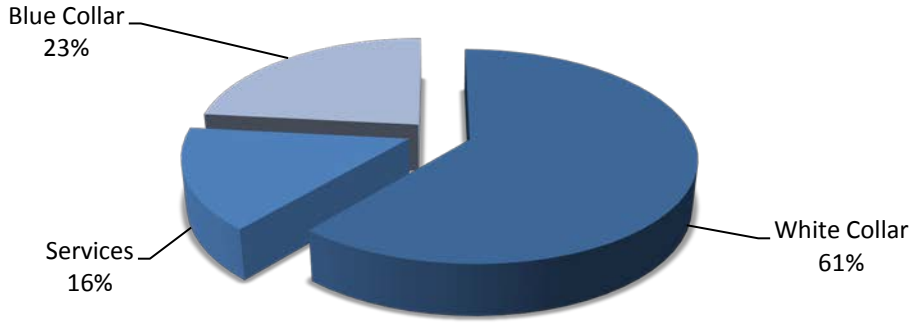
Indian Wells Valley ESA: Employed Population by Industry 16+ Years of Age (2016)



Source: ESRI

The majority of the labor force in the IWV ESA is comprised of Services with 47.6%, Public Administration 19.7%, and Retail Trade 9.8%. These three industries account for 77.1% of persons employed in the IWV ESA. The majority of jobs in the IWV ESA are from employers such as the Naval Air Weapons Station, Ridgecrest Regional Hospital, and Searles Valley Mineral. The data constructed for the purposes of reviewing the employment characteristics of the College's sphere of influence also targeted employment by occupation. From this perspective, the breakdown presented the following data:

Indian Wells Valley ESA: Employed Population by Occupation 16+ Years of Age (2016)



Source: ESRI

The IWV ESA 2016 employment is led by the White Collar and Blue Collar occupation sectors. Together these sectors account for 84.5% of employed individuals in the IWV ESA. The employment rate for 2016 was 92.6%, with 7.4% unemployed. This unemployment rate is lower than Kern County 9.9%. However, the IWV ESA unemployment percentage is higher than the State of California, which had a December 2016 unemployment rate of 5.2%. The Nation also had a lower unemployment rate of 4.7% for the same time period.

Fastest Growing Occupations: Occupations with the Greatest Levels of Solid Growth

Details regarding the fastest growing occupations, as measured by percentage increases and supported by the median rates of pay, are found in the table that follows. Data referenced from the Employment Development Department, Labor Market Information Division for Kern County identified the top 50 occupations projected to grow at the fastest rate over a ten-year period (2012 to 2022). For the purposes of the scan, these top 20 fastest growing occupations are identified below. Among these top 20, the top ten fastest growing occupations for 2012-2022 timeframe were:

1) Telecommunications Equipment Installers and Repairers, Except Line Installers
2) Drywall and Ceiling Tile Installers
3) Medical Assistants
4) Personal Care Aides
5) Home Health Aides
6) Dental Hygienists
7) Phlebotomists
8) Market Research Analysts and Marketing Specialists
9) Rehabilitation Counselors
10) Masons and Concrete Finishers

Source: Employment Development Department, Labor Market Information; presentation and interpretation by MAAS Companies

The occupations with the highest projected growth percentage are, Telecommunications Equipment Installers and Repairers with 7.40%, Drywall and Ceiling Tile Installers with 5.9% and Medical Assistants with 4.8%. Information regarding the fastest growing occupations as measured by percentage increases and supported by the median rates of pay, and projected employment for each is found in the table that follows:

Bakersfield Metro Area/ Kern County 2012-2022 Fastest Growing Occupations:

2012-2022 Fastest Growing Occupations Bakersfield Metro Statistical Area (Kern County)					
Occupational Title	2012	2022	Annual Average % Change	Median Annual Pay	Education/ Training Required
Telecommunications Equipment Installers and Repairers, Except Line Installers	430	750	7.40%	$42,931	Post-secondary non degree award
Drywall and Ceiling Tile Installers	320	510	5.90%	$41,246	Less than high school
Medical Assistants	1,680	2,480	4.80%	$25,040	Post-secondary non degree award
Personal Care Aides	4,120	5,960	4.50%	$18,964	Less than high school
Home Health Aides	880	1,240	4.10%	$21,241	Less than high school
Dental Hygienists	350	490	4.00%	$73,714	Associate's degree
Phlebotomists	230	320	3.90%	$34,583	Post-secondary non degree award
Market Research Analysts and Marketing Specialists	500	690	3.80%	$62,438	Bachelor's degree
Rehabilitation Counselors	360	490	3.60%	$30,746	Master's degree
Cement Masons and Concrete Finishers	480	650	3.50%	$38,747	Less than high school
Painters, Construction and Maintenance	460	620	3.50%	$35,792	Less than high school
Medical and Clinical Laboratory Technicians	320	430	3.40%	$36,624	Associate's degree

Medical Records and Health Information Technicians	350	470	3.40%	$29,633	Post-secondary non degree award
Medical Secretaries	1,090	1,460	3.40%	$33,628	High school diploma or equivalent
Industrial Machinery Mechanics	1,270	1,690	3.30%	$54,869	High school diploma or equivalent
Dental Assistants	770	1,020	3.20%	$27,267	Post-secondary non degree award
Cooks, Restaurant	1,480	1,950	3.20%	$21,614	Less than high school
Laborers and Freight, Stock, and Material Movers, Hand	6,140	8,070	3.10%	$23,506	Less than high school
Nursing Assistants	1,210	1,590	3.10%	$24,053	Post-secondary non degree award
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	550	720	3.10%	$51,340	High school diploma or equivalent

Source: Employment Development Department, Labor Market Information; presentation and interpretation by MAAS Companies

The next element to address in Workforce, Employment, and Opportunities within the College's Sphere of Influence is to look at which occupations are projected to have the greatest number of jobs openings for the future, in terms of absolute values. Again, the top 20 industries were selected for a ten-year time period (2012 to 2022). The data was gathered from the California Employment Development Department, Labor Market Information Division specific to the Bakersfield Metropolitan Area, Kern County.

Based on data provided, the top five (5) occupations projected for the greatest increase in jobs were:

1) Farmworkers and Laborers, Crop, Nursery, and Greenhouse (18,360 opening)
2) Cashiers (4,160 openings)
3) Combined Food Preparation and Serving Workers, incl. Fast Food (3,990 openings)
4) Laborers, Freight, Ranchers and Other Agricultural Managers (3,830 openings)
5) Retail Salespersons (2,800 openings)

These top five jobs are reflective of the economic conditions that are present within the IWV College's ESA.

Bakersfield Metro Area/ Kern County Occupations Most Job Openings

2012-2022 Occupations with the Most Job Openings Bakersfield Metropolitan Statistical Area (Kern County)			
Occupational Title	Total Job Openings 2012-2022	Median Annual Pay	Entry Level Education
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	18,360	$18,549	Less than high school
Cashiers	4,160	$19,351	Less than high school
Combined Food Preparation and Serving Workers, Including Fast Food	3,990	$18,893	Less than high school
Laborers and Freight, Stock, and Material Movers, Hand	3,830	$23,506	Less than high school
Retail Salespersons	2,800	$22,727	Less than high school
Correctional Officers and Jailers	2,230	N/A	High school diploma or equivalent
Personal Care Aides	2,140	$18,964	Less than high school
Waiters and Waitresses	2,080	$18,783	Less than high school
Heavy and Tractor-Trailer Truck Drivers	1,790	$39,603	Post-secondary non-degree award
Farmers, Ranchers, and Other Agricultural Managers	1,780	$109,873	High school diploma or equivalent
Packers and Packagers, Hand	1,510	$19,329	Less than high school
Office Clerks, General	1,450	$28,646	High school diploma or equivalent
Elementary School Teachers, Except Special Education	1,300	$63,485	Bachelor's degree
Teacher Assistants	1,270	$25,010	Some college, no degree
General and Operations Managers	1,260	$89,933	Bachelor's degree

Registered Nurses	1,250	$78,388	Associates degree
Maintenance and Repair Workers, General	1,140	$36,091	High school diploma or equivalent
Medical Assistants	1,130	$25,040	Post-secondary non-degree award
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,090	$24,012	Less than high school
Stock Clerks and Order Fillers	1,060	$21,527	Less than high school

Source: Employment Development Department, Labor Market Information; presentation and interpretation by MAAS Companies

Types of Industries within the IWV Sphere of Influence

The representative industry-types are dominated by Services, Retail Trade and Health Services. A profile of these largest industry-types will be analyzed in the data that follows. According to the KERNEDC, "sectors in the IWV with the highest average wages per worker are Mining, Quarrying, and Oil and Gas Extraction ($94,818), Utilities ($91,485), and Management of Companies and Enterprises ($71,057), Regional sectors with the best job growth (or moderate job losses) over the last 5 years are Health Care and Social Assistance ($40,421 jobs), Transportation and Warehousing ($19,689), and Accommodation and Food Services (+18,261)

Source: Kern Economic Development Corporation (KERNEDC)

Indian Wells Valley ESA: Top 25 Fastest Growing Industries

The data below provides the *Top 25 of the Fastest Growing Industries* specific to the Indian Wells Valley/ Ridgecrest area.

1. Home Health Care Services
2. Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
3. Outpatient Care Centers
4. Electronic Shopping and Mail-Order Houses
5. Offices of Other Health Practitioners
6. Utility System Construction
7. Other Financial Investment Activities
8. Other Ambulatory Health Care Services
9. Other Transit and Ground Passenger Transportation
10. Medical and Diagnostic Laboratories
11. Other General Merchandise Stores
12. Used Merchandise Stores
13. Other Heavy and Civil Engineering Construction
14. Specialty (except Psychiatric and Substance Abuse) Hospitals
15. Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities
16. Pipeline Transportation of Crude Oil
17. Satellite Telecommunications
18. Management, Scientific, and Technical Consulting Services
19. Software Publishers
20. Activities Related to Real Estate
21. Facilities Support Services
22. Wholesale Electronic Markets and Agents and Brokers
23. Sporting Goods, Hobby, and Musical Instrument Stores
24. RV (Recreational Vehicle) Parks and Recreational Camps
25. Computer Systems Design and Related Services

Source: Kern Economic Development Corporation (KERNEDC)

Indian Wells Valley ESA: Top 25 Fastest Growing Occupations

The List below presents the *Top 25 Fastest Growing Occupations* in the Indian Wells Valley/Ridgecrest area.

1. Wind Turbine Service Technicians
2. Nurse Practitioners
3. Occupational Therapy Assistants
4. Physical Therapist Assistants
5. Massage Therapists
6. Physician Assistants

7. Physical Therapist Aides
8. Statisticians
9. Reinforcing Iron and Rebar Workers
10. Ambulance Drivers and Attendants, Except Emergency Medical Technicians
11. Physical Therapists
12. Cartographers and Photogrammetrists
13. Therapists, All Other
14. Health Technologists and Technicians, All Other
15. Web Developers
16. Operations Research Analysts
17. Genetic Counselors
18. Home Health Aides
19. Solar Photovoltaic Installers
20. Commercial Divers
21. Forensic Science Technicians
22. Nurse Midwives
23. Diagnostic Medical Sonographers
24. Occupational Therapy Aides
25. Interpreters and Translators

Source: Kern Economic Development Corporation (KERNEDC)

Employment Outlook

Ridgecrest's top ten employers are captured in the table that follows. These groups of employers are led by the Naval Air Weapons Station. Ridgecrest Regional Hospital and Searles Valley Mineral are also top employers for the city of Ridgecrest.

City of Ridgecrest Principal Employers

Employer	Location
Naval Air Weapons Station	**Ridgecrest**
Ridgecrest Regional Hospital	**Ridgecrest**
Searles Valley Mineral	**Trona**
Sierra Sands Unified Schools District	**Ridgecrest**
AltaOne Federal Credit Union	**Ridgecrest**
Albertson's	**Ridgecrest**
Englity Corp	**Ridgecrest**
Cerro Coso Community College	**Ridgecrest**
Jacobs Technology	**Ridgecrest**
City of Ridgecrest	**Ridgecrest**

Source: City of Ridgecrest Comprehensive Annual Report

- **The Naval Air Weapons Station (NAWS) China Lake:** It is no surprise that the NAWS China Lake is Ridgecrest's largest and number one employer. As mentioned on the city of Ridgecrest website, NAWS China Lake is a major source of employment for Ridgecrest residents. "The economic stability of Ridgecrest as service community for the NAWS has been essential to its successful emergence as a community in its own right."
- **Ridgecrest Regional Hospital:** Ridgecrest Regional Hospital is the second largest employer for the city of Ridgecrest. According to RRH's CEO, its goals are founded on three principals: "Being the best possible place to receive patient care, being the best possible place to practice medicine and being the best place to work." This employer is sure to be a staple in this region.
- **Searles Valley Mineral:** The third largest employer for the city of Ridgecrest is Searles Valley Mineral. This employer processes solutions from Searles Lake to produce various specialty minerals. In essence, this employer helps manufactures create products that make life easier.
- **Sierra Sands Unified Schools District:** The fourth largest employer for the city of Ridgecrest is the Sierra Sands Unified School District. In its' mission statement, this employer states they are, "committed to providing the highest quality education in a safe environment to all K12 students. We believe the school

shares with the family, church and community the responsibility for developing lifelong learners who are responsible productive citizens."

- **AltaOne Federal Credit Union:** Alta One Federal Credit Union is the fifth largest employer for the city of Ridgecrest. Alta One Federal Credit Union has seen consistent growth over the years by adhering to key principals as: wisdom, prudent management, professionalism and strength. This employer has historic ties to Military and will be a secure employer for this region.
- **Albertson's:** Albertson's is sixth among the city of Ridgecrest largest employers. Albertson's is a well-known household name in the U.S. economy. Albertson's long held presence in the U.S. economy is sure to remain.
- **Englity Corp:** This Company is the seventh largest employer for the city of Ridgecrest. This company has a long history of being a problem solver. This company states that it is the "leading provider of integrated solutions and services for the U.S. government, supporting customers throughout defense, intelligence, space, federal civilian and international communities."
- **Cero Coso Community College:** The College itself is the eighth largest employer for the city of Ridgecrest. The College prides itself as supporting student achievement and success. Cerro Coso Community College has a long history of taking pride in seeing students as individuals with distinctive abilities and needs and a teaching-learning method that inspires excellence in their students. As quoted in the College's Vision Statement, this College wants to be "recognized as a leader in higher education, a source of programs and services for tomorrow's workforce, a model for student learning, and a partner with its diverse clientele and communities."
- **Jacobs Technology:** The ninth largest employer for the city of Ridgecrest is Jacobs Technology. This is an International company with locations around the world, and their focus is on building long term business relationships. This Company is a provider of technical, construction and professional services, operations and maintenance and also scientific and specialty consulting.
- **City of Ridgecrest:** The final top employer rounding out this list is the city of Ridgecrest. According to its Annual Comprehensive Annual Report. The City boasts as a thriving economy and the only incorporated community in the Indian Wells Valley. The City has its historical growth in the 1960s tied to its close relations and support to the U.S. NAVY. The City also takes pride in the fact that the City is a service community to the China Lake Naval Air Weapons Station (NAWS)

Tapestry Segmentation for the IWV ESA

Specific to the Indian Wells Valley ESA, and because of its concentrated and significant population base, a basic "Tapestry" segmentation was constructed that identifies the primary resident types. Tapestry segmentation is a valuable and new demographic tool available to assist in analyzing specific areas. As the title suggests, it provides a more qualitative perspective of "place," one that is more about the "fabric" of a given area. It combines socioeconomic, demographic composition, lifestyle modes and degrees of urbanization (or non-urbanization) to provide definition to any given area. It relies on 67 distinct living areas (the "neighborhoods of America") to capture a sense of "place." The result is a perspective and detail that captures the diversity and characteristics that goes beyond the numbers. Tapestry Segmentation is meant to help the provider, in this case, the IWV Campus, better understand the residents that are being served.

It should be noted that the "Tapestry Segmentation" uses colloquial terms and references to define the different neighborhood types. These terms and references are meant to provide general characterizations, often in a tongue-in-cheek manner. They are not, by their reference, meant to be derogatory in any way.

The top three (3) Tapestry segmentations for the IWV ESA's "effective service" area are: (1) Old and Newcomers, (2) Comfortable Empty Nesters and (3) Set to Impress.

1) ***"Old and Newcomers"*** represent a segment of the population comprised of singles' lifestyles, on a budget. This market is more concerned with economy over acquisition. Individuals in this segment focus more on convenience than consumerism. This segment is also comprised of a unique combination of neighborhoods. "Old and Newcomers are composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. These groups support environmental causes and Starbucks, and are more comfortable with the latest technology than buying a car. Some individuals in this segment are still in college; some are taking adult education classes." The average rent cost for this segment is $800.00 and 54% of these residents are renters occupied. 44% are in multiunit dwellings and 45% of housing units' single-family residents. The college education percentages for these groups are fairly high, 28% have a college degree, 33% have some college education and 10% are still enrolled in college. The unemployment rate is fairly low as well at 7.8%.

2) ***"Comfortable Empty Nesters"*** is as growing segment of older residents. More than half of all householders are 55 years of age or older. Many of these residents still live in the suburbs where they grew up. Most individuals in this group are professionals working in health care, government, or manufacturing. These Baby Boomers are earning a comfortable living and benefiting from years of prudent investing and saving. Their net worth is well above the State average. Many are enjoying the transition from child rearing to retirement. Comfortable Empty Nesters value their health and financial well-being.

3) ***"Set to Impress"*** is identified as a segment of this ESA population depicted by medium to large multi-unit apartments with less than average rents. These apartments are often situated in neighborhoods with other businesses or single-family housing. Approximately one in three residents are 20 to 34 years old, and over half of the homes are nonfamily households. Although many residents live alone, they preserve close connections with their family. Income levels for this segment are low. Many of these residents work in food service while they are attending college. They are very conscious of their image and seek to bolster their status with the latest fashion. However, this group is always looking for a deal. Set to Impress residents are tapped into popular music and the local music scene.

Keep in mind that, the IWV Campus as a whole has several other "neighborhood groups" residing in its "effective service area". The top three sub groups of "Tapestry Segmentation" that emerged are representative of a significant share of the population base. However, they are not representative of the entire population base that resides within the "effective service area."

Source: ESRI

Observations for the Indian Wells Valley ESA

This section of the External Environmental Scan provides a summary of findings and recommendations for the IWV campus. These findings and recommendation will be imperative as the College advances into the future. As an overview, the 2016 population base for the IWV ESA was 37,902 and is projected to grow by 2021 at an annual percentage of 0.61%. For 2021, the IWV ESA is projected to have a median household income that will increase by 5.9%. By 2021, the IWV ESA "up-and–comer" age group of 0-14 years is projected to remain the same. Conversely, the overall median age for the IWV ESA is older and projected to increase by 2021. Some factors that will need to be considered as it pertains to the future growth of the Campus are provided below:

- The IWV ESA "up-and-comer" age segment is set to remain the same through the 2021 projection. The Campus should develop programs and pathways to bring in the highest possible percentage of individuals in this age segment.
- The sustaining and growing of the IWV campus Dual enrollment program is very important for growth and capturing of the "up-and-comer" 0-14 age group.
- There will be an accelerated rate of growth in the Hispanic Ethnic/Race population and the Campus should further develop pathways and programs to cater to this population segment.

- The IWV campus can appeal to the *Some College/No Degree* segment of their population to encourage them to return to college to complete their degree or transfer.
- The development and sustaining of a transfer program is an important element for growth for the IWV campus.
- The IWV ESA has a wide range of major corporations that fuel the area's economy. The Campus should develop partnerships with these corporations to increase student enrollment which will decrease the unemployment rate for the IWV ESA.
- With a diverse offering of courses the IWV campus has the ability to create marketing and outreach to a large population. For example, the Campus is not limited to just the traditional "college-going" age group of 18-24.
- The median household income for the IWV ESA is projected to increase from $56,783 in 2016 to $60,360 in 2021.
- IWV ESA projected median age is set to increase from 38.0 in 2016 to 39.0 for 2021.
- The IWV Campus will need to develop programs to encourage the older population in the IWV ESA to enroll at the Campus.
- 28% of the IWV ESA has *Some College/No Degree*, which is a high percentage for this segment. The Campus will benefit from drawing this group to complete a degree and/or transfer to a university.
- High percentage of *High school graduate or less* with 35.4% of the ESA population base. The Campus' ability to develop ways of encouraging this group to enroll at the College would not only benefit the Campus but the IWV ESA as a whole.
- Enlarging the Campus' Distance/On-line course program will provide solid growth for the Campus.
- Enhancing the already established Child Development center is another growth opportunity for the IWV campus.

Summary

Growth for the IWV campus needs to be reasonable and sustained. The IWV campus will need to recognize external environmental changes, such as the growing older population versus the younger "up-and-comer" 0-14 age group that is not growing per se. The Campus will also need to consider and find ways of combating their 28% of *Some College/No degree* population and their 35.4% of *High School graduate or less* population segment. Nonetheless, the IWV ESA has great potential for growth and opportunities. To illustrate, the IWV ESA is projected to see growth in the higher income brackets of $75K-$200K+. The higher income segment of the population would likely benefit by taking a college course, such as continuing education courses. This in turn, would further advance their careers. The IWV campus will also need to focus on developing programs such as Dual Enrollment, transfer programs, and work pathways. The new Men's Basketball Team and Women's Softball Team will add growth opportunities for the IWV campus. Also, the military's presence gives the IWV campus an advantage over other California Community Colleges. As mentioned in the KEREDC, "China Lake is the Navy's largest single landholding in the world, and as weapons development continues, China Lake consistently adds jobs, both military and civilian." Further, President Trump's strategic decision to increase spending for defense will certainly have a positive impact on the IWV ESA and the Campus.

Source: Kern Economic Development Center (KERNEDC)

Cerro Coso Community College Educational Centers

Introduction

Cerro Coso Community College is unique in comparison to the other two colleges within the Kern Community College District as well as the 113 colleges that are part of the California Community College system. No other single college within a multi college district is responsible for the number of educational centers and facilities as Cerro Coso Community College and the diverse circumstances associated with each site. The Educational Centers and facilities are spread over 18,000 square miles in four counties with communities located in the desert, mountain, and valley region of eastern California. The Centers are identified as the Eastern Sierra College Center with locations in the City of Bishop and Mammoth Lakes. The East Kern Educational Center has a campus in the City of Tehachapi and a center at Edwards AFB. The East Kern River Valley area has a campus in the City of Lake Isabella. The College contends with challenges both in distances between Centers, economically and socially with the unique circumstances presented within each geographic area. The Centers diverse locations include a large military complex surrounded by desert to a popular recreational area tied to tourism in the mountains. In some situations, the Centers are closer geographically to other community college districts than facilities within the Kern Community College District and Cerro Coso Community College. Because of the diverse data and differences attributed to each of the locations, the Centers were reviewed independently for further analysis. The goals of the College outlined in its recent Strategic Plan are consistent in regard to each Center. This includes maximizing student success through increased completion rates, advancing student equity by closing achievements gaps, ensure student access and enhance community connections.

The following are the external environmental scans developed specifically for each of the individual geographical locations: Bishop, Mammoth, Edwards AFB, Tehachapi and Lake Isabella. These scans are intended to present the most current information related specifically to each of these locations for the purpose of identifying preexisting conditions related to the student population and trends attributed to the surrounding community contained within the effective service area for each location. Finally, opportunities and challenges in addressing the current and future needs of its students currently utilizing each of its Centers are presented for consideration at the end of the section for each location.

Student Participation Rates (SPRs)

Student Participation Rates (SPRs) are based on the number of students per 1,000 total population within the College's "effective service area". The statewide target using the measure of students per 1,000 total population is 36. It should be noted that there is an alternative measure that uses only the adult population segment (not the entire population base) to determine the SPR. Using the adult population targets a SPR of 54 students. For the purposes of calculating the SPR for Cerro Coso Community College as a whole, total population will be use as the standard. For the baseline semester fall 2015, the student enrollment was 4,515.

CERRO COSO COMMUNITY COLLEGE - STUDENT PARTICIPATION RATE FALL 2016			
	ENROLLMENT	SERVICE AREA POPULATION	STUDENT PARTICIPATION RATE
CERRO COSO COMMUNITY COLLEGE	4,515	144,606	31.22

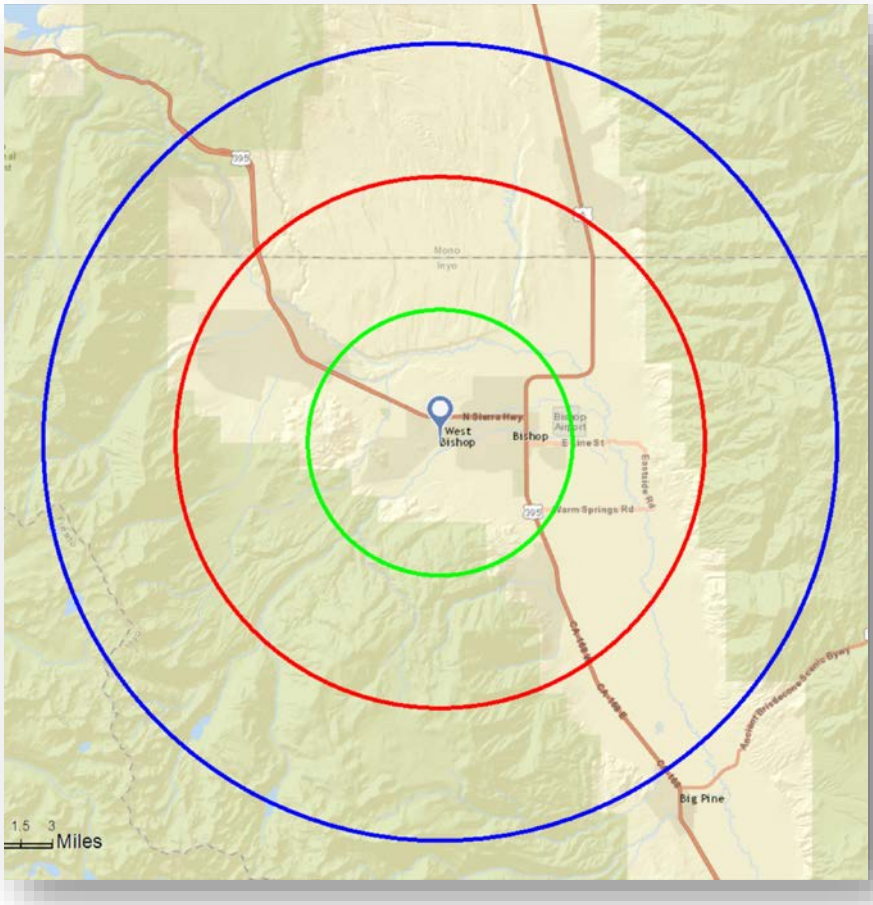
Source: Cerro Coso Community College; Environmental Systems Research Institute; derivations by MAAS Companies

The community college system across the State is heavily swayed by age when it comes to participation. The College would need to give substantiative attention to the 18-19 and 20-24 age group. It is well noted that these age segments have the highest rates per 1,000 for community college participation.

Eastern Sierra College Center (ESCC)

Overview

The Eastern Sierra College Center (ESCC) are institutional sites of Cerro Coso Community College and have locations in the City of Bishop and another 42 miles away in Mammoth. The instructional sites serve the communities of Bishop, Big Pine, Lone Pine, Independence, Mammoth, Death Valley, Eastern Sierra Mountains and its surroundings located in Inyo and Mono Counties. These Centers are full-service campuses offering the opportunity to advance education by taking classes for transfer, fulfillment of career, technical education or simply for personal fulfillment. A wide range of classes is offered on each campus, televised through interactive television or online in lengths ranging from a semester to a few weeks.



Bishop Center

Geographic Area Served

Bishop

The City of Bishop where the Center is located in a small community that covers slightly less than two square miles in the Eastern Sierras region and the only incorporated city in Inyo County. It is the primary commercial and population hub in the region with its primary industries being tourism, recreation, and related support services. Mining, agriculture and Native American heritage are also important attributes of the local area. Bishop's geographical area was determined with the Center's address as being the point of reference.

Effective Service Area (ESA)

For the ESCC – Bishop, a 15-mile radius was determined to be the best measurement for gathering the most comprehensive and relevant data for this area by utilizing the Center's physical address as the center point. Note that ESCC – Mammoth's ESA is adjacent to but does not overlap the ESCC – Bishop's ESA which allows each campus to be viewed independently. The ESA for ESCC – Bishop is shown at the right.

Source: ESRI

Characteristics of the ESA

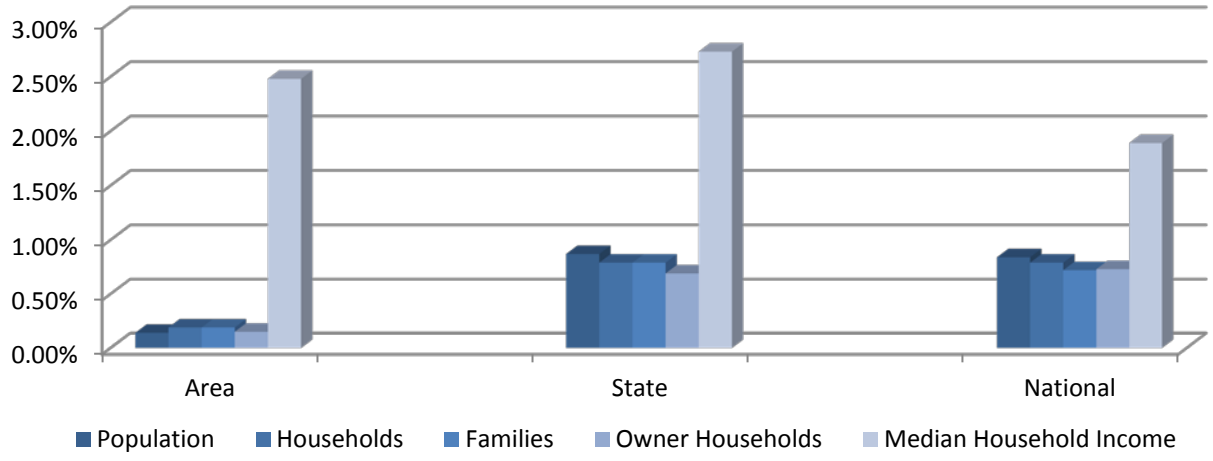
Demographic Profile

The ESA had a 2016 population of 14,166, growing to 14,264 by 2021. In 2010, the Bishop area had a population base of 13,976. The ESA is growing at an annual rate of 0.14%, this growth will be minimal over the next 5 years. The average household size had slightly decreased since 2010, which was 2.30, 2016 with 2.29, and 2021 projected to be 2.28. The average household size is smaller than both the County, 3.21 and the State with 2.93 for 2016. The ESA is older, with a current median age of 46.0. The median age is expected to only increase to 46.5 by 2021. The median household income, which is already low in comparison to statewide averages, is projected to increase during 2016-2021 in terms of absolute values. The 2016 unemployment rate is high at 8.6%. Comparatively, this number was higher than both the State's unemployment rate of 5.2% and the Nation's unemployment rate of 4.7% for December 2016. However, Bishop's ESA unemployment rate is lower than that of Kern County's 9.2% for 2016.

DEMOGRAPHIC PROFILE: ESCC – BISHOP: 15 MILE SERVICE AREA			
Summary	**2010**	**2016**	**2021**
Population	13,976	14,166	14,264
Households	5,963	6,074	6,133
Families	3,738	3,808	3,845
Average Household Size	2.30	2.29	2.28
Owner Occupied Housing Units	3,965	3,958	3,988
Renter Occupied Housing Units	1,998	2,115	2,145
Median Age	45.2	46.0	46.5
Trends: 2011-2016 Annual Rate	**Area**	**State**	**National**
Population	0.14%	0.87%	0.84%
Households	0.19%	0.79%	0.79%
Families	0.19%	0.79%	0.72%
Owner Households	0.15%	0.69%	0.73%
Median Household Income	2.48%	2.73%	1.89%

Source: ESRI

Bishop Center ESA: State and National Comparisons (2016)



Source: ESRI, Bureau of Census; analysis MAAS Companies

Households by Income

For 2016, the table below illustrates that 49.1% of the ESA had household incomes less than $50,000 per year. Conversely, only 6.5% of the Bishop Center ESA households make $150,000+ per year. On a more positive note, the per capita income for the ESA is projected to increase. In 2016, the per capita income was $28,312, with a 2021 projection of $ 31,084.

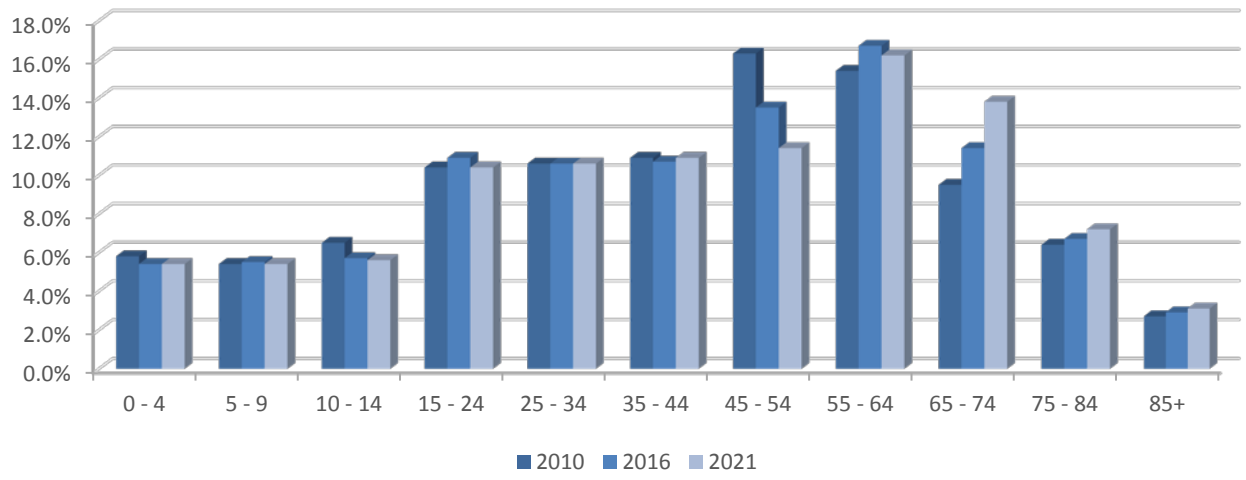
INCOME PROFILE ESCC – BISHOP: 15 MILE SERVICE AREA				
	2016		2021	
Households by Income	**Number**	**Percent**	**Number**	**Percent**
<$15,000	767	12.6%	726	11.8%
$15,000 - $24,999	817	13.5%	866	14.1%
$25,000 - $34,999	630	10.4%	496	8.1%
$35,000 - $49,999	765	12.6%	530	8.6%
$50,000 - $74,999	1,051	17.3%	1,140	18.6%
$75,000 - $99,999	828	13.6%	949	15.5%
$100,000 - $149,999	822	13.5%	976	15.9%
$150,000 - $199,999	278	4.6%	329	5.4%
$200,000+	116	1.9%	121	2.0%
Median Household Income	$50,933		$57,581	
Average Household Income	$65,375		$71,653	
Per Capita Income	$28,312		$31,084	

Source: ESRI

Age Segmentation

The Bishop Center ESA must look into the age segment when it comes to the future direction and planning of the Center. The data for the ESA age segmentation is provided in the graph below.

Bishop Center ESA: Population by Age



Source: ESRI

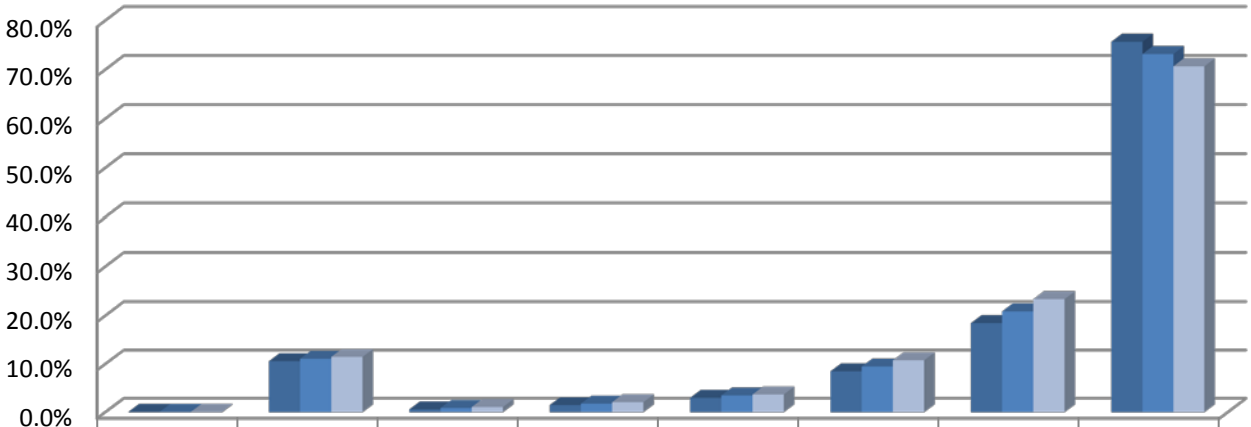
As the graph above illustrates, the Bishop Center ESA had an older population base in 2016. The ESA for 2016 showed that 51.2% of the population was 45+ years of age. Historical data shows that this percentage had increased, since 2010 in which 50.3% of the ESA population was 45+ years of age. Comparatively, this percentage is set to increase by 0.5%, with 2021 projected to be 51.7% for the same age segment. Conversely, the "up-and-

comer" age groups (0-14 years) only make up 16.6% of the ESA population with a raw number of 2,357 for 2016. The age segment percentage for the ESA will remain essentially the same by 2021.

When examining the ESA age segmentation, both age groups that represent the largest "college-going" group are projected to decrease. Based on the 2016 data for the ESA, only 10.9% of the population was made up of the age segment of 15-24-year-olds. Unfortunately, the number is projected to decrease to 7.6% for the Bishop Center ESA by 2021.

Ethnicity Segmentation

Bishop Center ESA: Race/Ethnicity Distribution



	Pacific Islander	American Indian	African American	Asian	Two or More Races	Some Other Race	Hispanic Orgin	White
2010	0.1%	10.6%	0.6%	1.5%	3.0%	8.5%	18.5%	75.7%
2016	0.1%	11.1%	0.9%	1.8%	3.5%	9.5%	20.9%	73.2%
2021	0.1%	11.5%	1.1%	2.1%	3.7%	10.8%	23.4%	70.7%

*As stated by ESRI, Hispanic Origin may be of any race. Therefore, race and ethnicity percentages will total more than 100%

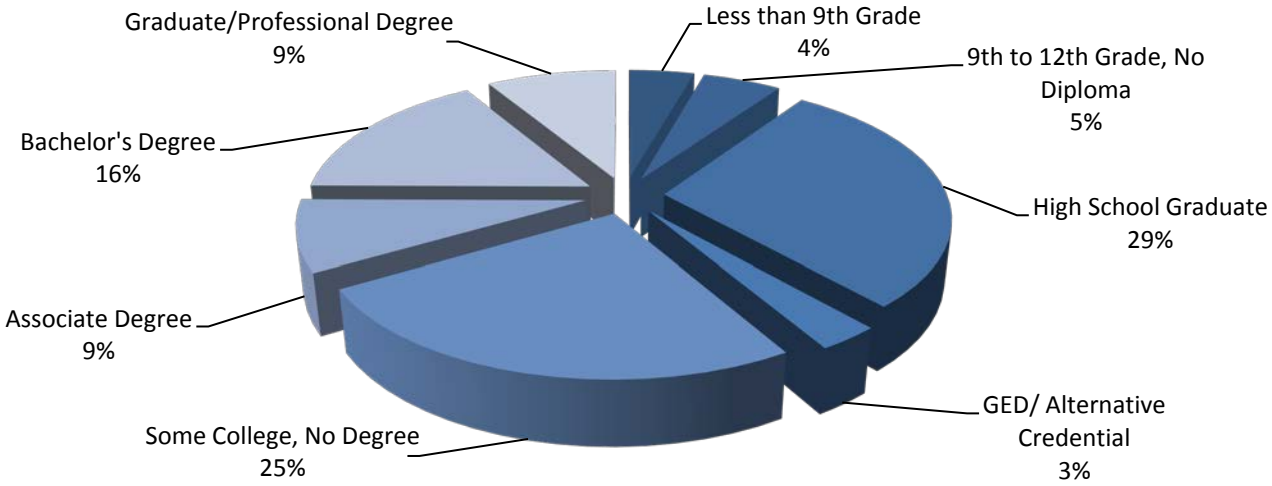
Source: Census Bureau, ESRI; analysis MAAS Companies

For 2016, the Bishop Center ESA shows a dominant White ethnic population of 73.2%. This percentage is forecasted to drop by -2.5% to 70.7% by 2021. The next largest ethnic population is the Hispanic population with 20.9%. Even with the Hispanic ethnic group increase to 23.4% by 2021, this will not come close to the White ethnic population number of 70.7% for the same projected year. The other ethnic groups all comprise a very small percentage of the ESA's population.

Levels of Educational Attainment

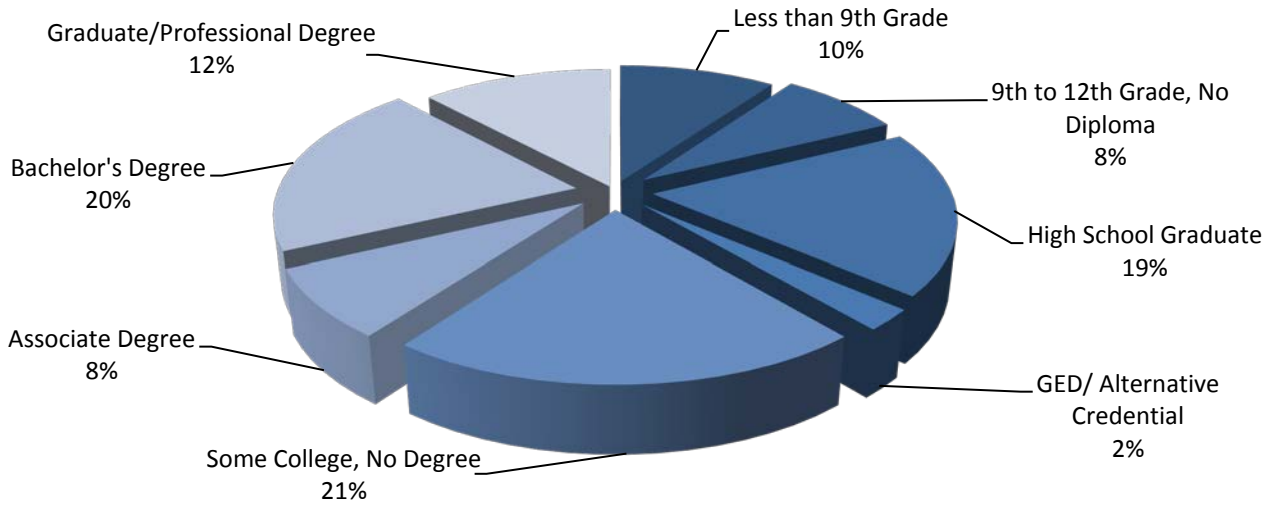
The next section assessed was the Bishop Center ESA's level of educational attainment for individuals 25+ years. The ESA shows a much higher percentage of *High School Graduate* segment at 29% than the statewide average of 19%. Combining the 25% of individuals that have had *Some College, No Degree* earned with the 9% *Associate Degree*, 16% *Bachelor Degree*, 9% *Graduate Degree*, the ESA has 59% of residents that could potentially enroll at the Center to continue their interest in higher education. Below is a comparison of the level of educational attainment of the Center's ESA and the State.

Bishop Center ESA: Educational Attainment (2016)



Source: ESRI

Statewide Averages: Educational Attainment (2016)



Source: ESRI

K-12 Partnerships and High School Graduation Rates

Another important element of the External Environmental Scan that will impact the Center going forward is the rate at which high schools successfully graduate students. It will be crucial for the Bishop Center to continue their strong existing partnership with the local high schools. Bishop Union is the largest high school in the External Service Area's 15-mile radius that provides students to this Center. It is not the only school located in the larger geographic area of the Center. Lone Pine High School (113 students), Big Pine High School (45 students) and Owen Valley High School (25 students) that have potential students to continue their education at the facility. Mammoth High School is the second largest high school in the region with 297 students but has the Mammoth Center as a closer option.

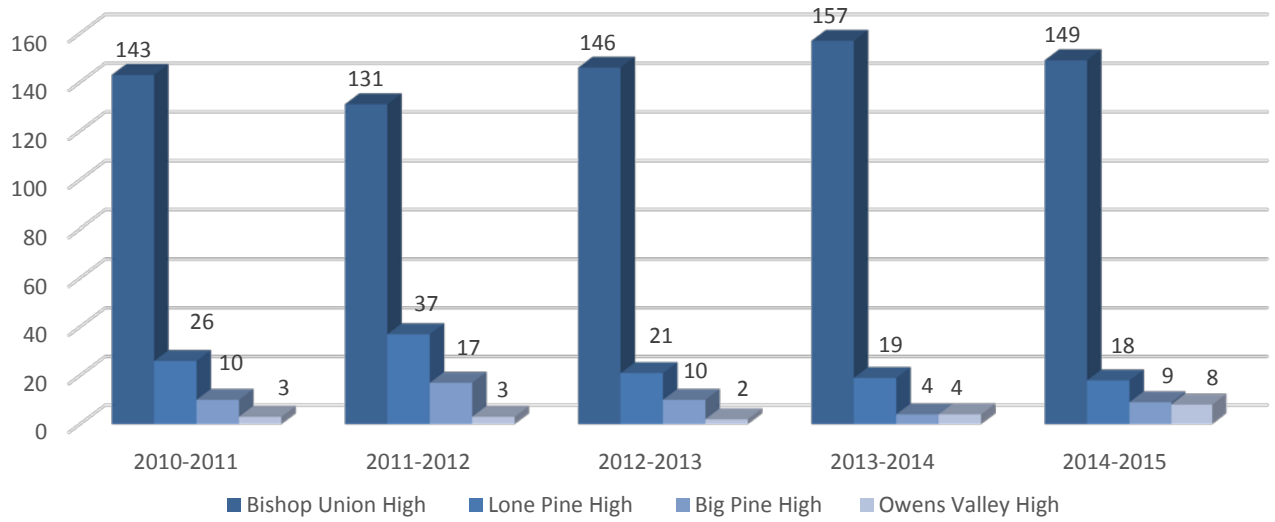
Bishop Center ESA: High School Enrollments (2014-2015)

High School(s) in Bishop Center ESA	Total High School Enrollments
Bishop Union High	612
Lone Pine High	114
Big Pine High	45
Owens Valley High	32

Source: U.S. Dept. of Education, National Center for Educational Statistics

The data presented below details historical High School graduation rates for the Bishop Center ESA through the academic years 2010-2015.

Bishop Center ESA: High School Graduation Rates

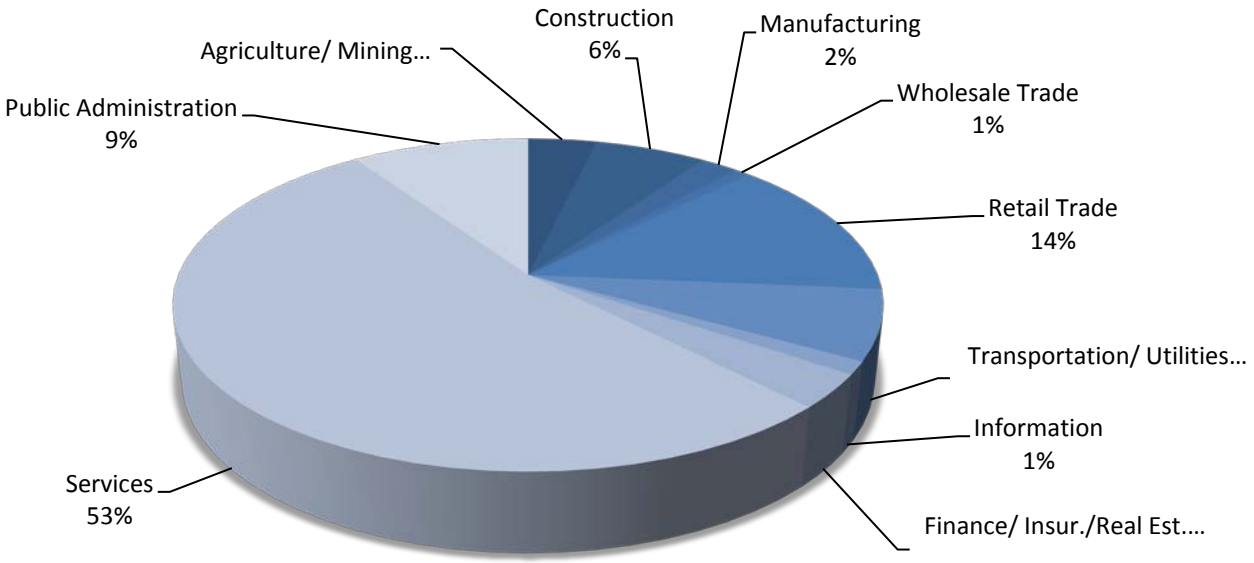


Source: California Department of Education; analysis MAAS Companies

The data above reflects a high school graduating class that is overall increasing among the four high schools in the Bishop Center ESA. As of the 2014-2015 academic year, there was a total of 184 graduating seniors versus only 182 in the 2010-2011 academic school year. Graduates from the feeder school for the Center, Bishop Union High school is up slightly as well. To illustrate, Bishop Union High, in the 2014-2015 academic year had 149 graduating students and for the 2010-2011 academic year 143 graduating students. Even though this growth is slight, it is a positive sign for the growth of the ESCC – Bishop.

Workforce, Employment and Opportunities within the Bishop Center Sphere of Influence

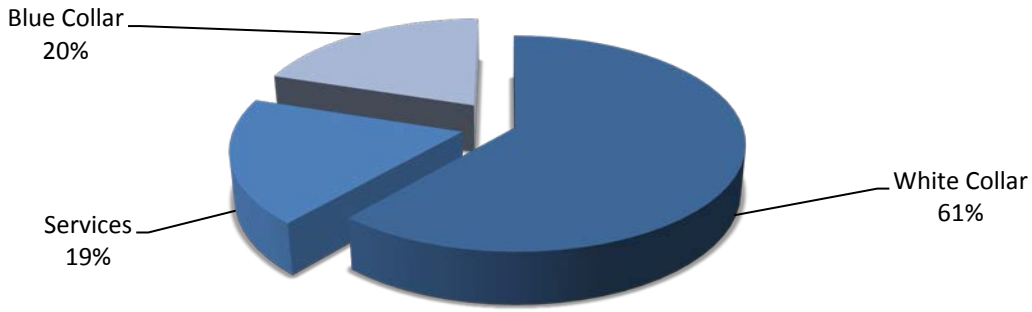
Bishop Center ESA: Employed Population by Industry 16+ Years of Age (2016)



Source: U.S. Census, ESRI; analysis MAAS Companies

Data presented for the ESA relative to the workforce and employment opportunities shows an available workforce of 6,638 individuals. For 2016, employment is led by the industry sectors of Service with 52.8%, Retail Trade at 13.8% and Public Administration with 9.6%. These three industries combined account for 67.2% of the ESA 2016 employed population age 16+ by industry.

Bishop Center ESA: Employed Population by Occupation 16+ Years of Age (2016)



Source: ESRI

The Blue-Collar sector accounts for the least employed population 16+ by Occupation for 2016, with 20%. The largest in this sector is White Collar occupations with 61% followed by Services with 19%. The Bishop Center would greatly benefit if they would seek the employers in these White Collar and Services occupations to see exactly what types of employees they would be looking to hire, and design courses and student's services to fill these employer's needs. A snapshot of the key employers in the Bishop Center ESA will be provided in the section that follows.

Types of Industries within the Bishop Center Sphere of Influence

According to data obtained from the Kern County Economic Development Commission, sectors in the Bishop area with the highest average wages per worker are Management of Companies and Enterprises, Mining, Quarrying, Oil & Gas Extraction and Utilities. Regional sectors with the best job growth (or most moderate job losses) over the last five years are Health Care and Social Assistance (+139 jobs), Utilities (+79) and Construction (+62).

Over the next ten years, employment in the Bishop area is projected to increase by 195 jobs. The fastest growing sector in the region is expected to be Construction with a +0.6% year over year rate of growth. The strongest forecast by number of jobs over this period is expected for Health Care and Social Assistance (+55 jobs), Construction (+18) and Professional, Scientific and Technical Services (+7).

Bishop Center ESA: Top 25 Fastest Growing Industries

1. Home Health Care Services
2. Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
3. Electronic Shopping and Mail-Order Houses
4. Other Ambulatory Health Care Services
5. Other Financial Investment Activities
6. Offices of Other Health Practitioners
7. Other Transit and Ground Passenger Transportation
8. Utility System Construction
9. Other General Merchandise Stores
10. Outpatient Care Centers
11. Used Merchandise Stores
12. Other Heavy and Civil Engineering Construction
13. Sporting Goods, Hobby, and Musical Instrument Stores
14. Software Publishers
15. Management, Scientific, and Technical Consulting Services
16. Activities Related to Real Estate
17. Facilities Support Services
18. Wholesale Electronic Markets and Agents and Brokers
19. RV (Recreational Vehicle) Parks and Recreational Camps
20. Computer Systems Design and Related Services
21. Educational Support Services
22. Miscellaneous Durable Goods Merchant Wholesalers
23. Offices of Physicians
24. Foundation, Structure, and Building Exterior Contractors
25. Other Schools and Instruction

Source: Kern Economic Development Corporation (KERNEDC)

Bishop Center ESA: Top 25 Fastest Growing Occupations

1. Wind Turbine Service Technicians
2. Ambulance Drivers and Attendants, Except Emergency Medical Technicians
3. Emergency Medical Technicians and Paramedics
4. Commercial Pilots
5. Home Health Aides
6. Optometrists
7. Ophthalmic Medical Technicians
8. Opticians, Dispensing
9. Web Developers
10. Massage Therapists
11. Chiropractors
12. Therapists, All Other
13. Personal Care Aides
14. Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters
15. Statisticians
16. Forensic Science Technicians
17. Bicycle Repairers
18. Criminal Justice and Law Enforcement Teachers, Postsecondary
19. Interpreters and Translators
20. Brickmasons and Blockmasons
21. Ophthalmic Laboratory Technicians

22. Cartographers and Photogrammetrists
23. Health Specialties Teachers, Postsecondary
24. Nursing Instructors and Teachers, Postsecondary
25. Personal Financial Advisors

Source: Kern Economic Development Corporation (KERNEDC)

Employment Outlook

The employers listed below represent five of the most active employers, including the counties of Inyo and Mono, in the Bishop Center ESA.

Bishop Paiute Tribe: The fifth largest California Tribe with approximately 2,000 members, provide various programs and services and operates a variety of tribally owned entities and enterprises including the Paiute Palace Casino located in the City of Bishop.

County of Inyo: County seat is located in Independence, CA and contains both the highest and lowest point in California with Mt. Whitney (14,505') and Badwater, Death Valley (282' below sea level). Cities located within county include Bishop, Big Pine, Lone Pine and Independence.

AmeriGas: Specializes in providing services and delivery of propane gas throughout the nation from recreational users to commercial and industrial needs and demands.

K-Mart: One of the largest retail providers in the area, providing a wide range of products from appliances to clothing and groceries, located in Bishop, no other K-Mart is located within 50 miles of existing store.

County of Mono: Mono County has a land area of 3,030 square miles, or just over 2 million acres, 94% of which is publicly owned with Highway 395 weaving its way through the heart of the county.

Tapestry Segmentation for the ESA

The top three (3) Tapestry segmentations for the ESCC – Bishop's "effective service" area are: (1) Exurbanites, (2) The Great Outdoors and (3) Old and Newcomers.

1) ***"Exurbanites"*** residents are now approaching retirement but showing few signs of slowing down. They are active in their communities, generous in their donations, and seasoned travelers. They take advantage of their proximity to large metropolitan centers to support the arts, but prefer a more expansive home style in less crowded neighborhoods. They have cultivated a lifestyle that is both affluent and urbane. Exurbanites residents are well connected, using the Internet for everything from shopping to managing their finances.
2) ***"The Great Outdoors"*** neighborhoods are found in pastoral settings throughout the United States. Consumers are educated empty nesters living an active but modest lifestyle. Their focus is land. They are more likely to invest in real estate or a vacation home than stocks. They are active gardeners and partial to homegrown and home-cooked meals. Although retirement beckons, most of these residents still work, with incomes slightly above the US level.
3) ***"Old & Newcomers"*** represent a segment of the population comprised of singles' lifestyles, on a budget. This market is more concerned with economy over acquisition. Individuals in this segment focus more on convenience than consumerism. This segment is also comprised of a unique combination of neighborhoods. "Old and Newcomers are composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. These groups support environmental causes and Starbucks, and are more comfortable with the latest technology than buying a car. Some individuals in this segment are still in college; some are taking adult education classes." The average rent cost for this segment is $800.00 and 54% of these residents are renters occupied. 44% are in multiunit dwellings and 45% of housing units' single-family residents. The college education percentages for these groups are fairly high, 28% have a college degree, 33% have some college education and 10% are still enrolled in college. The unemployment rate is fairly low as well at 7.8%.

To reiterate, the sub groups that emerged are representative of a significant share of the ESA population base. They are not representative of the entire population base that resides within the ESA.

Source: ESRI

Observations for the ESA

The External Environmental Scan for each of the Centers identified in this Section were completed to assist in determining what opportunities might exist within the Center's service area by reviewing existing conditions that would have an impact on what type of courses and curriculum could be offered at the Center to best serve the goals of the Center and its students in moving forward. Each of Center's service area has unique characteristics and challenges. Many of the current course offered at each Center are similar with regards to students pursuing an Associate Degree with the intent to transfer. The following are a summary of key points to the External Environmental Scan for the specific Center located in Bishop.

- Center has multiple high schools within the service area to support the Center.
- Influence of local Tribe population and business ventures present future opportunities.
- Effective Service Area (ESA) provides Center with potential business & industry relationships superior to other adjacent Centers.
- The Bishop Center ESA has an existing large percentage of individuals with higher educational background to attract "learners for life" to the campus for specific programs.
- Current course offerings could be developed to attract older and retired educated population in the area.
- Population in service area is very involved with recreation and fitness that can be capitalized upon.
- Health care listed among fastest growing industries compliment current curriculum offerings at Center.
- Minimal growth (0.14%) is projected for the area.
- The age group (15 – 24) is relatively small and decreasing.
- Wide range of economic background.
- Business and industry opportunities are available but still limited in overall potential for area.
- Close proximity to Mammoth Center (48 miles) offering similar courses for transfer.
- Funding options and limitations from KCCD presents challenges.

Summary

The Bishop Center has strong economic opportunities because of its proximity within the City of Bishop and the existing businesses and industries that are located in the region. Its close proximity to the Center located in Mammoth 42 miles away does not appear to have a negative effect on the Bishop facility. Because the City of Bishop is viewed as the primary economic hub for the area, regional employers, including employers in the adjacent counties, continue to utilize the Bishop area workforce for job recruitment. The ongoing relationship with the Cerro Coso Community College and these area employers, both public and private, continue to be strong for the Bishop Center. As with the other Centers / Campuses, Distant education continues to play an important role at the Center as well as the on-going relationship with the area high schools in providing educational opportunities for the community and Center. The economic and social factors such as population and potential "college ready" students are declining in the future but the location of the Center supported by the local economy and businesses allow the Center to continue to remain stable with its student population.

Mammoth Center

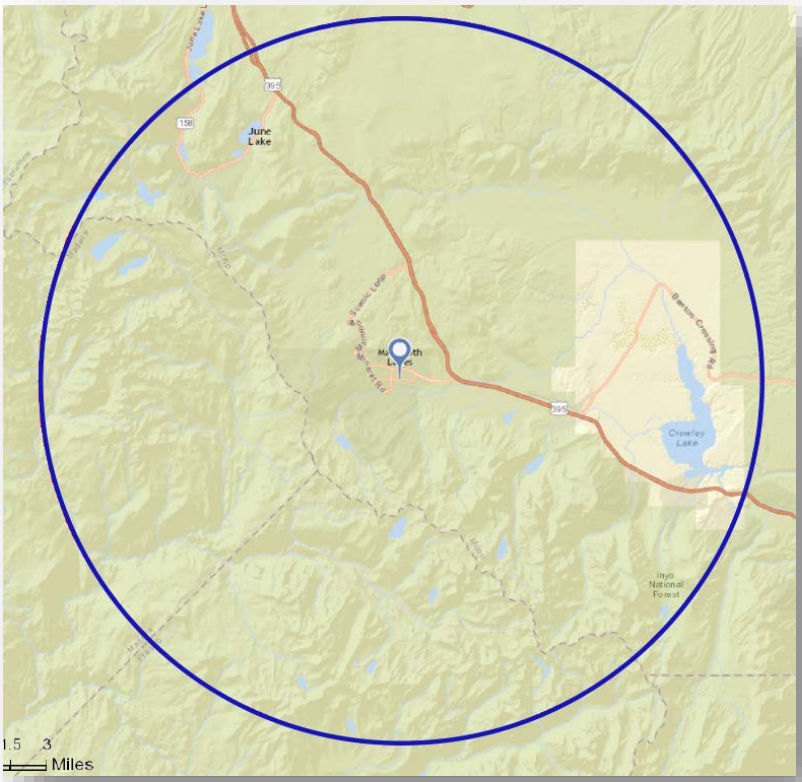
Geographic Area Served

Mammoth Lakes

The community of Mammoth Lakes which is the most prominent within the area served by the Center was incorporated in 1984 and consists of four square miles located within the Inyo National Forest in the southwestern region of Mono County. The local economy is focused primarily on tourism with the mainstay of the tax revenue coming from the rental of any lodging facility and campgrounds for stays of less than a month. The lodging industry generates around two-thirds of the Town of Mammoth Lakes' gross revenue from over 4,500 rental units that include condominiums, hotels, motels, lodges, Bed & Breakfast and cabins. These activities support year-round recreational facilities that also include one of the largest ski areas in the country, according to the local Chamber of Commerce.

Effective Service Area (ESA)

The "effective service area" (ESA) reaches across geographical boundaries. This unique area is defined with its own demographic and economic characteristics. Mammoth's geographical area was determined by the center's address as being the point of reference. For the purposes of this analysis, a 15-mile radius was established as being the best criteria to use for gathering the most accurate and relevant data for this area by utilizing the residential zip codes of the current student population. Please note that the ESA for ESCC – Mammoth does not overlap the ESA for ESCC – Bishop's, allowing each location to be evaluated independently. The ESA for the Mammoth Center is graphically depicted to the right.



Source: ESRI

Characteristics of the ESA

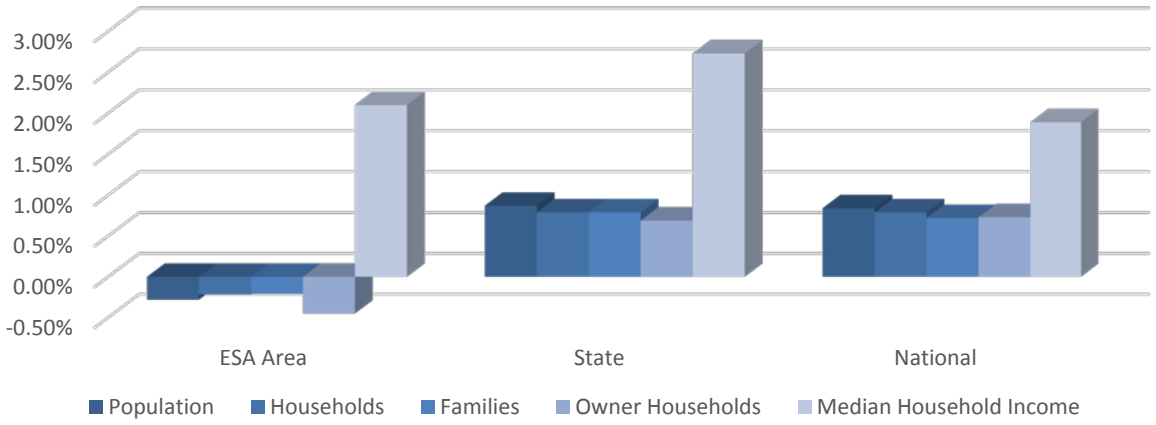
Demographic Profile

For 2016, the ESA is had a population base of 9,790, which is declining slightly to 9,656 by the year 2021. In 2010, the Mammoth Center ESA had a population base of 9,976. The annual population growth rate of -0.28%, will continue the slow rate of decline over the next 5 years. Likewise, the average household size has been on a slight decrease since 2010, which was at 2.46, 2016 at 2.45 and 2021 projected to be 2.44. This average household size is smaller than both the County, 3.21 and the State which had an average of 2.93 for 2016. The ESA median age was 34.6 in 2010, with a current median age of 34.9 and no increase anticipated in 2021. The median household income is projected to increase during 2016-2021 in terms of absolute values. To illustrate, the median household income for 2016 was $69,137 and is projected to be $76,721 by 2021.

DEMOGRAPHIC PROFILE MAMMOTH CENTER: 15 MILE SERVICE AREA			
Summary	**2010**	**2016**	**2021**
Population	9,976	9,790	9,656
Households	3,989	3,901	3,858
Families	2,204	2,155	2,132
Average Household Size	2.46	2.45	2.44
Owner Occupied Housing Units	2,010	1,875	1,833
Renter Occupied Housing Units	1,979	2,026	2,024
Median Age	34.6	34.9	34.9
Trends: Annual Growth Comparisons	**Area**	**State**	**National**
Population	-0.28%	0.87%	0.84%
Households	-0.22%	0.79%	0.79%
Families	-0.21%	0.79%	0.72%
Owner Households	-0.45%	0.69%	0.73%
Median Household Income	2.10%	2.73%	1.89%

Source: ESRI

Mammoth Center ESA: State and National Comparisons (2016)



Source: ESRI, Bureau of Census; analysis MAAS Companies

Households by Income

The table below illustrates that 35.9%of the ESA has household incomes of less than $50,000 per year. 29.3% of households make $100,000 + per year. The per capita income for the ESA is projected to increase. In 2016, the per capita income was $34,374 per year, with a 2021 projection of $37,341 per year.

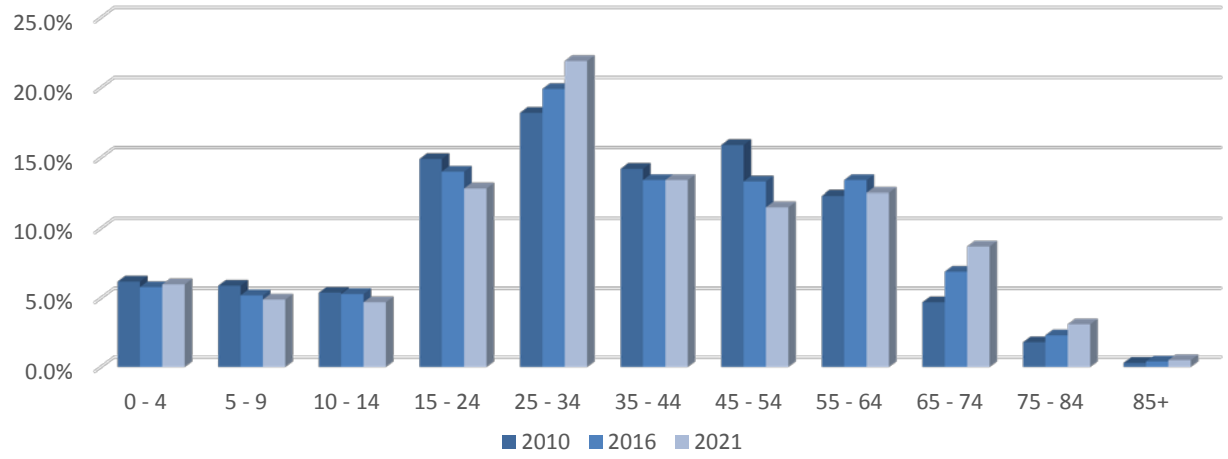
NCOME PROFILE MAMMOTH CENTER: 15 MILE SERVICE AREA				
	2016		**2021**	
Households by Income	**Number**	**Percent**	**Number**	**Percent**
<$15,000	406	10.4%	352	9.1%
$15,000 - $24,999	311	8.0%	352	9.1%
$25,000 - $34,999	224	5.7%	155	4.0%
$35,000 - $49,999	460	11.8%	332	8.6%
$50,000 - $74,999	665	17.1%	673	17.5%
$75,000 - $99,999	691	17.7%	671	17.4%
$100,000 - $149,999	678	17.4%	812	21.1%
$150,000 - $199,999	261	6.7%	306	7.9%
$200,000+	201	5.2%	202	5.2%
Median Household Income	$69,137		$76,721	
Average Household Income	$85,198		$92,384	
Per Capita Income	$34,374		$37,341	

Source: ESRI

Age Segmentation

The data for the Mammoth Center ESA age segmentation is provided in the graph below:

Mammoth Center ESA: Population by Age

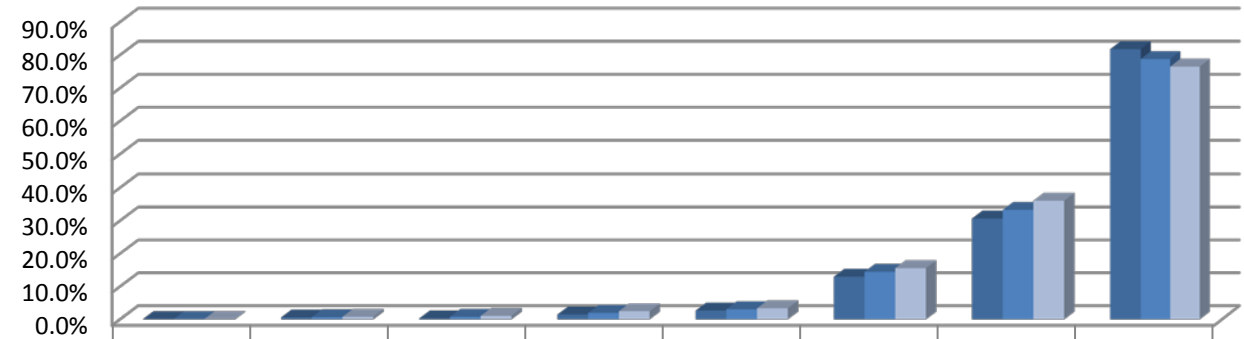


Source: ESRI

As of 2016, 60% of the Mammoth Center ESA population is between 25 and 64 years of age. Conversely, the "up-and-comer" age groups (0-14 years) make up 16.3% of the ESA population with a raw number of 1,599 for 2016. This age segment is set to decrease to 15.6% by 2021. The age group most likely to attend college (15 – 24) is projected to decrease in size from 14% in 2016 to 12.8% in 2021.

Ethnicity Segmentation

Mammoth Center ESA: Race/Ethnicity Distribution



	Pacific Islander	American Indian	African American	Asian	Two or More Races	Some Other Race	Hispanic Orgin	White
2010	0.1%	0.6%	0.3%	1.5%	2.7%	13.0%	30.7%	81.8%
2016	0.1%	0.7%	0.8%	2.0%	3.1%	14.5%	33.3%	78.8%
2021	0.1%	0.8%	1.1%	2.5%	3.4%	15.6%	36.1%	76.5%

*As stated by ESRI, Hispanic Origin may be of any race. Therefore, race and ethnicity percentages will total more than 100%

Source: Census Bureau, ESRI; analysis MAAS Companies

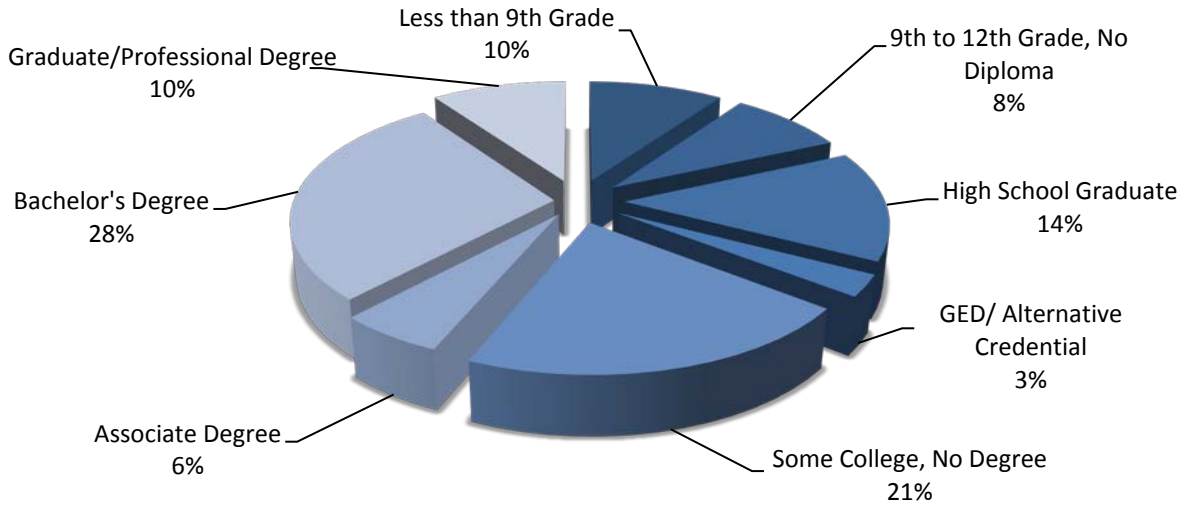
The data above provides that the Mammoth Center ESA population is predominantly White with 78.8%. This percentage is forecasted to drop by 2.3% to 76.5% by 2021. The next largest ethnic population is the Hispanic

population with 33.3%. Even though the Hispanic ethnic group is expected to increase to 36.1% by 2021, this population still represents a minority when compared to the White ethnic population for the same year. The other ethnic groups all comprise a very small percentage of the ESA's population.

Levels of Educational Attainment

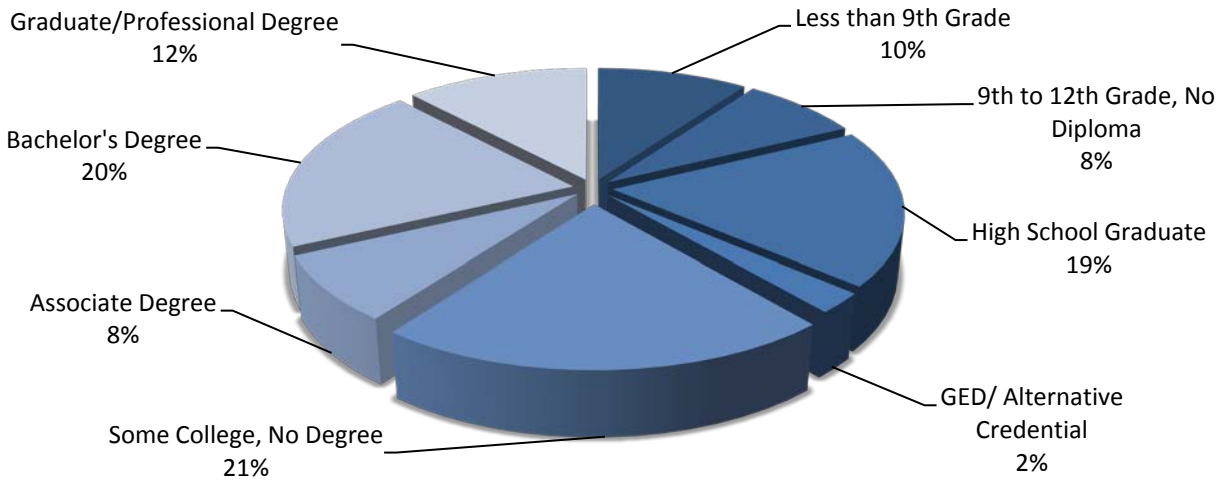
The next section assessed was the Mammoth Center ESA's level of educational attainment for individuals 25+ years of age. The ESA shows a lower percentage of high school graduates, at 14%, than the statewide average of 19%. Combining the 21% of individuals that have had some college experience but no degree earned with the 6% Associate Degree, 28% Bachelor Degree, 10% Graduate Degree, the ESA has 65% of residences that could potentially enroll at the Center to continue their interest in higher education. Below is a comparison of the level of educational attainment of the Center's ESA and the State.

Mammoth Center ESA: Educational Attainment (2016)



Source: ESRI

Statewide Averages: Educational Attainment (2016)



Source: ESRI

K-12 Partnerships and High School Graduation Rates

Another important element of the External Environmental Scan that will impact the Center going forward is the rate at which high schools successfully graduate students. Mammoth High School is the largest high school in the External Service Area's 15-mile radius that provides students to this Center. Mammoth High School is not the only school located in the larger geographic area of the Center. Lone Pine High School 113 students, Big Pine High School 45 students and Owen Valley High School 25 students that have potential students to continue their education at the facility. Bishop Union High School is the largest high school in the region with 667 students but has the Bishop Center as a closer option.

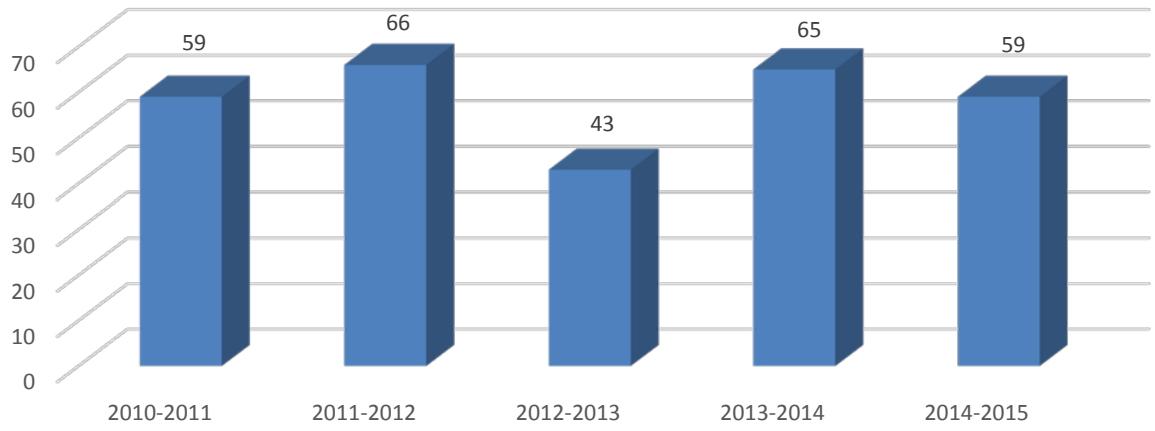
Mammoth Center ESA: High School Enrollments (2014-2015)

High School(s) in Mammoth Center ESA	Total High School Enrollments
Mammoth High	297

Source: U.S. Dept. of Education, National Center for Educational Statistics

The graduation rates below illustrate the historical numbers for the Mammoth Center ESA for High School graduates in through the academic years 2010-2015.

Mammoth Center ESA: High School Graduation Rates

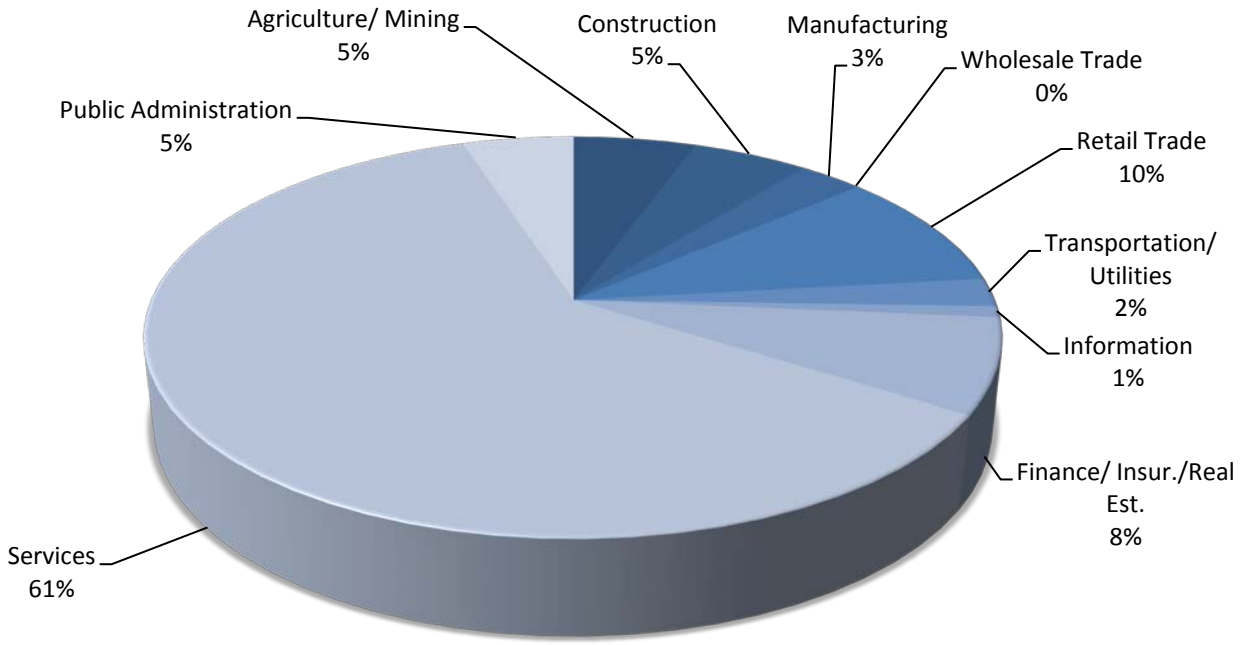


Source: Department of Education; analysis MAAS Companies

Workforce, Employment and Opportunities within the Mammoth Center Sphere of Influence

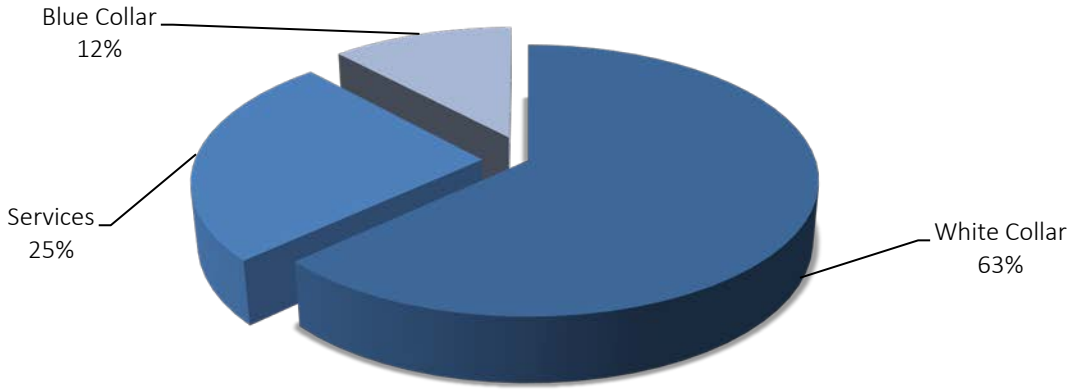
Data presented for the ESA relative to the workforce and employment opportunities shows an available workforce of 5,435 individuals in 2016. Most employment opportunities can be found across the industry sectors of Service with 61.0%, Retail Trade at 9.6% and Finance/Insurance/Real Estate 7.6%. These three industries combined account for 78.2% of the ESA 2016 employed population age 16+ by industry.

Mammoth Center ESA: Employed Population by Industry 16+ Years of Age (2016)



Source: ESRI

Mammoth Center ESA: Employed Population by Occupation 16+ Years of Age (2016)



Source: ESRI

The Blue-Collar sector accounts for the least employed population 16+ by Occupation for 2016, with 12%. The largest in this segment is White Collar occupations with 63% followed by Services with 12% The Mammoth Center would greatly benefit if they would seek the employers in these White Collar and Services occupations to see exactly what types of employees they would be looking to hire, and design courses and student's services to fill these employer's needs.

Employment Outlook

The area's major employers are associated with outdoor recreation and the natural attributes that attract people to the region. Mammoth Mountain is the most dominant employer providing a wide range of employment

opportunities that are tied to the tourism industry. The service industry and other businesses dependent on tourism and outdoor recreation are the most visible within the job market. There appears to be no major corporate presence in the area. Local government including the school district offer limited employment opportunities similar to the field of health care and medicine. Companies advertising for jobs in the Mammoth area such as K-Mart, AmeriGas, Bishop Paiute Tribe and the Counties of Inyo and Mono are more prominent and active in the City of Bishop with their hiring.

At a community forum offered by the college on Wednesday, November 5, 2018, to present and get feedback on the draft educational master plan, it was noted by community members that the Mountain had been purchased recently by Aspen Corporation and that this could increase the population and change to demographics of the area.

Tapestry Segmentation for the ESA

The top three (3) "Tapestry Segments" for the Mammoth Center ESA are: (1) Emerald City, (2) Trendsetters and (3) Enterprising Professionals.

1) ***"Emerald City's"*** can be found in lower-density neighborhoods of urban areas throughout the country. Young and mobile, they are more likely to rent. Well educated and well employed, half have a college degree and a professional occupation. Incomes close to the US median come primarily from wages and self-employment. This group is highly connected, using the Internet for entertainment and making environmentally friendly purchases. Long hours on the Internet are balanced with time at the gym. Many embrace the "foodie" culture and enjoy cooking adventurous meals using local and organic foods. Music and art are major sources of enjoyment. They travel frequently, both personally and for business

2) ***"Trendsetters"*** are armed with the motto "you're only young once". Residents live life to its full potential. These educated young singles aren't ready to settle down; they do not own homes or vehicles and choose to spend their disposable income on upscale city living and entertainment. Dressed head to toe in the most current fashions, their weeknights and weekends are filled discovering local art and culture, dining out, or exploring new hobbies. Their vacations are often spontaneous, packed with new experiences and chronicled on their Facebook pages.

3) ***"Enterprising Professionals"*** are well educated residents climbing the ladder in STEM (science, technology, engineering, and mathematics) occupations. They change jobs often and therefore choose to live in condos, town homes, or apartments; many still rent their homes. The market is fast-growing, located in lower density neighborhoods of large metro areas. Enterprising Professionals residents are diverse, with Asians making up over one-fifth of the population. This young market makes over one and a half times more income than the US median, supplementing their income with high-risk investments. At home, they enjoy the Internet and TV on high-speed connections with premier channels and services.

Again, these sub groups that emerged are representative of a significant share of the population base. However, they are not representative of the entire population base that resides within the ESA.

Source: ESRI

Observations for the ESA

The following are a summary of key points to the External Environmental Scan for ESCC – Mammoth.

- Business and employment primarily limited to tourism and recreation.
- No major business or industry in area to provide employment opportunities.
- Number of age segment (15 – 24) most likely to be potential students is currently a large percentage of the ESA but declining over time.
- Small population base with limited overall growth.

- Maintaining FTES thresholds for Educational Center status.
- Funding from District to support and/or expand Center.
- High percentage of educated population in service area provides opportunities for “learners for life”.
- Interest in recreation and outdoors activities by individuals in service area.
- Small businesses specific to services and retail.
- Local High School cooperation with dual enrollment agreement

Summary

The Mammoth Center is located within 42 miles of the Bishop Center and offers a similar curriculum focusing on transfer courses. The Mammoth area is remote and limited in size with a year-round population of 9,790. Because of its location, it also does not compete for students with another community college close in proximity. The area’s economy is driven by tourism and outdoor recreation supported primarily by the Mammoth Ski Mountain and services and businesses to support this industry. In addition to the retail and service areas, there is a growing presence within the local art community that has had a positive influence on the Center and its curriculum with an emphasis for the arts. Educational status is relatively high in the area compared to the other Centers / Campuses and this population tends to have an interest in and support for the arts. Distance Education (On-line Education) also appeals to many within the service area because of the limited options and an interest in continuing to be lifelong learners. Because of the relatively small service area and limited employment opportunities, on-line courses dedicated to transferring students and producing FTES appear to be a strong asset of the Center. To increase participating rates and involvement from the local community, partnering with the local high school in the area of dual enrollment and providing courses of interest to the existing population have proven successful. The relationship to the arts continues to provide opportunities for the Center in the future both in community support and curriculum. A unique feature of this Center is providing affordable and conveniently located housing to its students that assists in not only attracting students but keeping students enrolled at the Center.

Greater East Kern Center

Overview

The East Kern Educational Center was previously referred to as the South Kern Valley Educational Center. It should be noted that previously, the City of Tehachapi was not included within the South Kern Valley Educational Center or Cerro Coso Community College. It was previously under the responsibility of Bakersfield College as its Educational Center but has since been re-assigned to Cerro Coso Community College and now included within the East Kern Educational Center. The Center serves the largest geographical region of all the Educational Centers within the Cerro Coso Community College’s boundaries through two unique locations. The first is a college center located at Edwards AFB. The second is a campus located in the City of Tehachapi. In part, because of the sheer geographic size of the area, the East Kern Center has multiple cities and employers throughout the service area. The data accumulated and reviewed was broken down to focus on two specific locations within the entire service area. The Greater East Kern area used the southern section of California City as its point of reference (City Hall) and included the cities of Boron, California City, Mojave and Edwards AFB. For the Tehachapi Campus it was determined that centering the associated service are on the campus itself would yield the best results. Both locations service areas utilize 20-mile radius to capture the information and data but did not overlap and duplicate information. The format utilized for both service areas has been standardized for convenience and to allow for an easy comparison between the different areas.

Greater East Kern Center

The Geographic Area Served

Boron

The City of Boron is on the border of Kern and San Bernardino Counties along Highway 58 and 85 miles east of Bakersfield and 40 miles west of Barstow. It has a population of 2,253 and a total area of 13.8 square miles. Located at an elevation of 2,467, the City is name after the element boron and the home to the U.S. Borax Boron Mine, California's largest open pit mine which is also the largest borax mine in the world. Boron is a chemical element used primarily as an additive for insulation and structural materials. The community is closely tied economically to the operation of this facility and product. Another major employer is the Kramer Junction Corporation (KJC) which operates one of the world's largest solar power facilities.

California City

California City is located the northern Antelope Valley in Kern County and 65 miles southwest of Death Valley National Park. City is served by Highway 14 to the west and Highway 58 to the south. With a population of 13,277, the City is the 331st largest city in the state by population but is the 3rd largest in area with over 203 square miles within its city limits. Edwards AFB is located south of the city and much of the workforce for the military base is made up of city residents. Another major source of employment is the California City Corrections Center. The Hyundai/Kia Proving Grounds are located in the rural southwestern part of the city. Cerro Coso Community College owns 22 acres in California City for potential development of a campus facility to better serve the area in the future.

Edwards AFB

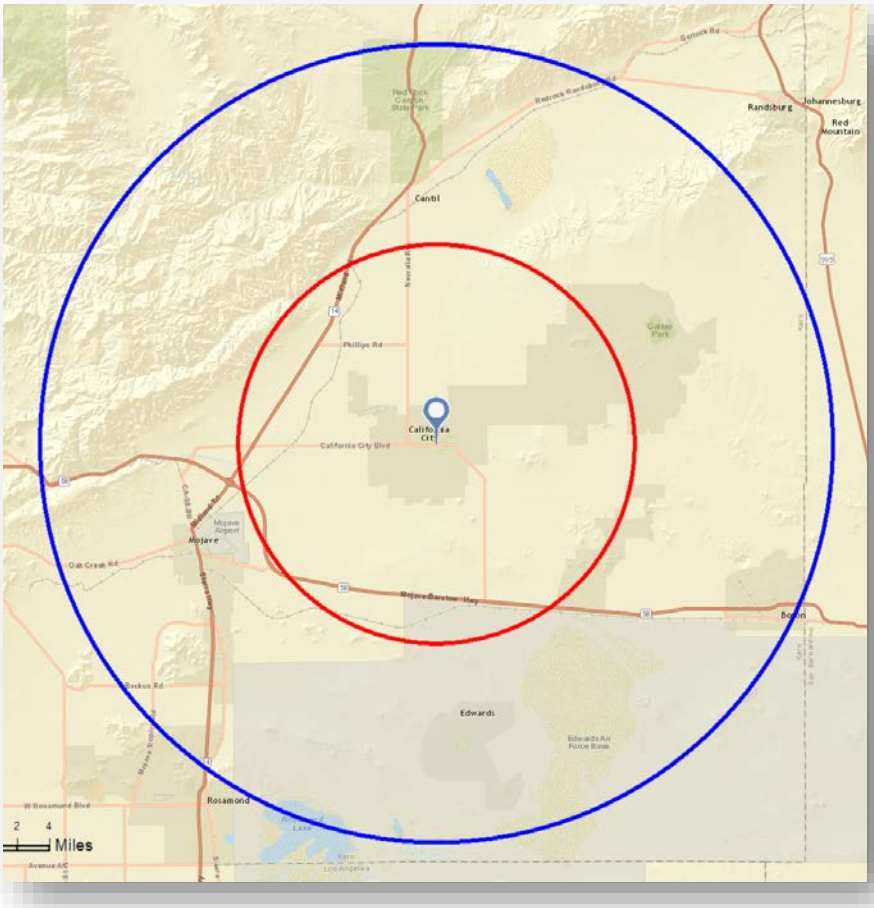
The base continues to play a significant role in the region with respect to military aviation and the U.S. Air Force and is one of the major economic employers for the region. The base directly or indirectly provides a high level of jobs and opportunities for the region. With one of the two campuses for the East Kern Educational Center located on the base, it provides a convenient higher educational facility to the military personnel and civilians working at the facility. Edwards AFB is located in the western portion of the Mojave Desert and is 83 miles from the City of Bakersfield and 75 miles from the Ridgecrest campus.

Mojave

The City of Mohave is situated 50 miles east of Bakersfield in the Antelope Valley at the southwestern region of the Mojave Desert and east of the Tehachapi Mountains. Part of Kern County, it has a population of 4,238 and an elevation of 2,762 feet. Strong ties exist to aviation and military because of its proximity to Edwards AFB and the Naval Air Weapons Station in China Lake and the Mojave Air and Space Port. Outdoor recreation and tourism are also a significant contributor to the local economy.

Effective Service Area (ESA)

For the Greater East Kern area, a 20-mile radius was determined to be the best measurement for gathering the most comprehensive and relevant data for this area. As a point of reference, the City Hall in the southern portion of California City was utilized. Though the East Kern Center includes the Tehachapi Campus, it is not included in the evaluation of the Greater East Kern ESA due to its geographically disparate location. Data for the city of Tehachapi will be included in the Information gathered for the Tehachapi Campus ESA provided in the following section. Using a 20-Mile radius ensures that the two ESAs do not overlap one another, allowing each location and its surrounding area to be reviewed independently. The ESA for the Greater East Kern area shown to the right.



Source: ESRI

Characteristics of the ESA

Demographic Profile

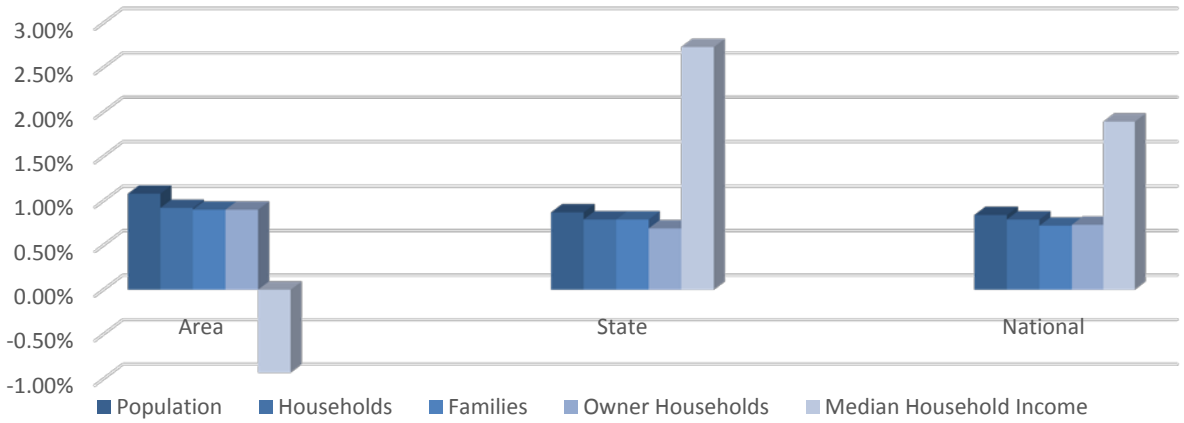
The ESA has a 2016 population of 25,468 and projected to grow to 26,625 by 2021. For reference, in 2000 the East Kern Educational Center area had a population base of 24,875. The ESA is growing at an annual rate of 0.89%, while positive; growth will be minimal over the next 5 years. The average household size has slightly increased since 2010, when it was at 2.79, for 2016 this number is 2.83 and projected for 2.85 in 2021. This average household is smaller than both the County, 3.21 and the State with 2.93 for 2016. The current median age is 33.7 and is expected to slightly increase to 34.0 by 2021. The median household income, which is already low in comparison to statewide averages, is projected to decrease during 2016-2021 in terms of absolute values. To illustrate, the median household income for 2016 was $46,381 and is projected to be $46,075 by 2021.

DEMOGRAPHIC PROFILE GREATER EAST KERN: 20 MILE SERVICE AREA			
Summary	**2010**	**2016**	**2021**
Population	24,875	25,468	26,625
Households	7,961	8,223	8,572
Families	5,524	5,687	5,921
Average Household Size	2.79	2.83	2.85
Owner Occupied Housing Units	42.2%	39.9%	39.7%
Renter Occupied Housing Units	35.9%	37.8%	38.0%
Median Age	33.5	33.7	34.0
Trends: 2016-2021 Annual Rate	**Area**	**State**	**National**
Population	0.89%	0.87%	0.84%

Households	0.83%	0.79%	0.79%
Families	0.81%	0.79%	0.72%
Owner Households	0.74%	0.69%	0.73%
Median Household Income	-0.13%	2.73%	1.89%

Source: ESRI

Greater East Kern: State and National Comparisons (2016)



Source: ESRI, Bureau of Census; analysis MAAS Companies

Households by Income

The table below illustrates that 52.8% of the 2016 Greater East Kern ESA had household incomes less than $50,000 per year. Conversely, only 3.6% of the ESA households make more than $150,000+ per year. The per capita income for the ESA is projected to increase. In 2016, the per capita income was $21,556, with a 2021 increase projected to be $ 22,676.

INCOME PROFILE GREATER EAST KERN: 20 MILE SERVICE AREA				
	2016		**2021**	
Households by Income	**Number**	**Percent**	**Number**	**Percent**
<$15,000	1,374	16.7%	1,609	18.8%
$15,000 - $24,999	942	11.5%	825	9.6%
$25,000 - $34,999	823	10.0%	849	9.9%
$35,000 - $49,999	1,199	14.6%	1,264	14.7%
$50,000 - $74,999	1,489	18.1%	1,129	13.2%
$75,000 - $99,999	1,002	12.2%	1,206	14.1%
$100,000 - $149,999	1,102	13.4%	1,324	15.4%
$150,000 - $199,999	178	2.2%	229	2.7%
$200,000+	114	1.4%	139	1.6%
Median Household Income	$46,381		$46,075	
Average Household Income	$58,742		$62,726	
Per Capita Income	$21,556		$22,676	

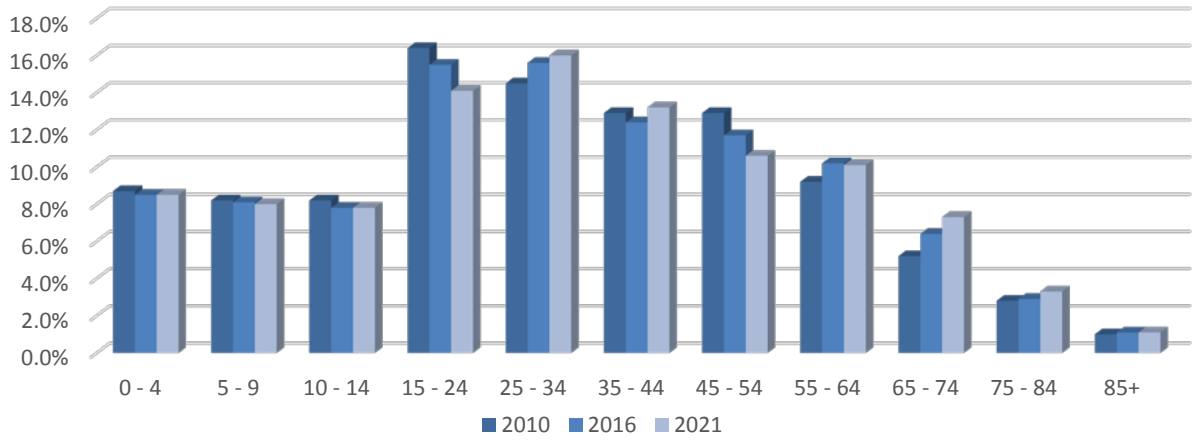
Source: ESRI

Age Segmentation

The Greater East Kern 2016 population base discloses that 35.0% of the population is 45+ years of age. Historical data provides that this number had decreased, since 2010 in which 34.0% of the ESA population was 45+ years of age. Similarly, this figure is set to increase by 0.2%, with 2021 projected to be 35.2% for the same age segment. Conversely, the “up-and-comer” age groups (0-14 years) make up 21.9% of the ESA population for 2016. This age segment will slightly increase to 22.1% by 2021.

The age group that represents the largest "college-going" group is projected to decrease. Based on the data for the ESA, 14.1% of this population is made up of the age segment of 15-24-year-olds. This number is projected to continue to decrease to 13.1% by 2021.

Greater East Kern: Population by Age

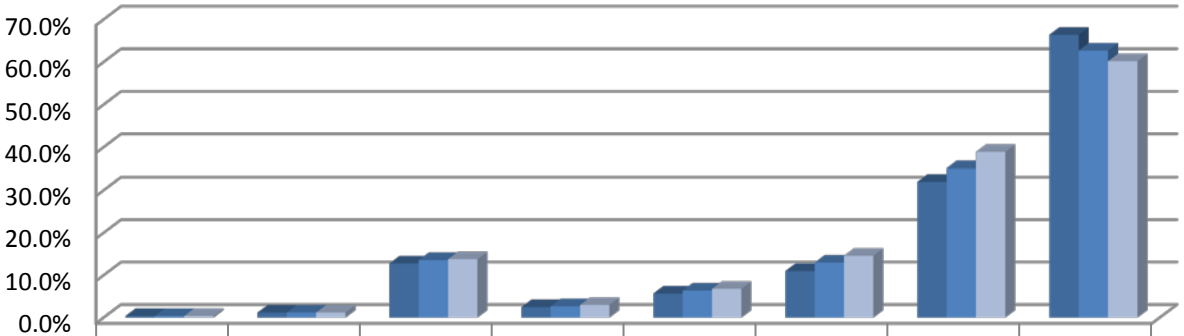


Source: ESRI

Ethnicity Segmentation

The data below provides that the Greater East Kern ESA had a majority White ethnic population with 2016 at 62.7%. This percentage is forecasted to drop by -2.5% to 60.2% by 2021. The next largest ethnic population was the Hispanic population with 35.1% for 2016. Even with the Hispanic ethnic group 2021 projection of 38.9%, this increase will still not come close to the White ethnic population percentage of 60.2% for the same projected year. The African American population was the third largest percentage at 13.6% and is projected to grow to 13.8% in 2021. The other ethnic groups combined comprise of a very small percentage of the remaining ESA's population.

Greater East Kern ESA: Race/Ethnicity Distribution



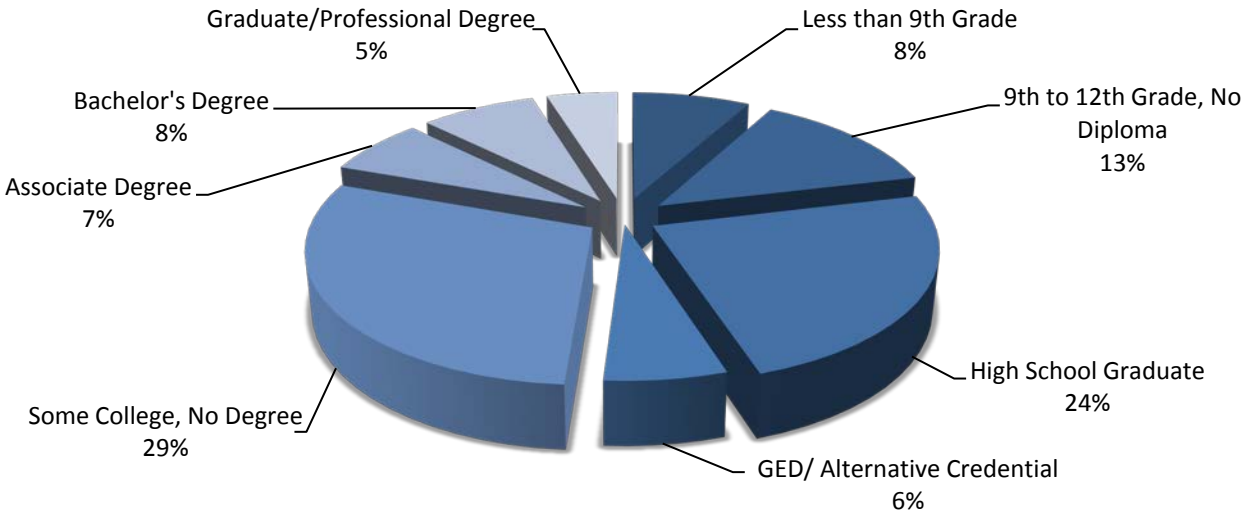
	Pacific Islander	American Indian	African American	Asian	Two or More Races	Some Other Race	Hispanic Orgin	White
2010	0.4%	1.2%	12.8%	2.5%	5.7%	11.0%	32.0%	66.4%
2016	0.4%	1.2%	13.6%	2.7%	6.4%	13.0%	35.1%	62.7%
2021	0.4%	1.2%	13.8%	3.0%	6.8%	14.6%	38.9%	60.2%

Source: ESRI

Levels of Educational Attainment

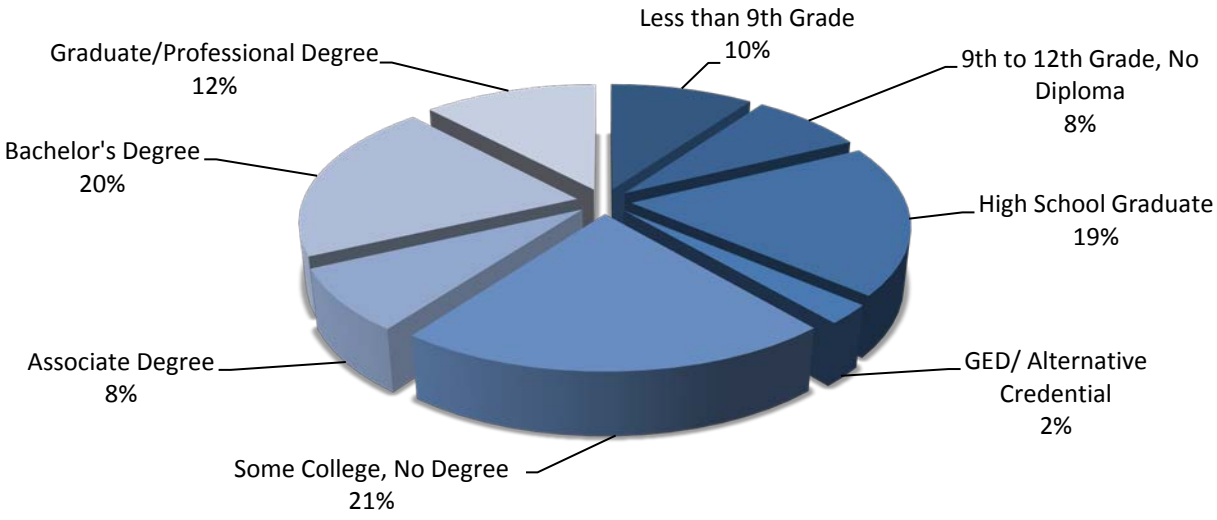
The next section assessed was the Greater East Kern ESA's level of educational attainment for individuals 25+ years. The ESA shows a higher percentage of *High School Graduates* at 23.8% than the statewide average of 19%. Combining the 29.4% of individuals that have had *Some College, No Degree* earned with the 6.9% *Associate Degree,* 7.8% *Bachelor Degree*, 4.8% *Graduate Degree*, the ESA has 48.9% of residents that could potentially enroll at the Center to continue their interest in higher education. Below is a comparison of the level of educational attainment of the Center's ESA and the State.

Greater East Kern ESA: Educational Attainment (2016)



Source: ESRI

Statewide Averages: Educational Attainment (2016)



Source: ESRI

K-12 Partnerships and High School Graduation Rates

It is imperative that the East Kern Center continue and strengthen their partnerships with the four high schools that are directly in the Center's ESA. Four of these schools can be found in the Greater East Kern Center 20-mile ESA.

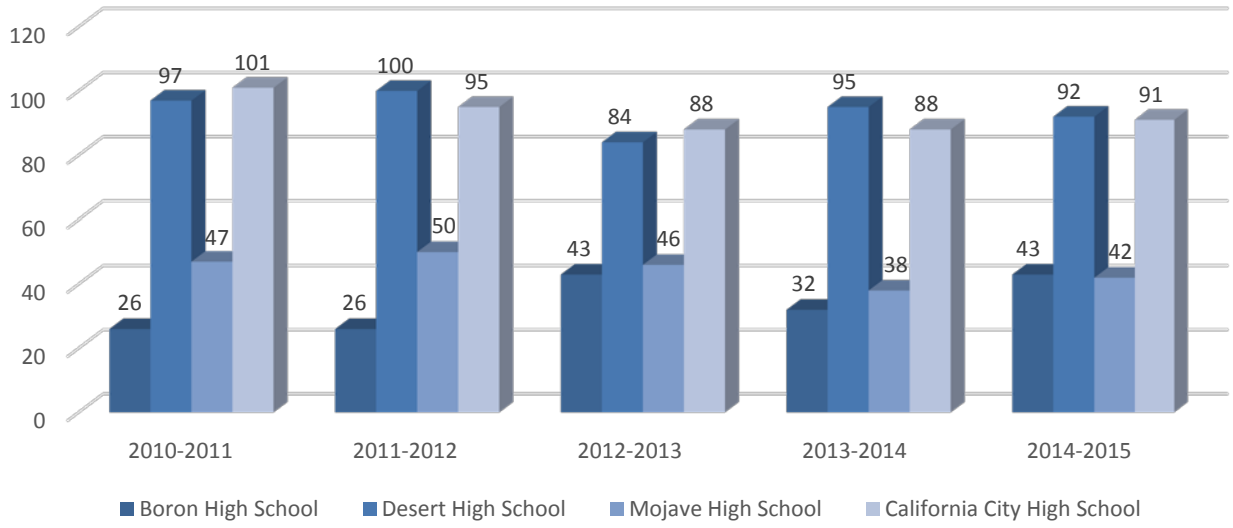
Greater East Kern ESA: High School Enrollments (2014-2015)

High School(s) in Edwards AFB ESA	Total High School Enrollments
Boron High	172
Desert High	386
Mojave High	195
California City High	508

Source: U.S. Dept. of Education, National Center for Educational Statistics

California City High School is the largest high school in the Greater East Kern ESA. California City High School had 508 students for the 2014-2015 academic year, Desert High School had 386 students and Mojave High School had 195 students that have potential students to continue their education at the facility.

Greater East Kern ESA: High School Graduation Rates



Source: California Department of Education; analysis MAAS Companies

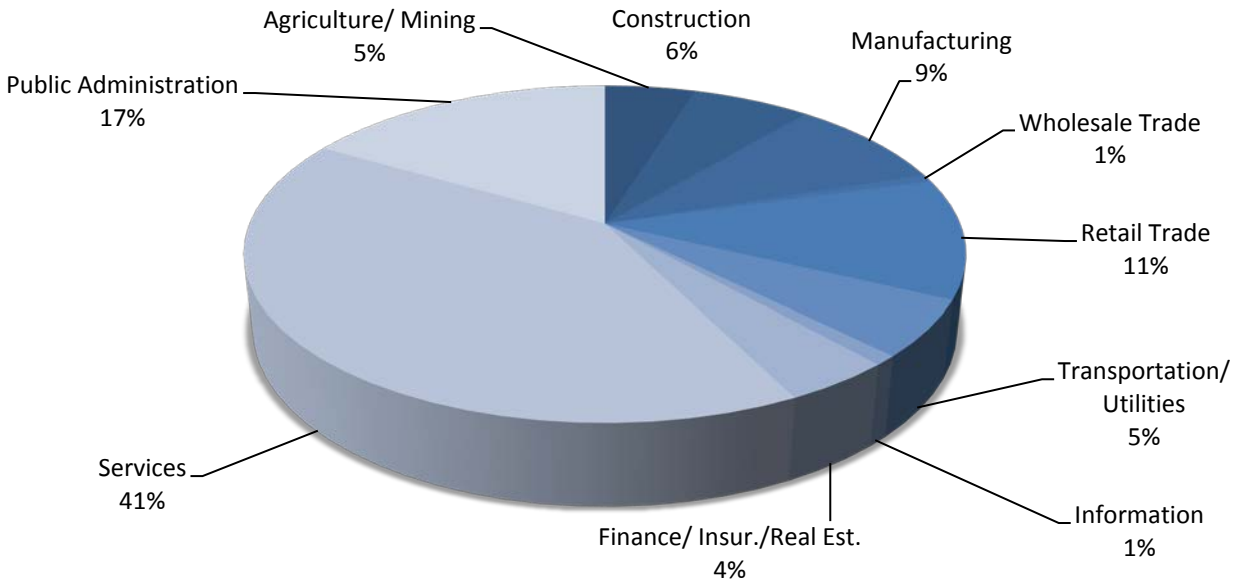
In comparison to the other Center's, the Greater East Kern ESA had a fairly high number of high school graduates. This is a benefit that the Center can take advantage of, which will guarantee a higher graduate rate for the Center. The high school graduating class sizes for the past five academic years have slightly fluctuated. The 2014-2015 numbers show that Boron High School had 43 graduating seniors. Desert High School had 92 graduating seniors and California City High School had 91 students graduate for the 2014-2015 academic year. The high school with the least amount of high school graduates was Mojave with only 42 graduating seniors for the 2014-2015 academic year.

Workforce, Employment and Opportunities within the Greater East Kern Sphere of Influence

Data presented for the ESA relative to the workforce and employment opportunities exhibits a 2016 available workforce of 7,798 individuals. For 2016, employment is led by the industry sectors of Service with 40.8%, Public Administration (Government) with 16.6%, Retail Trade at 11.5%, Manufacturing at 8.8%, and Construction at 6.3%.

The three industries of Government, Manufacturing and Construction reflect the economic drivers for the service area of the ESA 2016 employed population age 16+ by industry.

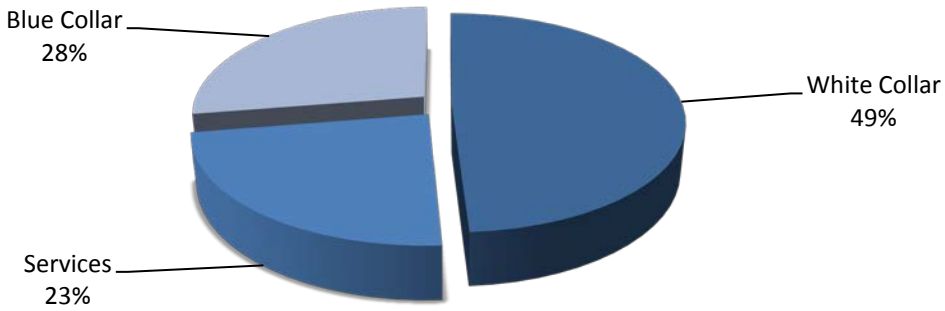
Greater East Kern ESA: Employed Population by Industry 16+ Years of Age (2016)



Source: ESRI

The Blue-Collar sector illustrated below accounts for 27.6% of the employed population 16+ by Occupation for 2016. The largest in this sector is White Collar occupations with 49.1% followed by Services with 23.4%.

Greater East Kern ESA: Employed Population by Occupation 16+ Years of Age (2016)



Source: ESRI

Types of Industries within the Greater East Kern Sphere of Influence

Greater East Kern Center: Top 25 Fastest Growing Industries

1. Home Health Care Services
2. Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
3. Electronic Shopping and Mail-Order Houses
4. Outpatient Care Centers
5. Offices of Other Health Practitioners
6. Other Ambulatory Health Care Services
7. Other Financial Investment Activities
8. Psychiatric and Substance Abuse Hospitals
9. Utility System Construction

10. Other Transit and Ground Passenger Transportation
11. Medical and Diagnostic Laboratories
12. Other General Merchandise Stores
13. Used Merchandise Stores
14. Other Heavy and Civil Engineering Construction
15. Satellite Telecommunications
16. Specialty (except Psychiatric and Substance Abuse) Hospitals
17. Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities
18. Management, Scientific, and Technical Consulting Services
19. Software Publishers
20. Activities Related to Real Estate
21. Wholesale Electronic Markets and Agents and Brokers
22. Sporting Goods, Hobby, and Musical Instrument Stores
23. Pipeline Transportation of Crude Oil
24. Facilities Support Services
25. RV (Recreational Vehicle) Parks and Recreational Camps

Source: Kern Economic Development Corporation (KERNEDC)

Greater East Kern: Top 25 Fastest Growing Occupations

1. Wind Turbine Service Technicians
2. Occupational Therapy Assistants
3. Physical Therapist Aides
4. Nurse Practitioners
5. Physical Therapist Assistants
6. Massage Therapists
7. Physician Assistants
8. Physical Therapists
9. Therapists, All Other
10. Reinforcing Iron and Rebar Workers
11. Commercial Divers
12. Ambulance Drivers and Attendants, Except Emergency Medical Technicians
13. Cartographers and Photogrammetrists
14. Home Health Aides
15. Occupational Therapy Aides
16. Diagnostic Medical Sonographers
17. Genetic Counselors
18. Solar Photovoltaic Installers
19. Web Developers
20. Statisticians
21. Forensic Science Technicians
22. Industrial Machinery Mechanics
23. Operations Research Analysts
24. Optometrists
25. Audiologists

Source: Kern Economic Development Corporation (KERNEDC)

Employment Outlook

According to the Kern Economic Development Corporation, over the next 10 years, employment in the Greater East Kern service area is projected to expand at a similar rate to the rest of the ESA's. The fastest growing sector in the region is expected to be Health Care and Social Assistance with a +2.2% year-over-year rate of growth. The strongest forecast over this period is expected for Health and Social Assistance; Agriculture, Forestry, Fishing and Hunting; and Construction.

Tapestry Segmentation for the ESA

The top three (3) Tapestry segmentations for the Greater East Kern Center "effective service" area are: (1) Middleburg, (2) Hardscrabble Road and (3) Diners & Miners.

1) ***"Middleburg"*** neighborhoods transformed from the easy pace of country living to semirural subdivisions in the last decade, when the housing boom reached out. Residents are conservative, family-oriented

consumers. Still more country than rock and roll, they are thrifty but willing to carry some debt and are already investing in their futures. They rely on their smartphones and mobile devices to stay in touch and pride themselves on their expertise. They prefer to buy American and travel in the US. This market is younger but growing in size and assets.

2) ***"Hardscrabble Road"*** neighborhoods are in urbanized areas within central cities, with older housing, located chiefly in the Midwest and South. This slightly smaller market is primarily a family market, married couples (with and without children) and single parents. Younger, highly diverse (with higher proportions of black, multiracial, and Hispanic populations), and less educated, they work mainly in service, manufacturing, and retail trade industries. Unemployment is high (almost twice the US rate), and median household income is half the US median. Almost 1 in 3 households have income below the poverty level. Approximately 60% of householders are renters, living primarily in single-family homes, with a higher proportion of dwellings in 2–4 unit buildings. This market is struggling to get by.

3) ***"Diners & Miners"*** account for close to one in five employed residents. These residents work in mining, oil and gas extraction, or quarrying industries. Diners and Miners is a very rural, primarily Southern market. Married-couple families reside in over half of the households, and over a quarter of householders live in mobile homes. This socially conservative group earns a living working with their hands. In addition to mining, construction and agriculture are common industries for employment. They take pride in the appearance of their homes and their vehicles. Budget-minded residents enjoy home cooking, but nothing too fancy. This is a gregarious group that values time spent with friends.

Source: ESRI

Observations for the ESA

Of all the Cerro Coso College Centers, the Greater East Kern area serves the largest geographical area within the community college boundaries. The Center serves the areas of Boron, California City, Edwards AFB, and Mojave. The Center is home to a solid economic base with major employers in the fields of Corrections, Solar power Healthcare, as well as a recreation sector. The Greater East Kern ESA 2016 population is one of the largest among all the Centers with 26, 625 individuals in this area.

- Wide range of economic opportunities
- Mojave Desert hosts a commercial-sized solar farm that contributes to the State's energy grid.
- Host of companies that are generating power from natural sources in East Kern County.
- Trumps Administration intention to increase defense spending.
- The size and diversity of the service area.
- The physical land mass and the geographical differences that make-up the service area.
- Future planning will require a focused and compartmentalized approach for each area are among the greatest challenges.
- Population growth, as a natural economic driver, will be generally slow.
- Funding and resource allocation from District could present a challenge.

Summary

The Greater East Kern's service area is the largest geographically and most diverse with its population and economic ranges among the other Cerro Coso Centers / Campuses. Despite the size and diversity of the service area, the overall population is not growing and the industries while numerous, do not cumulatively support the Center through employment opportunities. Additionally, the ability to draw students to the Center located on a

military installation in a post 911 environment can be challenging not only because of the physical distance from the different communities but also because of the restrictive security process to gain entrance onto the base. Many of the communities in the large service area don't have any strong ties to the existing Center that also hamper on-site enrollment. Distant education remains a viable option for the students enrolled at the Center. The land owned by the College in California City may present an opportunity to build a future campus that is more central to the overall service area but the bigger challenge is to maintain a current level of students and funding while dealing with a declining population base. While defense spending is projected to increase under the Trump Administration and employment opportunities remain with the presence of the numerous area correctional facilities, other existing industries within the service area are more aligned with specific communities and not the Center. Energy, aerospace and agriculture continue to be a presence in the area and may provide opportunities with the growth in areas such as the emerging medical marijuana industry and advances in public space travel.

Tehachapi Campus

Geographic Area Served

Tehachapi

The City of Tehachapi is located at an elevation of 3,970 in the Tehachapi Mountains between the San Joaquim Valley and the Mojave Desert and 35 miles southeast from Bakersfield. It is 10 square miles with a population of 14,414 (U.S. Census Bureau). The largest employer in the area is the California Correctional Institution, a maximum-security prison also known as Tehachapi State Prison. Edwards AFB is located 40 miles to the east of the City.

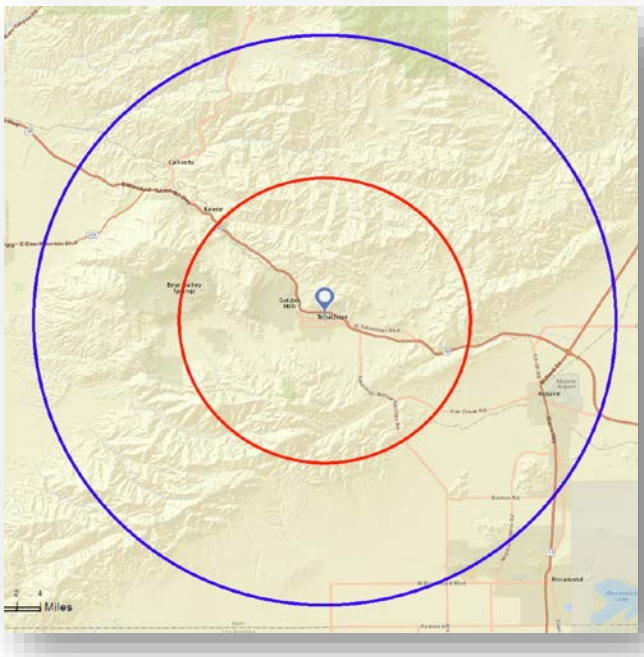
The area has had a long history with farming, ranching and agriculture that continues with large-scale, organic farming enterprises and family-owned, local ventures sharing the landscape. The region yields impressive wines, quality grass-fed beef and farm-fresh produce.

The Tehachapi Mountain Range is home to one of the world's largest producers of wind-generated electricity. Several energy companies have projects located in the region. The most notable being: Terra-Gen Power, LLC., AES, NextEra Energy, Brookfield Renewable, EDF and Iberdrola among others.

A recent California Retail Survey stated that Tehachapi is the 10th fastest growing retail market in the State of California.

Effective Service Area (ESA)

For the Tehachapi Campus, a 20-mile radius was determined to be the best measurement for gathering relevant data for the area. The actual campus in Tehachapi was utilized as the point of reference for the service area. Because of the economic and social data presented below in more detail, reviewing the 20-mile service area associated with this campus independently would provide for a more accurate representation of the location. The distance between the Tehachapi and at Edwards AFB locations, is another reason why the Tehachapi Campus is being viewed as a sub-region to the East Kern Educational Center. Both of the service areas examined do not overlap to allow each location and its surrounding area to be reviewed independently. The ESA for the Tehachapi Campus is shown at the right.



Source: ESRI

Characteristics of the ESA

Demographic Profile

The ESA has a 2016 population of 41,714 and projected to grow to 43,453 by 2021. For reference, in 2010 the area had a population base of 41,247. The ESA is growing at an annual rate of 0.82%, while positive; growth will be minimal over the next 5 years. The average household size has slightly increased since 2010 when it was at 2.62 to 2.65 for 2016 and projected to rise to 2.67 in 2021. The average household is smaller than both the County, 3.21 and the State with 2.93 for 2016. The 2016 median age is 40.2 and is expected to become only slightly older to 40.5 by 2021. The median household income for 2016 was $54,963 and is projected to be $57,035 by 2021. The Tehachapi Campus ESA 2016 unemployment rate is 7.2%. Comparatively, this number is higher than both the State's unemployment rate of 5.2% and the Nation's unemployment rate of 4.7% for the same year.

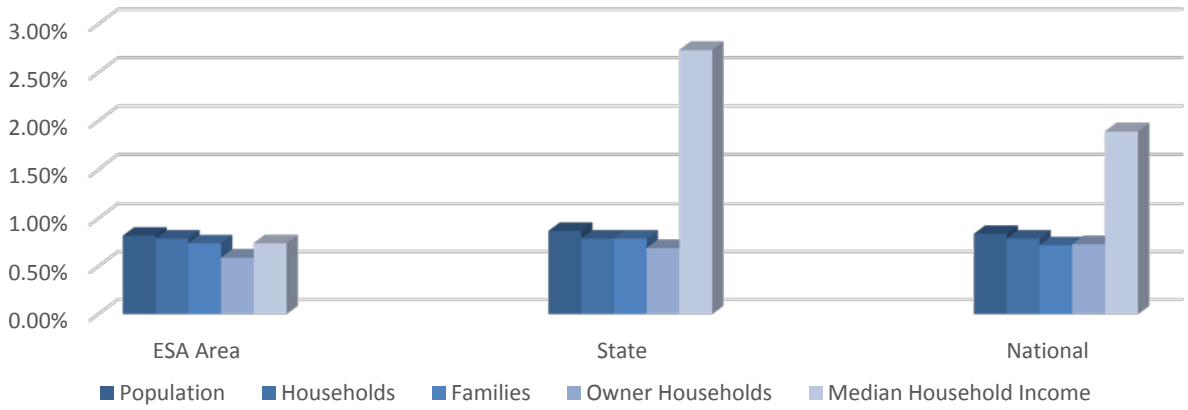
DEMOGRAPHIC PROFILE
TEHACHAPI CAMPUS: 20 MILE SERVICE AREA

Summary	2010	2016	2021
Population	41,247	41,714	43,453
Households	13,453	13,816	14,368
Families	9,641	9,858	10,227
Average Household Size	2.62	2.65	2.67
Owner Occupied Housing Units	59.3%	57.1%	56.5%
Renter Occupied Housing Units	24.6%	26.2%	26.7%
Median Age	39.4	40.2	40.5

Trends: 2016-2021 Annual Rate	Area	State	National
Population	0.82%	0.87%	0.84%
Households	0.79%	0.79%	0.79%
Families	0.74%	0.79%	0.72%
Owner Households	0.59%	0.69%	0.73%
Median Household Income	0.74%	2.73%	1.89%

Source: ESRI

Tehachapi Campus ESA: State and National Comparisons (2016)



Source: ESRI

Households by Income

For 2016, the table below illustrates that 44.8% of the Tehachapi Campus ESA has household incomes less than $50,000 per year. Also, for 2016, 10.3% of the ESA households made $150,000+ per year. However, the per capita income for the ESA is projected to increase. In 2016 the per capita income was $26,685, with a 2021 increase projected to be $28,875. The composite of financial indicators for the Tehachapi Campus ESA are stronger and more positive than found in the remaining East Kern Valley ESA.

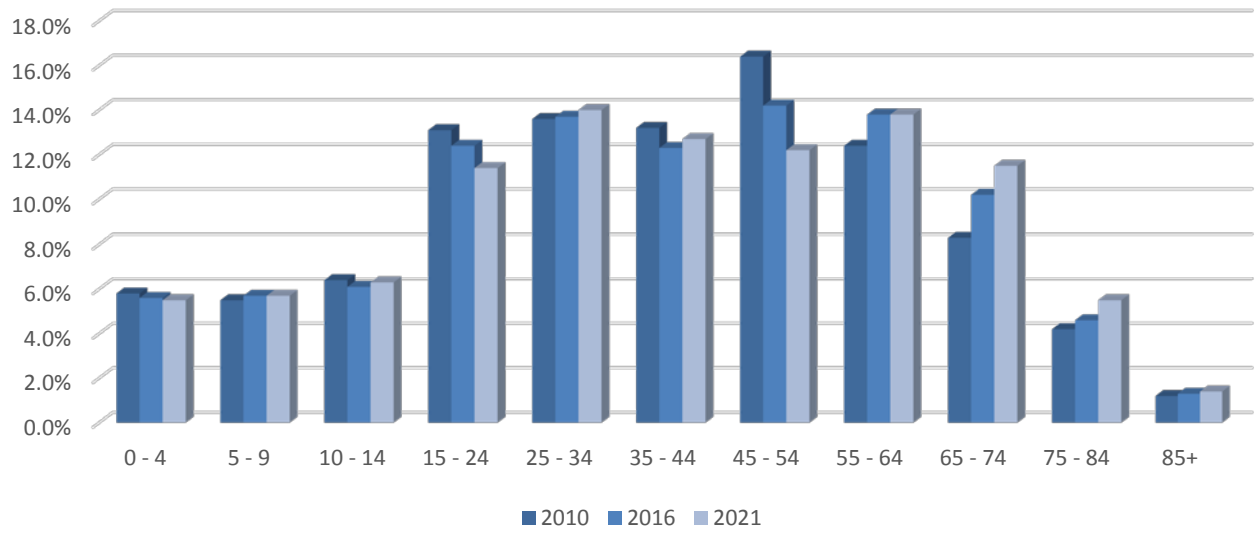
INCOME PROFILE EAST KERN VALLEY EDUCATIONAL CENTER – TEHACAHPI: 20 MILE SERVICE AREA	2016		2021	
Households by Income	Number	Percent	Number	Percent
<$15,000	1,732	12.5%	1,999	13.9%
$15,000 - $24,999	1,151	8.3%	1,018	7.1%
$25,000 - $34,999	1,514	11.0%	1,490	10.4%
$35,000 - $49,999	1,795	13.0%	1,980	13.8%
$50,000 - $74,999	2,624	19.0%	1,953	13.6%
$75,000 - $99,999	1,489	10.8%	1,731	12.0%
$100,000 - $149,999	2,085	15.1%	2,469	17.2%
$150,000 - $199,999	694	5.0%	839	5.8%
$200,000+	730	5.3%	887	6.2%
Median Household Income	$54,963		$57,035	
Average Household Income	$77,749		$84,635	
Per Capita Income	$26,685		$28,875	

Source: ESRI

Age Segmentation

The Tehachapi Campus ESA age segmentation is provided in the graph below.

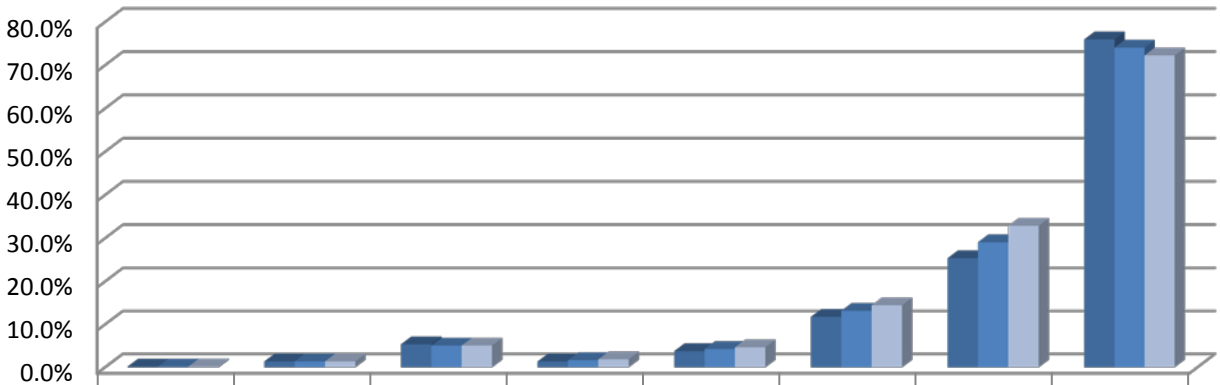
Tehachapi Campus ESA: Population by Age



Source: ESRI

The 2016 Tehachapi Campus ESA population data indicated that 44.1% of the population is 45+ years of age. Historical data provides that this percentage has increased, since 2010 in which 42.5% of the ESA population was 45+ years of age. Similarly, this percentage is set to increase by 0.3%, with 2021 projected to be 44.4% for the same age segment. Conversely, the "up-and-comer" age groups (0-14 years) make up 17.4% of the ESA population for 2016. This age segment will slightly increase to 17.5% by 2021.

Tehachapi Campus ESA: Race/Ethnicity Distribution



	Pacific Islander	American Indian	African American	Asian	Two or More Races	Some Other Race	Hispanic Orgin	White
2010	0.2%	1.4%	5.4%	1.4%	3.8%	11.8%	25.4%	76.0%
2016	0.2%	1.4%	5.1%	1.7%	4.3%	13.2%	29.1%	74.1%
2021	0.2%	1.4%	5.1%	1.9%	4.7%	14.5%	32.9%	72.3%

For the Tehachapi Campus ESA, the age group that represents the largest "college-going" group is projected to decrease. Based on the 2016 data for the ESA, 12.4% of this population is made up of the age segment of 15-24-year-olds. The number is projected to decrease to 11.4% by 2021.

Ethnicity Segmentation

The ethnicity composition for the Tehachapi Campus ESA is illustrated in the graph below.

Tehachapi Center ESA: Race/Ethnicity Distribution

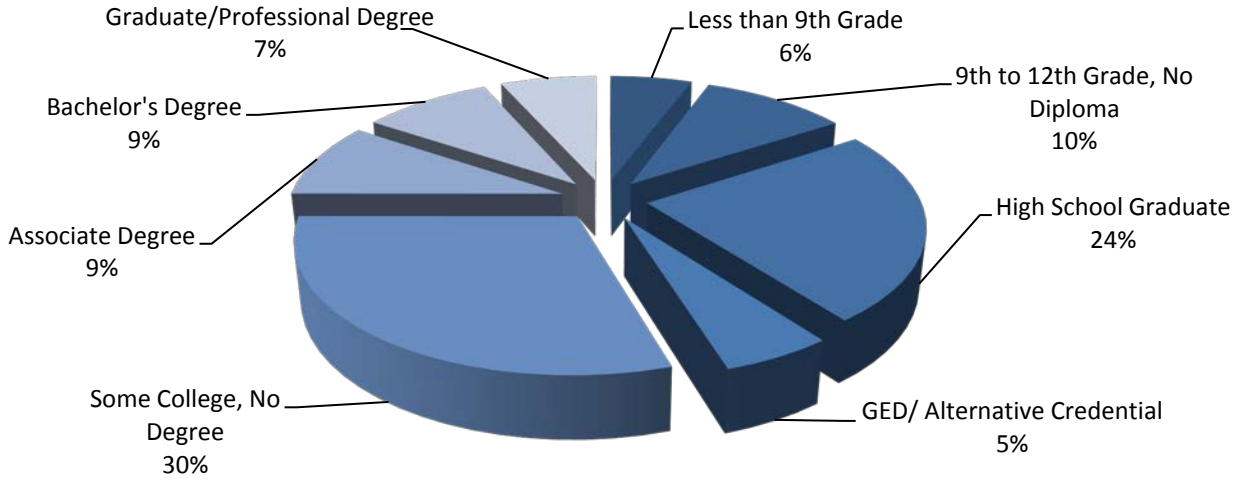
Source: ESRI

For 2016, the majority of the Tehachapi Campus ESA ethnic/race population is White with 74.1%. The percentage is forecasted to drop by -1.8% to 72.3% by 2021. The next largest ethnic population is the Hispanic population with 29.1% for the same timeframe. The African American population is the fourth largest percentage at 5.1% and is projected remain the same for 2021. The other ethnic groups combined comprise a very small percentage of the remaining ESA's population at 7.3% for 2016.

Levels of Educational Attainment

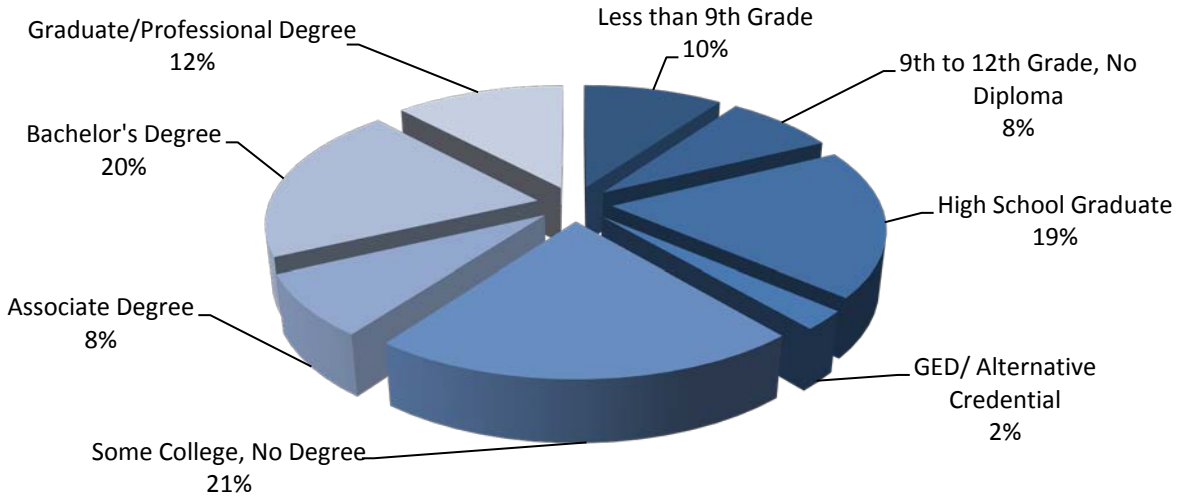
The next section assessed was the East Kern Center ESA's level of educational attainment for individuals 25+ years. The data reveals an outlook of what the Center can expect relative to the area's value for education. 2016 data for ESA shows a higher percentage of high school graduates, at 23.8%, than the statewide average of 19%. If the individuals that have attended some college but have not achieved a degree are combined with those that have completed their GED (or equivalent), graduated high school, earned an Associate's or Bachelor's Degree there is roughly 77% percent of the population that may be interested in and able to enroll at the Center. Below is a comparison of the level of educational attainment of the Center's ESA and the State.

Tehachapi Campus ESA: Educational Attainment (2016)



Source: ESRI

Statewide Averages: Educational Attainment (2016)



Source: ESRI

K-12 Partnerships and High School Graduation Rates

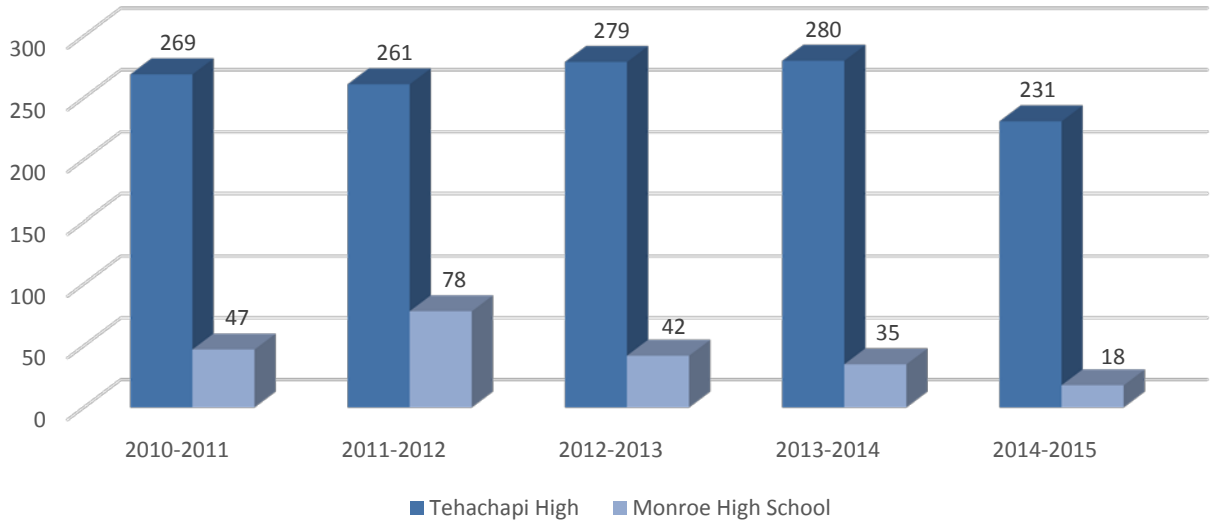
Another important element of the External Environmental Scan that will impact the Center, going forward is the rate at which high schools successfully graduate students. Continuing strong K-12 partnerships is crucial for the Tehachapi Campus ESA.

Tehachapi Campus ESA: High School Enrollments (2014-2015)

High School(s) in Tehachapi Campus ESA	Total High School Enrollments
Tehachapi High	1,237
Heritage Oak School (Private)	16
Monroe High	117

Source: California Department of Education; analysis MAAS Companies

Tehachapi Campus ESA: High School Graduation Rates



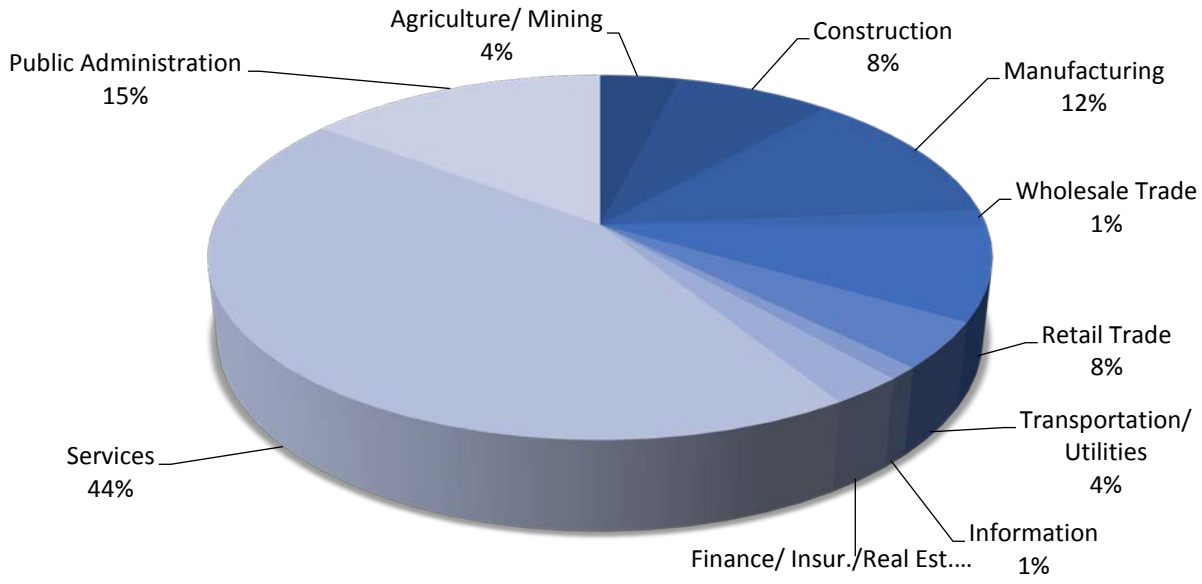
Source: California Department of Education; analysis MAAS Companies

Tehachapi High School is the largest high school in the External Service Area's 20-mile radius that provides students to the Center. However, it is not the only school located in the larger geographic area of the Center. Tehachapi High had a 2014-2015 graduating class of 231 graduates. This number is lower than the 2013-2014 academic year of 280 graduates. As a whole, this number is lower than the previous five years. For the 2014-2015 academic school year Monroe High School had a graduating class of 18 students. This number is down from previous years.

Workforce, Employment and Opportunities within the Tehachapi Campus Sphere of Influence

Data available for the ESA relative to the workforce and employment opportunities shows a workforce of 15,036 individuals. For 2016, employment is led by the industry sectors of Service with 44.1%, Public Administration (Government) with 14.7%, Manufacturing at 12.1%, Retail Trade at 8.3%, and Construction at 7.6%. The three industries of Services, Public Administration and Manufacturing reflect the economic drivers for the service area of the ESA 2016 employed population age 16+ by industry.

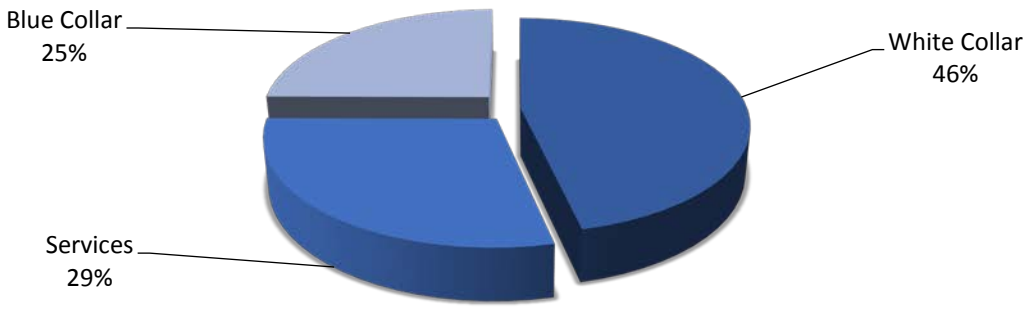
Tehachapi Campus ESA: Employed Population by Industry 16+ Years of Age (2016)



Source: ESRI

The White-Collar sector illustrated below accounts for most of the employed population 16+ by occupation for 2016, with 46.4%. The next largest sector is Services with 28.7%, followed by Blue Collar occupations with 24.9% in the Tehachapi Campus ESA.

Tehachapi Campus ESA: Employed Population by Occupation 16+ Years of Age (2016)



Source: ESRI

Types of Industries within the Tehachapi Campus Sphere of Influence

Tehachapi Campus ESA: Top 25 Fastest Growing Industries

1. Home Health Care Services
2. Utility System Construction
3. Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
4. Electronic Shopping and Mail-Order Houses
5. Offices of Other Health Practitioners
6. Outpatient Care Centers
7. Other Ambulatory Health Care Services
8. Other Financial Investment Activities
9. Other Transit and Ground Passenger Transportation
10. Medical and Diagnostic Laboratories
11. Other General Merchandise Stores
12. Used Merchandise Stores

13. Other Heavy and Civil Engineering Construction
14. Management, Scientific, and Technical Consulting Services
15. Software Publishers
16. Activities Related to Real Estate
17. Wholesale Electronic Markets and Agents and Brokers
18. Sporting Goods, Hobby, and Musical Instrument Stores
19. Pipeline Transportation of Crude Oil
20. Facilities Support Services
21. Educational Support Services
22. RV (Recreational Vehicle) Parks and Recreational Camps
23. Computer Systems Design and Related Services
24. Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities
25. Offices of Physicians

Source: Kern Economic Development Corporation (KERNEDC)

Tehachapi Campus ESA: Top 25 Fastest Growing Occupations

1. Wind Turbine Service Technicians
2. Occupational Therapy Assistants
3. Physical Therapist Assistants
4. Physical Therapist Aides
5. Occupational Therapy Aides
6. Physical Therapists
7. Ambulance Drivers and Attendants, Except Emergency Medical Technicians
8. Audiologists
9. Massage Therapists
10. Home Health Aides
11. Nurse Practitioners
12. Ophthalmic Medical Technicians
13. Therapists, All Other
14. Opticians, Dispensing
15. Web Developers
16. Cartographers and Photogrammetrists
17. Forensic Science Technicians
18. Optometrists
19. Occupational Therapists
20. Emergency Medical Technicians and Paramedics
21. Statisticians
22. Chiropractors
23. Anesthesiologists
24. Diagnostic Medical Sonographers
25. Athletic Trainers

Source: Kern Economic Development Corporation (KERNEDC)

Employment Outlook

The section below represents the key employers for the Tehachapi area. The list below includes employers such as California Correctional Institution which is at the top of the list employing 1,911. Others included in this list are Tehachapi Unified School District, Tehachapi Hospital, Lehigh SW Cement Company and others. Thirteen of the key employers are captured in the table provided below.

Key Employers: Tehachapi Area

Employer	Employees	Product/Service
California Correctional Institution	**1,911**	**State Prison**
Tehachapi Unified School District	**464**	**Education**
Tehachapi Hospital (Full Time/Part Time)	**175**	**Medical Care**
Lehigh SW Cement Company	**120**	**Cement Production**
Home Depo (FT/PT)	**115**	**Retail**
Albertson's	**112**	**Retail**
Big K Mart	**107**	**Retail**

Benz Sanitation	**70**	**Waste Haulers**
Save Mart Supermarkets	**65**	**Retail**
City of Tehachapi (FT/PT)	**58**	**Government**
Terra-Gen Power, LLC	**54**	**Wind Energy**
Selecta Products Inc.	**45**	**Specialty Switches**
Chemtool, Inc.	**39**	**Specialty Lubricants**

Source: Greater Tehachapi Chamber of Commerce

According to the Kern Economic Development Corporation, over the next 10 years, employment in Tehachapi Campus ESA is projected to expand by 1,086 jobs. The fastest growing sector in the region is expected to be Health Care and Social Assistance with a +2.1% year-over-year rate of growth. The strongest forecast by number of jobs over this period is expected for Health and Social Assistance (+181 jobs), Accommodations and Food Services (+155 jobs) and Educational Services (+135 jobs).

At a community forum offered by the college on Thursday, October 20, 2018, to present and get feedback on the draft educational master plan, it was noted by community members that the recent contract award to Northrup Grumman was likely to generate 7,000 jobs. Although this work is situated in Antelope Valley, attendees thought it would directly benefit Tehachapi, as a portion of that workforce is expected to live in Tehachapi and commute. It was noted that as much as 68% of the community works outside of Tehachapi. In addition, attendees noticed that World Wind Solar was missing from the list of key employers above, employing as many as 200 employees.

Tapestry Segmentation for the ESA

The top three (3) Tapestry segmentations for the Tehachapi Campus "effective service" area are: (1) Exurbanites, (2) Comfortable Empty Nesters and (3) Middleburg.

1) **"Exurbanites"** are now approaching retirement but showing few signs of slowing down. They are active in their communities, generous in their donations, and seasoned travelers. They take advantage of their proximity to large metropolitan centers to support the arts, but prefer a more expansive home style in less crowded neighborhoods. They have cultivated a lifestyle that is both affluent and urbane.

2) **"Comfortable Empty Nesters"** is a large, growing, segment of older residents with more than half of all householders aged 55 or older; many still live in the suburbs where they grew up. Most are professionals working in government, health care, or manufacturing. These Baby Boomers are earning a comfortable living and benefiting from years of prudent investing and saving. Their net worth is well above average (Index 363). Many are enjoying the transition from child rearing to retirement. They value their health and financial well-being.

3) **"Middleburg"** neighborhoods transformed from the easy pace of country living to semirural subdivisions in the last decade, when the housing boom reached out. Residents are conservative, family-oriented consumers. Still more country than rock and roll, they are thrifty but willing to carry some debt and are already investing in their futures. They rely on their smartphones and mobile devices to stay in touch and pride themselves on their expertise. They prefer to buy American and travel in the US. This market is younger but growing in size and assets

Source: ESRI

Observations for the ESA

The Tehachapi Campus is perhaps the fastest growing Cerro Coso Community College Center. As mentioned above, the City of Tehachapi is the 10th fastest growing retail market in the state of California. This is most certainly a positive economic indicator for the Center and for Cerro Coso Community College as a whole. The city is also home to one of the world's largest producers of wind-generated electricity. The Tehachapi Campus ESA 2016 population is 41,714 and growing to 43,453 for 2021. In general, this Center has the most progressive and substantial financial indicators than the other East Kern Valley ESA.

- Wide range of economic opportunities
- Correctional facilities opportunities
- Geothermal companies have been established in East Kern County for over a decade
- Tehachapi is home to California's largest, single wind-energy source operates 700+ mega-watt producing turbines that support the power grid
- Center's service area is closer to Antelope Valley College (51 miles) than Ridgecrest campus (72 miles)

Summary

The Tehachapi Campus had previously been under the direction of Bakersfield College until recently when the Kern CCD made the decision to have the site become part of the newly configured East Kern Center and the responsibility of Cerro Coso Community College. The East Kern Center area that includes the Tehachapi Campus is the most diverse in terms of industries, population, economic and social ranges and has a diverse employment base that ranges from both the public and private sectors. The Tehachapi Campus serves a prosperous financial area that benefit from a consistent level of growth and positive economic indicators that will provide a strong foundation for the continued success of the campus in the future. Local business and industries in the area continue to grow and provide opportunities, including the correctional facility, energy companies and the area of agriculture. The Tehachapi Campus provides a curriculum of general education and provides tele-conference with the other facilities and curriculum opportunities within Cerro Coso Community College. This is valuable because of the geographic distance between campuses / centers. For example, the Tehachapi Campus is closer to Antelope Valley College than the campus at Ridgecrest.

Kern River Valley Campus

Overview

The Kern River Valley/Lake Isabella (KRV) Campus is located just south of the Sierra Nevada range. The campus serves the communities of Lake Isabella, Weldon, Kernville, and Wofford Heights. In the fall of 1986, Cerro Coso provided its first complete schedule of classes in Kern River Valley. Kernville Elementary School, Kern Valley High School, and Camp Owens Facilities were the sites for these first classes. The old Senior Citizen Center was the first office in which Cerro Coso utilized in Lake Isabella.

The Lake Isabella Campus affords its students a wide range of economically relevant courses. These programs include Child Development, Vocational Nursing, Medical Assisting, Psychology, Administrative of Justice, and Emergency Medical Technician. According to the Campus' 2011 Community report, there are several Campus goals that are worthy of mention. For example, the Campus is committed to providing their community with educational opportunities, workforce development, and transfer programs. In align with this goal; the Campus has partnerships with their local high school, Kern Valley High, Kern Valley Healthcare District and CCCC. Also, the Campus is dedicated to improving the services for the underprepared student and increase their success rate. Another significant goal is the Campus' identification and implementation of principles for effective communication in support of the College's mission. To support this goal, the Campus established an emergency alert system, CC Alert. CC Alert's function is to alert and protect lives and property, as well as delivers relevant information to students, staff, and faculty via text messages, e-mail and voice messages. The Campus is also actively involved in the community. To illustrate, students, staff, and faculty participate in various events such as the Kern River Valley Hospital Foundation Heart Walk, Kern River Valley Green Festival, and Kern River Valley Whiskey Flat Days.

The Geographic Area Served

Lake Isabella

The city of Lake Isabella is considered one of California's best-kept secret. With over 11,000 surface acres, Lake Isabella is one of Southern California's Largest Reservoirs. Lake Isabella is southeast of Keyesville, 35 miles northeast of Bakersfield and 6 miles south of Wofford Heights. The elevation for Lake Isabella ranges from 2,500 to 2,600 feet. The economy for Kern River Valley/ Lake Isabella area is closely connected to that of leisure and tourism activities. Tourism alone plays a major role in the community's economy. Robust with activities such as camping, picnicking, windsurfing, boating, skiing, and fishing make for frequent pastimes for the residents and tourist in the area. Lake Isabella is the home of one the largest trout derbies, the Lake Isabella Fishing Derby. The area is also known for its annual *Whiskey Flat Days*, which is one of California's largest Wild West celebrations. In close proximity to Los Angeles and Bakersfield, Lake Isabella provides one of the best fresh-water recreation experiences year around.

In the News

In June of 2016, the Lake Isabella community experienced a catastrophic fire. Approximately 30,000 acres burned in Erskine in Lake Isabella. Unfortunately, this fire claimed the lives of 2 and destroyed around 100 structures and threatened 1,500 more. Governor Brown issued a state of emergency for the area for this wind-driven out-of-control fire. Evacuations centers were opened at the Kernville Elementary School and the Red Cross of Kern County opened another evacuation center at St. Jude's Catholic Church in Wofford Heights. This devastating event will have a lingering effect on the Lake Isabella community.

Source: Lake Isabella, Cerro Coso Community College, Kern Valley, 23 ABC, Kern Global Empire, KTLA 5 websites and Kern River Valley, South Kern Report to the Community 2011

Recent news has provided a more positive outlook for the Lake Isabella area. For example, in a recent news article, Lake Isabella water levels have hit a record high. These waters are now above 250,000-acre feet, sitting at 251,748-acre feet. As of this February 2017, Lake Isabella's water levels raised approximately 25,000-acre feet in 2 days. This occurrence is quite a surprise to Kern County residents. A poignant fact of this article is that "it has been seven years since the river has been this full." However, the strong flow of water has produced some concerns, as there have been closures, mudslides, rock slides and recuses caused by flooding. Nevertheless, "the extra water is just an added benefit." This fact could not be truer in light of the June 2016 fire.

There is, however, yet another concern of fixing the long-needed dam. In a recent article from February 2017, just days after the rising of flood waters article, concerns of Lake Isabella's dam is of great significance. Although drought conditions are drastically improving, water is quickly filling Lake Isabella, putting more pressure on the dam." On a positive note, experts do not see these rising waters as posing a threat, and construction of the dam is expected to be completed by 2022. In light of recent news, the Kern Valley /Lake Isabella area a great recreational area that is seeing a resurgence of tourism that will have positive effects for the future of the Campus and the community.

Effective Service Area (ESA)

The Lake Isabella Campus "effective service area" ESA is the area that serves the students that attend the Lake Isabella Campus.

The Lake Isabella Campus ESA is the unique boundary established with its distinct demographic and economic factors. These factors are specific to the KRV campus. The scope of the Lake Isabella Campus ESA analysis recognized that a 20-mile radius was best for gathering the most accurate information that was relevant to the Lake Isabella Campus. This allowed for the collection of the most comprehensive and pertinent data. The 20-mile ESA was characterized by using an address from the most western region of the city of Onyx as the point of reference. This determined service area allowed for capturing all the areas that the Lake Isabella Campus serves

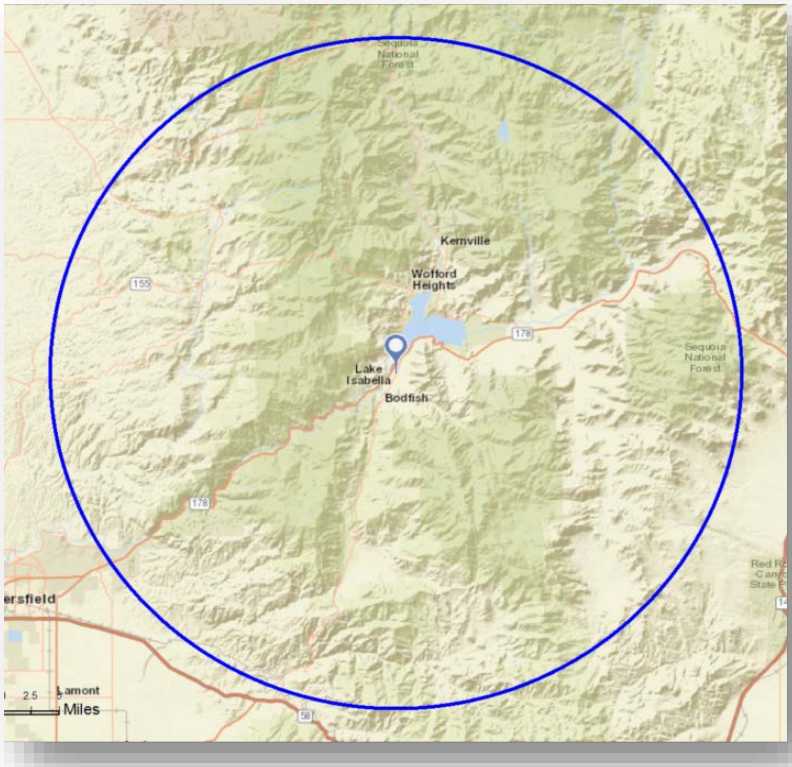
(i.e. Lake Isabella, Weldon, Kernville and Wofford Heights). This also ensured that the Lake Isabella Campus ESA was not too close in proximity to the city of Bakersfield. This in turn, prevented any overlapping of service areas for the city of Bakersfield. The ESA for Lake Isabella Campus is represented on the map to the right.

Source: ESRI

Characteristics of the ESA

Demographic Profile

The Lake Isabella Campus ESA had a 2016 population of 15,566. By 2021, this figure is projected to grow to 16,239. In 2010, the Lake Isabella Campus ESA had a population base of 14,920. The Lake Isabella Campus ESA is growing at an annual rate of 0.85%. This growth rate of 0.85% is one of the highest amongst all of the Cerro Coso Community College sites. Since 2010, the average household size of 2.11 has slightly increased. In 2016 this figure was 2.13 and is projected to be 2.14 by 2021. The 2016 average household size was smaller than both the County with 3.21 and the State with 2.93.



Compared with the other Campuses and Centers, the Lake Isabella Campus ESA has a noticeably older population base. To illustrate, the KRV ESA 2016 median age of 55.2, is projected to increase by 2021 to 57.5. The noticeable older population for the KRV ESA could be indicative of the fact that the area is a tourist and retirement community.

The median household income is projected to decrease during 2016-2021 in terms of absolute values. The Lake Isabella Campus ESA median household income for 2016 was $35,132. By 2021, this number is projected to decline to $32,762. In relative values, this is a -7.23% drop in this ESA's median household income. The decline should be of concern for the KRV campus, but should not cause alarm. This reduction is plausibly the result of the retirement segment in the KRV ESA. Reasonably, this segment of the population usually has a reduction in incomes. Likewise, the 2016 unemployment rate is high at 9.7%. The Lake Isabella Campus ESA's 2016 unemployment percentage is higher than both the statewide average of 5.2% and the National average of 4.7%. Conversely, the unemployment percentage for the ESA is slightly lower than Kern County's 2016 9.9%.

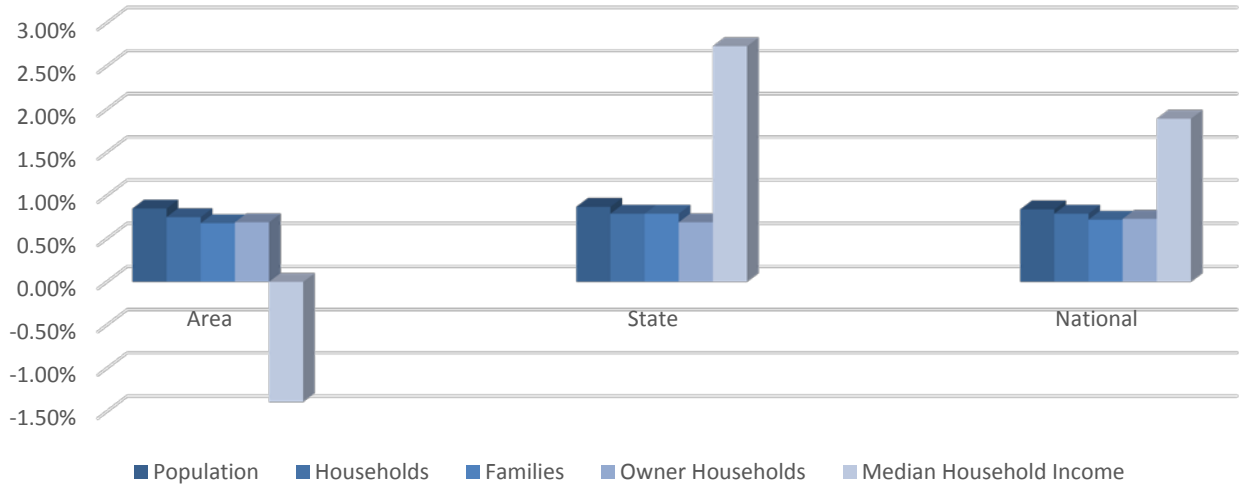
DEMOGRAPHIC PROFILE KERN RIVER VALLEY/LAKE ISABELLA: 20 MILE SERVICE AREA			
Summary	**2010**	**2016**	**2021**
Population	14,920	15,566	16,239
Households	7,050	7,292	7,569
Families	4,058	4,169	4,313
Average Household Size	2.11	2.13	2.14
Owner Occupied Housing Units	49.8%	48.1%	47.8%
Renter Occupied Housing Units	18.1%	19.7%	19.8%
Median Age	52.5	55.2	57.5

Trends: 2016-2021 Annual Rate	Area	State	National
Population	0.85%	0.87%	0.84%
Households	0.75%	0.79%	0.79%
Families	0.68%	0.79%	0.72%
Owner Households	0.69%	0.69%	0.73%
Median Household Income	-1.39%	2.73%	1.89%

Source: Source: ESRI; analysis MAAS Companies

On the following page is a visual graph of the State and National Comparison from table above:

Lake Isabella Campus ESA: State and National Comparisons (2016)



Source: Source: ESRI; analysis MAAS Companies

Households by Income

A scan of the income segmentation of the Lake Isabella Campus ESA's provides the following:

INCOME PROFILE KERN RIVER VALLEY LAKE ISABELLA: 20 MILE SERVICE AREA				
	2016		2021	
Households by Income	Number	Percent	Number	Percent
<$15,000	1,609	22.1%	1,879	24.8%
$15,000 - $24,999	1,124	15.4%	1,004	13.3%
$25,000 - $34,999	897	12.3%	1,094	14.5%
$35,000 - $49,999	1,214	16.6%	1,275	16.8%
$50,000 - $74,999	1,052	14.4%	800	10.6%
$75,000 - $99,999	455	6.2%	482	6.4%
$100,000 - $149,999	586	8.0%	592	7.8%
$150,000 - $199,999	234	3.2%	306	4.0%
$200,000+	120	1.6%	137	1.8%
Median Household Income	$35,132		$32,762	
Average Household Income	$51,068		$52,419	
Per Capita Income	$24,055		$24,552	

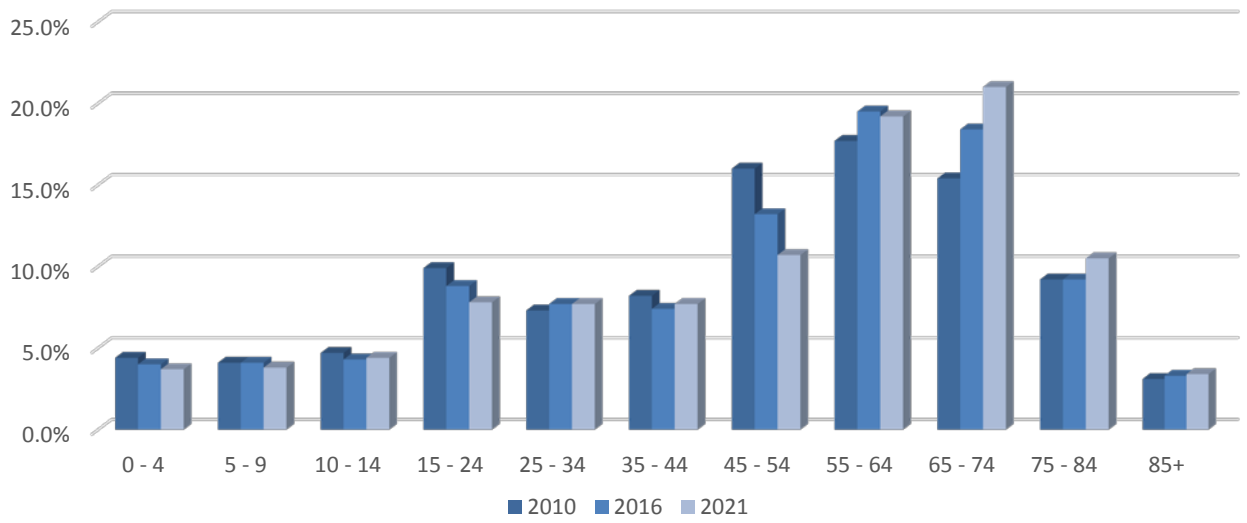
Source: Source: ESRI; analysis MAAS Companies

For 2016, the table above exhibits that 66.4% of the Lake Isabella Campus ESA had household incomes less than $50,000 per year. Additionally, for the same timeframe, only 4.8% of the Lake Isabella Campus ESA households make $150,000+ per year. For 2016, the per capita income was $24,055. On a positive note, the per capita income for the ESA is projected to increase. By 2021 the Lake Isabella Campus ESA per capita income is projected to reach $24,552.

Age Segmentation

Having a comprehensive view of the age segmentation of the Lake Isabella Campus ESA will enable the Campus to recognize the future strategy and tactics required to serve the Lake Isabella Campus ESA's population base. To reiterate, the Lake Isabella Campus ESA population base is older and this segment is growing. The ESA age segmentation data is provided in the graph below:

Lake Isabella Campus ESA: Population by Age



Source: Source: ESRI; analysis MAAS Companies

For 2016, 63.6% of the Lake Isabella Campus ESA population is 45+ years of age. Historical data shows the number increasing. To illustrate, in 2010 61.4% of the ESA population was 45+ years of age, this is a 2.2% increase. Similarly, this percentage is set to increase by 1.2%, with 2021 projected to be 64.8% for the same age segment. On the other hand, the "up-and-comer" age groups (0-14 years) only make up 12.4% of the ESA population with a raw number of 1,924 for 2016. This age segment is set to decrease to 11.9% of the Lake Isabella Campus ESA population base by 2021.

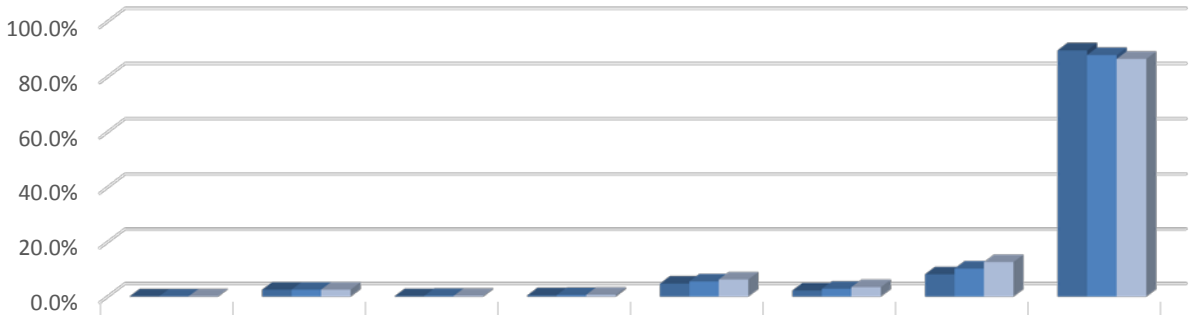
According to the California Community Colleges Chancellor's Office, in 2011-12, "two age categories - 18 to 19 and 20 to 24 - accounted for 61 percent of those enrolled in distance education course." The Chancellor's Office sites that for 2015-2016 the age segment of fewer than 19 years through 24 years of age accounted for 57.54% of the student demographics by age. Comparatively, the Lake Isabella Campus ESA age segments that represent the largest "college-going" group are projected to decline. By 2021 the 15-24 age segment percentage is set to decrease to 7.8% from the 2016 8.8%. The College would need to develop pathways and programs to draw this age segment to the Lake Isabella Campus. Also, because of the large older population base, the Campus would benefit if they would develop creative programs to fully capture the older age segment of the Lake Isabella Campus ESA.

Source: Census Bureau, ESRI, California Community Colleges Chancellor's Office; analysis MAAS Companies

Ethnicity Segmentation

The composition of the Lake Isabella Campus ESA ethnic segmentation is illustrated in the graph below:

Lake Isabella Campus ESA: Race/Ethnicity Distribution



	Pacific Islander	American Indian	African American	Asian	Two or More Races	Some Other Race	Hispanic Orgin	White
2010	0.1%	2.6%	0.2%	0.5%	4.8%	2.3%	8.2%	89.6%
2016	0.1%	2.6%	0.3%	0.6%	5.6%	2.9%	10.3%	87.9%
2021	0.1%	2.6%	0.3%	0.7%	6.3%	3.5%	12.7%	86.5%

*As stated by ESRI, Hispanic Origin may be of any race. Therefore, race and ethnicity percentages will total more than 100%

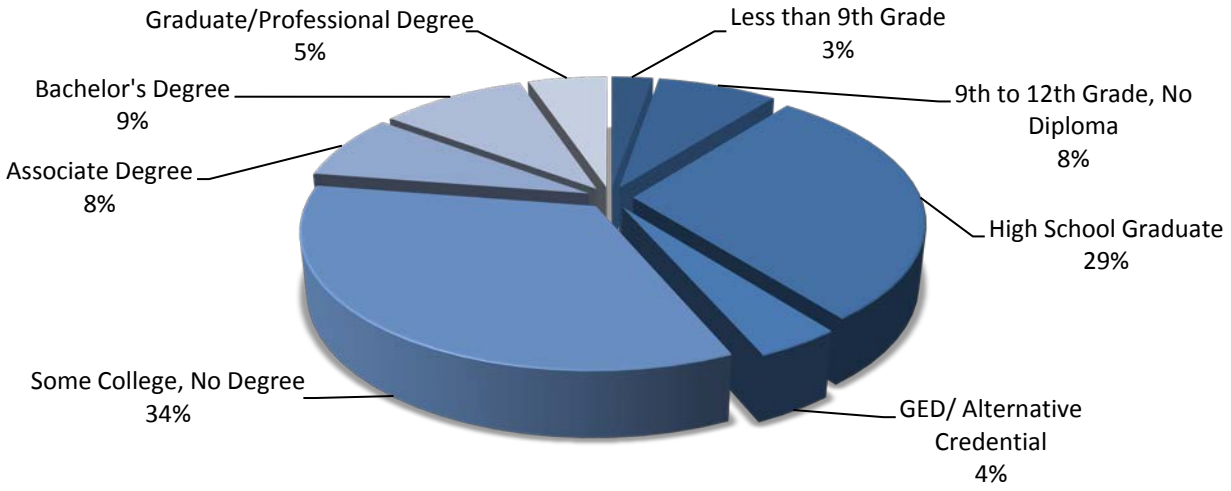
Source: ESRI; analysis MAAS Companies

The data above exemplifies that the Lake Isabella Campus ESA had a 2016 White population that consist of 87.9% of the ESA population base. By 2021 this percentage is forecasted to drop by -1.4% to 86.5%. The next largest ethnic population is the Hispanic population with 10.3% for the same timeframe. The Hispanic race/ethnic segment is projected to increase by 2.4%. The other race/ethnic groups comprise a very small percentage of this ESA's population. For example, for 2016, all other races combined total 12.1% of the Lake Isabella Campus ESA. By 2021 this percentage is projected to increase by 1.4% to 13.5%. The Campus will need to make a conscious effort to reach all ethnic groups. More specifically, as the Hispanic population in the ESA increases, the Campus will need to develop outreach and marketing strategies to serve this segment of the ESA population.

Levels of Educational Attainment

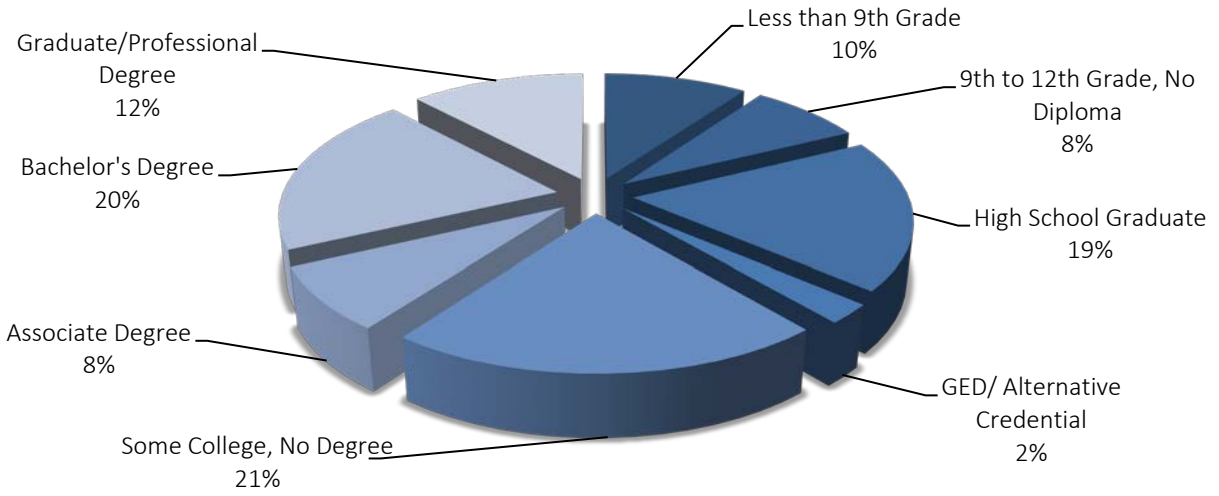
The Lake Isabella Campus ESA's level of educational attainment for individuals 25+ years was evaluated as part of the external environmental scan. Seeking opportunities and possibilities of reaping the benefits of an educated community, or having to assist with rising the higher educational bar of the area should be a great concern for the Campus'. Below are comparisons of the level of educational attainment for the Lake Isabella Campus ESA and the State.

Lake Isabella Campus ESA: Educational Attainment (2016)



Source: ESRI

Statewide Averages: Educational Attainment (2016)



Source: ESRI

The Lake Isabella Campus ESA is characterized by a high *Some College, No Degree* population base. For 2016, the group *Some College, No Degree* in the Lake Isabella Campus ESA constituted 34% of the population. The statewide average was 21% for the same year. In an effort to increase the educational attainment percentage, the College would need to strengthen their partnerships with their local universities. This will, in turn, encourage students to transfer and obtain a higher degree (i.e. a Bachelor's or higher). The Lake Isabella Campus ESA also depicts a high percentage of *High School graduates or lower* segment. To illustrate, for 2016 the *High School graduates or lower* segment accounted for 43.4% of the Lake Isabella Campus ESA population base. A noteworthy segment is the individuals within the *Bachelor's Degree* segment. For 2016, 9.6% of the Lake Isabella Campus ESA population has a Bachelor's Degree. Comparatively, this percentage is higher than the statewide average of 8% for the same timeframe.

Based on the overall percentages for educational attainment for the Lake Isabella ESA, the campus would benefit from finding more ways of encouraging individuals to obtain some college or complete a community college education. In support, the California Chancellor's Office Key Facts states, "Students who earn a degree or

certificate from a California community college nearly double their earnings within three years. Also, attending or graduating from a community college doubles an individual's chance of finding a job compared to those who failed to complete high school."

Source: Environmental Systems Research Institute, California Community College Chancellor's Office

K-12 Partnerships and High School Graduation Rates

The Lake Isabella Campus must cultivate its existing partnership with the high school directly in the Lake Isabella Campus ESA. This is very crucial for the Campus since there is only one high school in the Campus' ESA. Kern Valley High is the one high school in the Kern River Valley ESA that provides students to this Campus. Incorporating strategies to increase the percentage of high school graduates in the ESA will have direct impact for the Lake Isabella Campus growth and future enrollments. Additionally, it will be imperative for the Lake Isabella Campus to attract the under-prepared high school students and high school students who might not otherwise consider a postsecondary education.

Lake Isabella Campus ESA: High School Enrollments (2014-2015)

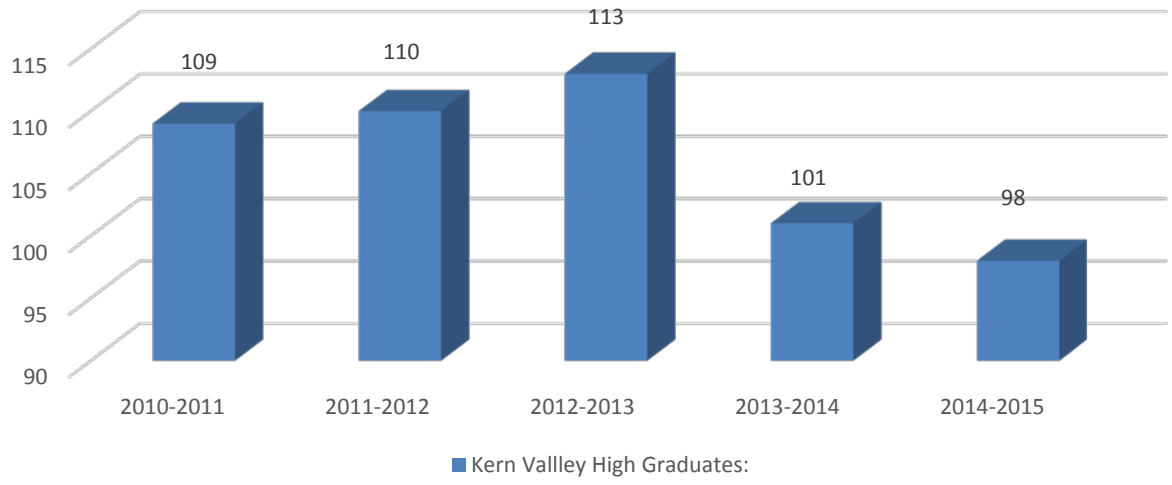
High School(s) in the Lake Isabella ESA	Total High School Enrollments
Kern Valley High	469

Source: U.S. Dept. of Education, National Center for Educational Statistics

For the academic school year 2014-2015, the total enrollment for Kern Valley High School was 496 students. Research revealed that there was one continuation school (Summit Continuation High School) that closed as of 2016 and there was no data available for analysis.

Graduation rates are an essential element that is measured when forecasting the future growth of the Lake Isabella Campus. The graduation rates presented displays the Kern Valley High School graduates in their historical numbers through the 2010-2015 academic years.

Lake Isabella Campus ESA: High School Graduation Rates



Source: California Department of Education; analysis MAAS Companies

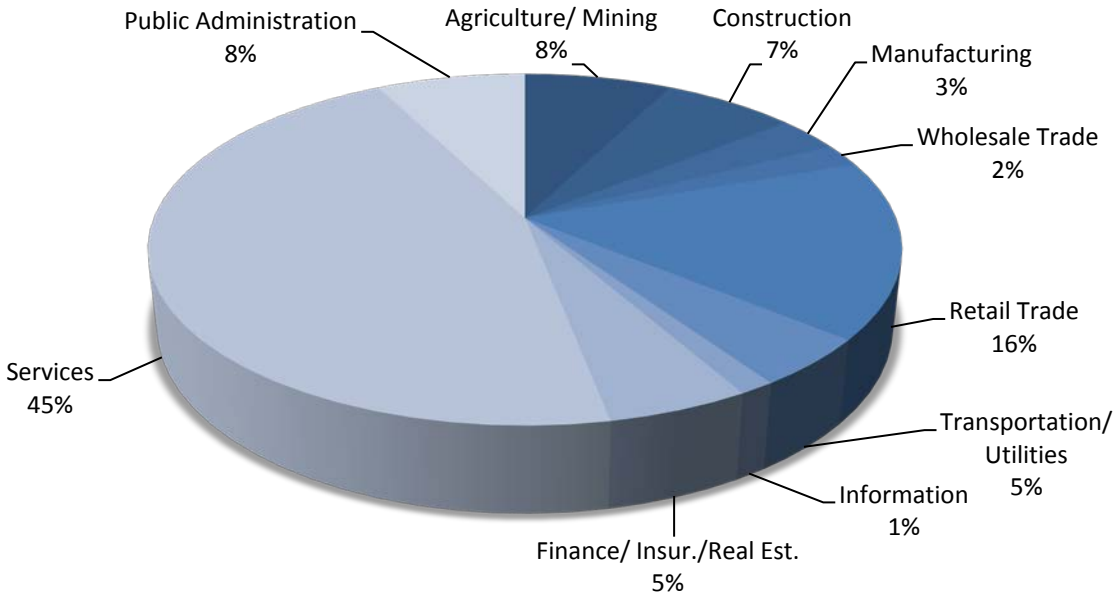
The data above shows a trend of a declining high school graduating class within the Lake Isabella Campus ESA. As of the 2014-2015 academic year, there were only 98 graduating seniors' versus 109 in the 2010-2011 academic school year. The Lake Isabella Campus will need to focus on developing outreach programs that will guarantee the highest percentage of return for students graduating from Kern Valley High School, and electing the Lake Isabella

Campus as their choice for a postsecondary education. These programs would include developing and/or expanding any existing dual enrollment or concurrent enrollment programs. The Campus could also host visits for Kern Valley High School students to further encourage them to enroll at the Campus.

Workforce, Employment and Opportunities within the Lake Isabella Campus Sphere of Influence

Data presented for workforce and employment opportunities reveals an available workforce of 4,173 individuals. See an illustration below of how the workforce is distributed.

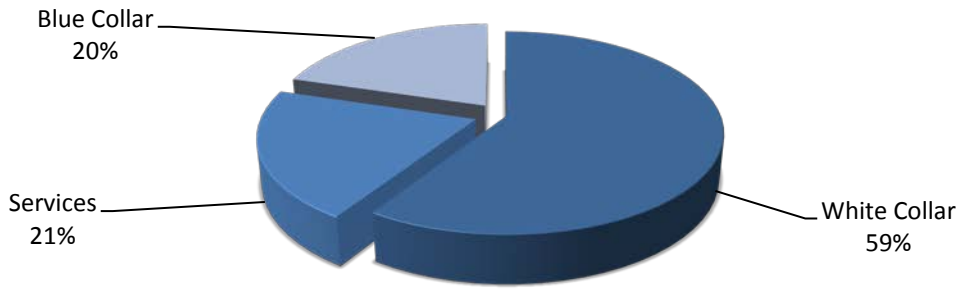
Lake Isabella Campus ESA: Employed Population by Industry 16+ Years of Age (2016)



Source: ESRI

For 2016, employment in the Lake Isabella Campus ESA was led by the industry sector of Services with 45.5%. For the same time period, Retail Trade followed with 16.4% and Public Administration with 7.6%. As a whole, these three industries combined accounted for 69.5% of the Lake Isabella Campus ESA population base.

Lake Isabella Campus ESA: Employed Population by Occupation 16+ Years of Age (2016)



Source: ESRI

For the Lake Isabella Campus ESA, White Collar occupations for 2016 are the largest in the employed population 16+ by Occupation sector with 59.1%. Services occupations accounted for 21% and the Blue-Collar sector accounted for the least with 20% for the same timeframe. It would benefit the Lake Isabella Campus to seek employers in these White Collar and Services occupations and inquire what types of employees they would be

looking to hire. The College could then design courses and student services to fill these employer's needs. According to the KERNEDC, "sectors in the KRV area with the highest average wages per worker are Mining, Quarrying, and Oil and Gas Extraction ($94,065), Utilities ($89,217), and Management of Companies and Enterprises ($83,163)."

Source: ESRI, Kern Economic Development Corporation (KERNEDC)

Types of Industries within the Lake Isabella Campus Sphere of Influence

Lake Isabella ESA: Top 25 Fastest Growing Industries

1. Home Health Care Services
2. Outpatient Care Centers
3. Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
4. Electronic Shopping and Mail-Order Houses
5. Offices of Other Health Practitioners
6. Utility System Construction
7. Other Financial Investment Activities
8. Other Ambulatory Health Care Services
9. Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities
10. Other Transit and Ground Passenger Transportation
11. Medical and Diagnostic Laboratories
12. Other General Merchandise Stores
13. Used Merchandise Stores
14. Other Heavy and Civil Engineering Construction
15. Management, Scientific, and Technical Consulting Services
16. Sporting Goods, Hobby, and Musical Instrument Stores
17. Software Publishers
18. Activities Related to Real Estate
19. Wholesale Electronic Markets and Agents and Brokers
20. Pipeline Transportation of Crude Oil
21. Computer Systems Design and Related Services
22. Facilities Support Services
23. Educational Support Services
24. RV (Recreational Vehicle) Parks and Recreational Camps
25. Offices of Physicians

Source: Kern Economic Development Corporation (KERNEDC)

Lake Isabella ESA: Top 25 Fastest Growing Occupations

1. Occupational Therapy Assistants
2. Physical Therapist Aides
3. Physical Therapist Assistants
4. Statisticians
5. Substance Abuse and Behavioral Disorder Counselors
6. Occupational Therapy Aides
7. Reinforcing Iron and Rebar Workers
8. Physical Therapists
9. Audiologists
10. Massage Therapists
11. Operations Research Analysts
12. Hearing Aid Specialists
13. Home Health Aides
14. Maintenance Workers, Machinery
15. Mental Health and Substance Abuse Social Workers
16. Nurse Practitioners
17. Psychiatric Aides
18. Industrial Machinery Mechanics
19. Web Developers
20. Mental Health Counselors
21. Biomedical Engineers
22. Physician Assistants
23. Therapists, All Other
24. Personal Care Aides
25. Residential Advisors

Source: Kern Economic Development Corporation (KERNEDC)

Employment Outlook

The employers in the next section represent key employers in the Lake Isabella Campus ESA. These groups of employers include companies such as Pathways by Molina, a company that has offices across the U.S., and Southern California Edison. Eight of the key employers are captured in the table provided below.

Key Employers: City of Lake Isabella and Surrounding City

Employer	Location
Kern Valley Healthcare District	Mountain Mesa
Rural Health Clinic	Lake Isabella
Pathways by Molina	Lake Isabella
Southern California Edison	Wofford Heights
Kellogg Company	Lake Isabella
Optimal Health Services	Lake Isabella
Alta One Federal Credit Union	Lake Isabella
L & M Lumber	Lake Isabella

Source: MAAS Research and Analysis

***Kern Valley Healthcare District (KVHD)*:** KVHD is home to Kern Valley Hospital, Rural Health Clinic, and Mesa Clinical Pharmacy. This non-profit organization offers a skilled nursing facility, 24 Acute Care beds, a 3 bed ICU Unit. This employer also provides Radiology, Respiratory, Clinical Lab, Surgery and Physical Therapy Departments. The KVHD is sure to be a continuous asset to the KRV community. The organization will afford the Lake Isabella Campus the opportunity to continue to grow their Nursing Program into the future. This will make possible the unique and valuable opportunity of having home grown nurses that are able to serve the community in which they live.

Source: Kern Valley Healthcare District website

***Pathways by Molina*:** Pathways by Molina, is one of the largest national providers of available, outcome-based behavioral and mental health services. “Pathways offer a full spectrum of social service and behavioral health solutions.” This major employer is sure to be a staple in the Kern River Valley / Lake Isabela area.

Source: Pathways by Molina website

***Southern California Edison*:** This major employer has provided all of Southern California with safe, reliable electricity for over 125 years. Southern California Edison is looking to hire individuals that are bright, dedicated and looking to make a difference in their careers. This employer is sure to be looking for new employees for many years to come.

Source: Southern California Edison website

***Optimal Health Services*:** Optimal Health Services began providing home health care in 1992 and is one of the largest providers of home health in Kings, Kern and Tulare Counties. This employer provides therapy, home nursing, social work and supportive services. “Optimal prides itself on being positive community members and supporting the success of the communities [they] serve wherever possible.”

Source: Optimal Health Services website

***Clinical Management Consultants*:** Clinical Management Consultants is a consulting firm providing Healthcare recruitment to Acute Care Hospitals and Healthcare Companies across the U.S. Clinical Management Consultants also offer Nurse Recruitment software, Executive Search services and Strategic Hospital Management services.

This employer will provide a solid support base for the Healthcare industry in the ESA thus providing jobs for the Kern River Valley and aid the Healthcare industry in the ESA to grow and provide jobs as well.

Source: Clinical Management Consultants website

***Alta One Federal Credit Union*:** Alta One Federal Credit Union has seen consistent growth over the years by focusing on key principals as: wisdom, prudent management, professionalism and strength. This employer has historic ties to Military and will be a secure employer for the region.

Source: Alta One Federal Credit Union website

L & M Lumber Inc.: This major lumber company is located right in the city of Lake Isabella. The company has various departments to serve the Lake Isabella community with all of their building and construction needs. L & M's website provides five online calculators for its customer's projects and planning. L & M Lumber Inc. has worked or partnered with over 25 companies in serving these customers building and construction needs.

Source: L & M Lumber Inc. website

Tapestry Segmentation for the ESA

The top three (3) Tapestry segmentations for the Lake Isabella Campus "effective service" area are: (1) Senior Escapes, (2) Small Town Simplicity and (3) Rural Resort Dwellers.

1) ***"Senior Escapes"*** seek neighborhoods that are highly seasonal yet owner occupied. Most of these dwellings began as seasonal getaways and now serve as primary residences. These areas are heavily concentrated in the warmer states of Arizona, California, and Florida. Over 25% of the population is 65-74 years of age. More than half of the residences draw social security and the labor force participation is low. "Senior Escapes" have conservative political views. This group does not carry a balance on their credit cards; they do their banking in person and spend within their means. "Three-quarters of all homes are owner occupied, and the majority owns their homes free and clear.
2) "*Small Town Simplicity"* includes young families and senior households that are bound by community ties." These residents engage in activities such as scrapbooking, online computer games, and rural actives such as fishing and hunting. Almost 1 in 4 of these households lives below the poverty level. As a result of this, these residents keep their finances modest by avoiding debt and paying bills in person. These neighborhoods consist of 51% owner occupied homes and for those who rent; the average rent is $600. These residents are older with almost half of the families aged 55 years or older. The unemployment rate for this group is higher at 11.9%, and the labor force participation is lower at 51%. "Small Town Simplicity" individuals are community –oriented residents; with more conservative views than middle-of-the-road.
3) *"Rural Resort Dwellers*" prefer communities centered in resort areas. Retirement is close for most of this blue collar, older households, but workers are delaying retirement or returning to work to maintain their current lifestyles. "Rural Resort Dwellers" consist of 42% of these households being married couples. These individuals continue to have jobs in skilled occupations. "Rural Resort Dwellers" spend time with their spouses and also maintain a social calendar."

The sub groups that emerged are representative of a significant share of the ESA population base. However, they are not representative of the entire population base that resides within the ESA.

Source: Environment Systems Research Institute, Tapestry Segmentation

Observations for the ESA

This final section provides a summary of the findings as well as suggestions as it pertains to the future of the Lake Isabella Campus. The Lake Isabella ESA has a small, but diverse, population base that is projected to grow in 2021 by 0.85%. However, for 2016 66.4% of the Lake Isabella Campus ESA has a household income that is less than

$50,000. The majority of the Lake Isabella Campus ESA population is older with 45+ year-olds making up 63.6% of the population for 2016. On a positive note, the ESA is very community oriented. As described in the Kern River Valley & South Kern Report to the Community, the Lake Isabella Campus participates in many community activities and serves the community as a great resource for higher education. It would behoove the campus to maintain its close ties with the community and develop strategies to strengthen these ties. Following are some key observations and some suggestions for the Lake Isabella Campus to consider as it moves forward.

- 45.5% of the Lake Isabella Campus ESA industry is Services related. The Center would need to ensure that there are programs, certificates and degrees in place to train students entering the services occupations.
- Developing stronger connections with their local business and corporations. Looking to major corporations in the Lake Isabella Campus ESA would be the best place for building these connections.
- Develop job fairs with the local community and businesses.
- Create job training programs with the major corporations in the community so students are better prepared to work at these corporations.
- Fostering stronger bonds with the high schools in the Lake Isabella Campus ESA. Expanding the Campus' efforts of implementing concurrent or dual enrollment programs with their local high school is a good way to strengthen the Campus' ties with their local high school and provide growth for the Campus.
- Developing campus programs that support student retention and success. One focus of the Campus is Student Success, so building stronger student focused programs like counseling, mentoring and outreach will ensure that student success remains a top priority for the Lake Isabella Campus.
- Enhance the strong community ties that the Lake Isabella Campus has with its local community. The Center is already actively involved in the community, so continuing this involvement and discovering other opportunities to get involved would be recommended.
- Smaller population base of 15,566. The Campus will need to take advantage of the Lake Isabella Campus ESA's 0.85% growth and create ways for bringing in more students while the area is set for growth.
- The Lake Isabella Campus ESA population base is older with a 2016 median age of 55.2, with a 2021 projection of 57.5
- Median household income for the Lake Isabella Campus ESA for 2016 was $35,132 and is set to decrease by 2021 to $32,762.
- The "up-and-comer" age group of 0-14 years of age is decreasing for the Lake Isabella Campus ESA. For 2016 the percentage of 0-14 ears of age was 12.4%, and for 2021 the projection is 11.9%
- With the overall reduction of budgets and a shortage of resources, the Lake Isabella Campus must remain focused on the success and commitment to educating the students at the Lake Isabella Campus.

Summary

Generally speaking, there is a vast array of opportunities for growth in the Kern River Valley/Lake Isabella community. The Lake Isabella ESA positioned for a trajectory of growth with the areas rebirth of tourism. The Lake Isabella Campus ESA projected 0.85% growth for 2021 will be an added benefit for the Campus. However, the Lake Isabella campus will need to address and combat the various outside environmental challenges that lie ahead. Some of these challenges include a smaller population base that is growing older. The Lake Isabella Campus ESA will also face a median household income that is projected to decline from 2016 $35,132 to 2021 with $32,762. Nevertheless, these challenges should not prevent growth for the Lake Isabella Campus. With the Campus' commitment and passion to serving the underserved, this will bode well for the Lake Isabella Campus and the community. If the Lake Isabella Campus continues to incorporate programs and work pathways specific to the

community, growth will be natural and organic. In turn, this will allow the Campus to thrive and be a greater asset to the community and College as a whole.

Growth and the Future Program of Instruction

The View from the College

Overview

Cerro Coso Community College serves an area of approximately 18,000 square miles. It is the only postsecondary educational institution within this vast area. The College has five campuses (one of which is an on-line campus) that accommodate its population-base. The extreme diversity, both in terms of land mass and distribution of the population, represents a significant challenge for the College. The land area ranges from the desert to the Sierra Nevada Mountains; it touches three of the 58 counties in the state.

The population-base of the College's greater service area is a blend of individuals and families that support the military, the trade industries, commercial/retail operations, the health care industries and tourism and recreation. Overall, the population-base is growing very slowly, at less than 1% per year. In some sectors of the service area, the growth rate is actually regressing. The population-base is characterized as older versus younger. It is home to a significant number of retirees. The younger age segment (0 to 14 years of age) comprises only 12% to 20% of the population-base. While the younger segment is holding steady as a percentage share of the population, it is not increasing. For the foreseeable future, the College will not be able to count on a natural growth spike within the younger age segment of the population. The challenges for Cerro Coso Community College in meeting the demands of its vast service area are many; they are formidable as well.

Approach to Interpreting Data and the Forecasting Process

To capture the educational delivery dynamic employed, the approach to presenting data and perspectives for this section of the Educational Master Plan (i.e. projecting future growth and applying that growth to the future program of instruction) will alternate between the College overall and each of its campuses individually. The goal for data presentation will be to provide both the greater perspective of the College while at the same time providing usable and relevant information that is specific to each of the campuses. Characteristics that are common to all of the campuses will be presented as those of the College; additionally, specific data will be provided for each campus.

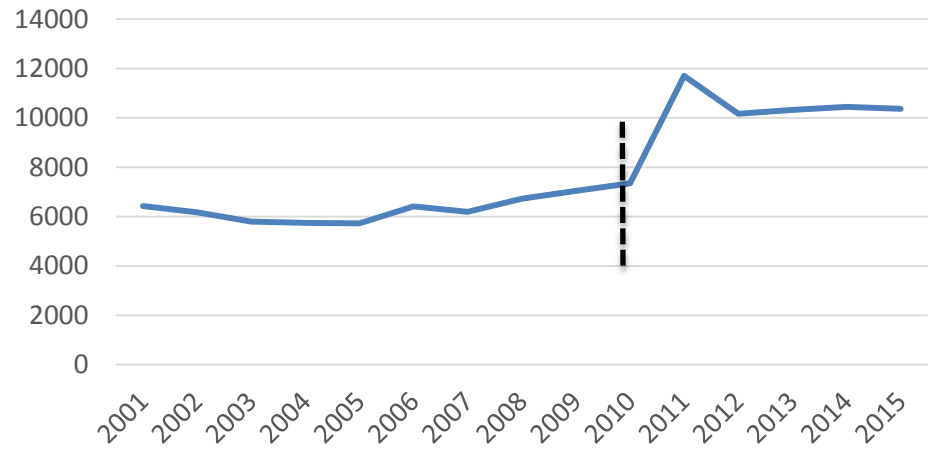
Historical Trends that Will Influence Future Growth

As the College looks to the future, it is always helpful to include a review of the past – i.e. what has occurred historically and, more particularly, what has occurred since the last Educational Master Plan was completed.

Over the past 5-years, there have been some significant changes at Cerro Coso Community College. Student headcount at all of the six locations has generally trended upward while the generation of weekly student contact hours (WSCH) and full time equivalent students (FTES) has trended downward. The decline in the production of WSCH and FTES is a great concern for the College. Aside from the other historical trends that will impact the future of the College, including those identified in the External and Internal Environmental Scans that are part of the Educational Master Plan document, the ability of the College to attract, retain and expand the educational presence of students (i.e. greater course loads) at each of the campuses will be critical for future growth of the College. Because the generation of WSCH is the key element for determining future space needs, the current trends for student enrollment and WSCH stand to have a significant impact on the qualification for space.

The following graphics are presented to help illustrate the changes that have taken place over the past 5-years with regard to student enrollment and WSCH generation. The data gathered represents the College collectively, i.e. it was derived from an assemblage of data from each of the campuses.

Trending Student Enrollments

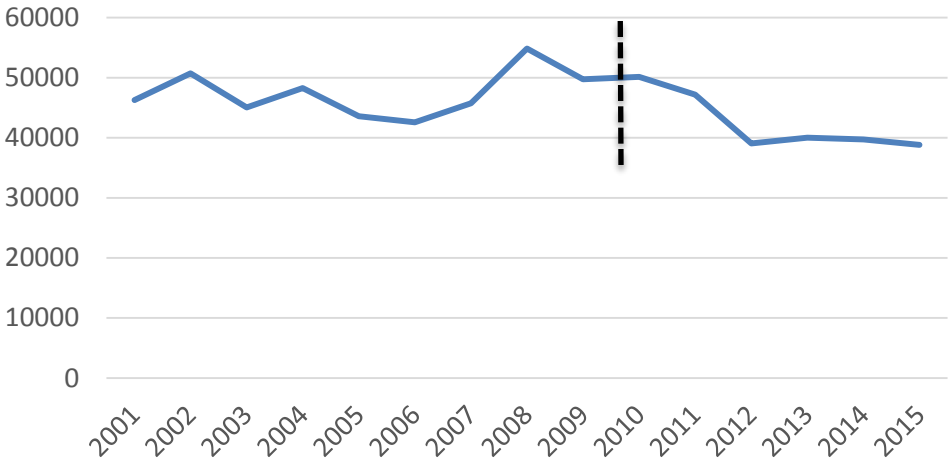


Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The College has seen an uptick in student enrollment, particularly over the past-five years. Starting from a mark of 6,428 in 2001, enrollment growth increased at a steady rate through 2010. It spiked in 2011 to a 15-year high of 11,705 and has maintained, on average, a rate of approximately 10,300 students annually since that time. For 2015, the student enrollment mark was 10,369. The annual percentage rate of growth of 6.85% over the past 5-years is particularly noteworthy.

A look at the measure of WSCH generated over the view period, again from the perspective of the College, finds a trend line that travels in the opposite direction. WSCH have declined significantly over the past several years, and more particularly since year 2010.

Trending WSCH



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

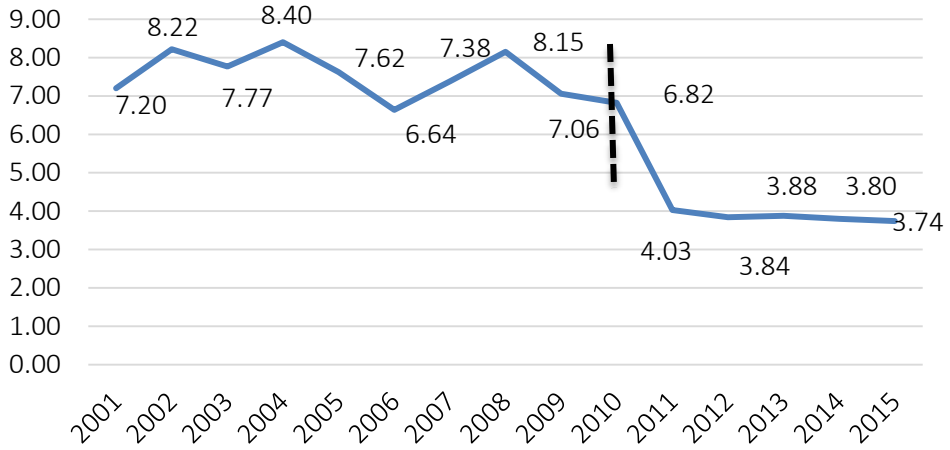
WSCH began at 46,270 in 2001 and declined to 38,829 in 2015. The apex for WSCH was in 2008 when it reached 54,857. It exceeded the 50,000 mark again in 2010 when it registered 50,135. Of particular note, however, has

been the WSCH decline over the past five years, i.e. from in 2010 to 2015. Over that period, the total loss for WSCH was -22.55%. This translates to an annual average decline of -4.51%.

The combined impact of and changes in student enrollment and WSCH trends is most telling when the measure of WSCH generated per enrollment is considered. The dramatic drop in WSCH per enrollment suggest a possible change in the attitudes and / or preferences of students. This trend is not just a Collegewide condition. It is a trend that is prevalent at all of the campuses.

The following graphic presents a perspective on the measure of WSCH per enrollment as a composite for Cerro Coso Community College.

Composite WSCH / Enrollment



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

WSCH per enrollment hit its high point in 2004 when it was 8.40. It exceeded the 8.00 mark again in 2008, when it recorded WSCH per enrollment of 8.15. From 2001 to 2010, WSCH per enrollment averaged 7.53. Since 2010, there has been a steady decline. WSCH per enrollment reached its lowest mark in 2015, when it was 3.74. The data suggest that while more students have been attending the College, they are taking substantially reduced course loads. Currently (year 2015), students attending the campuses of the College are taking, on average, the equivalent of a course load of only 1.25.

Going forward, the College will need to address the measure of WSCH per enrollment if it is to prevail and grow. A cause needs to be determined and an adjustment in the delivery of the program of instruction needs to be considered to move the current trend line in a positive direction. These may include addressing the latter-born millennials who are more driven by communications, media, and digital technologies and are concerned over both their immediate and long-term economic well-being. There may be a changing value for the priority of education within the College's service area. Students graduating from four-year institutions today are averaging $80,000 in school loan debt. While students attending community colleges enjoy a postsecondary education at very reasonable costs, the reality or goal of a postsecondary education may not be as high a priority as it has been in past. On the plus side, the College has a long, storied and successful past of having to adapt and reinvent itself in the way it serves its diverse population base. Addressing falling rates for student course loads will be yet another significant challenge to overcome.

Another change that has occurred since the last Educational Master Plan is the method for delivery of the program of instruction. Collegewide, the delivery of curriculum has moved towards more of a lecture orientated preference and less towards a laboratory orientation. Using 2010 Fall Semester as the baseline for the last Educational Master Plan, the College's ratio of lecture to laboratory time was 64% to 36%. For the 2015 Fall Semester, the baseline for the current Educational Master Plan, that ratio was to 70% to 30%. The State's formulas for space favors laboratory-based WSCH over lecture-based WSCH. Laboratory-based WSCH receives on average three to five

times the allocation for space as compared to lecture-based WSCH. The College's qualification for future space will be impacted by the selected method of curriculum delivery.

With the decline in WSCH production and the change in delivery of the curriculum, the College can expect to see a lesser need for space (as defined by the State Title V guidelines) than it did five years ago, when the last Educational Master Plan (EMP) was completed.

Common Premises for Constructing the Growth Forecasts

While assumptions for future growth relied heavily on the historical trends for the growth of student enrollment and WSCH, it also took into consideration other tangible factors as well as some intangible factors, such as the College's strong track record for adapting to change and meeting challenging situations in a head-on manner. The factors predominantly considered included the following:

1. The population will be growing, but slowly. The College will be able to rely on a population base that is not regressing. While the growth rate will be very slow (under 1%), it will at least be positive.
2. The age segment of 0 to 14 years will maintain its current percentage share of the population. Depending upon location, the population segment 0-14 years represented 12% to 19% of the population in 2016. Projected to the year 2021, the greater College area (all campuses) can expect to have a student pool similar to that which presently exists.
3. Comparable and consistent rates of high school graduation**.** While there is no specific data on the long-range high school graduation rates for the each of the campuses of the College, the high school graduation rates for the College's home County (Kern) reflects a 1% annual increase through 2024. This is not rapid growth but it is positive growth. Not every county in the state will see positive growth for high school graduates.
4. Capacity to attract students to the College who are less academically prepared. The levels of educational attainment within the greater College service area suggest a growth opportunity for students who are less academically-prepared – i.e. students who will either be fringe postsecondary education possibilities or who are mentored into a postsecondary education. This opportunity will need to be facilitated by a strong program of Basic Skills education. Basic Skills education will continue to be an important point of entry into the mainstream program of academics at Cerro Coso Community College.
5. Attracting and retaining students through an emphasis on academic success**.** Enough cannot be said about the value of creating an inviting campus and for placing emphasis on the success of the students. It is always easier to retain an existing student than it is to attract a new student. Students who succeed in their academic missions also serve to attract more students to the College.
6. Maintaining a competitive edge through productivity. Higher productivity values will need to be achieved through greater class sizes and better utilization of existing space. The future capacity for growth will depend on simply doing better in the basic measures of curricular productivity.

Common Premises for the Application of Growth to the Future Programs of Instruction

Applying forecasted growth to the future programs of instruction is the juncture where the proverbial "rubber meets the road". The application of growth for this section of the Educational Master Plan used the following methodology and / or references for all of the campuses of the College.

Existing Program of Instruction Used as the Foundation Model

While a planned program of instruction could have been constructed within each department at each campus to create appropriate class sections, WSCH, FTES generation, the number of lecture and laboratory hours required and the application of reasonable standards for efficiency, the current program of instruction was found to serve as a strong foundation from which to build. It is assumed that adjustments will be made to curricular content and

the methods of instructional delivery but that the core of the current instructional program will remain similar to what it is presently. It is expected that Career/Technical Education and Basic Skills Education will change and increase proportionately with the needs of each of the campus service areas and that programs within these two areas will reflect the environmental conditions and changes within the student body.

Growth Projections Were Made at the Discipline/Program Level

Service area demographics, external and internal factors, past performance, efficiency values, and overall curriculum balance were factors that were taken into consideration for each discipline/ program in the forecasting process. This caused each program / discipline to grow at different rates over time. The results and conclusions from this method of growth application were then aggregated into each respective department at each of the campuses of the College.

WSCH Used as the Basis for Forecasting the Characteristics of the Future Program of Instruction

While the College measures its progress and success in terms of FTES, the state measures growth and the need for space in terms of WSCH. WSCH represents the average number of hours of student instruction in a given week. A class of 35 students meeting three hours per week produces 105 WSCH. The state uses this (WSCH) measure to define the need for and the capacity of facilities at every campus location. WSCH, therefore, was used as the foundation element to project growth relative to the future programs of instruction.

Key Reference Documents

Projections for the future program of instruction also relied on key reference documents. Those that carried the greatest weight included the following:

- The 2017/18 Kern Community College District, Report 17 ASF/OGSF Summary & Capacities Summary (State Chancellor's Office)
- The 2017/2018 Kern Community College District's Five-Year Construction Plan (State Chancellor's Office)
- The 2017/2018 Long Range Enrollment and WSCH Forecast (State Chancellor's Office)
- Data reports and information provided via Cerro Coso Community College, Office of Institutional Research for the 2015 Fall Semester
- Cerro Coso Community College's 2012 Educational Master Plan
- MAAS Companies database for over 60 community college in the state

Planning Assumptions

The following assumptions were also incorporated into the growth forecast for the future program of instruction.

- The organizational structure at the campuses of the College was projected to be similar to that which currently exists with greater demands on curricular direction and support services.
- Delivery of the academic program of instruction was projected to remain similar to that which currently exists.
- The campuses of the College will continue to make strides in its instructional efficiency values and, for the future, trend higher in the key elements that measure overall viability.
- The College will use existing space to its intended capacity to meet the state standards for facility utilization.
- Based on the use of Title V standards, the College will strive to keep itself in a funding worthy position with the state.

The View from the Campuses

The data provided for this section will focus on the key historical trends that will influence future growth, the current conditions at the campus, the capacity for growth and need for future space for each of the campuses that comprise Cerro Coso Community College. These include the Indian Wells Valley Campus, the On-line Campus/Program of Instruction, Eastern Sierra College Center (including the sites at Bishop and Mammoth), East Kern Education Center at Edwards AFB (including course offerings at Tehachapi) and the Kern River Valley Campus located in Lake Isabella.

The Indian Wells Valley Campus

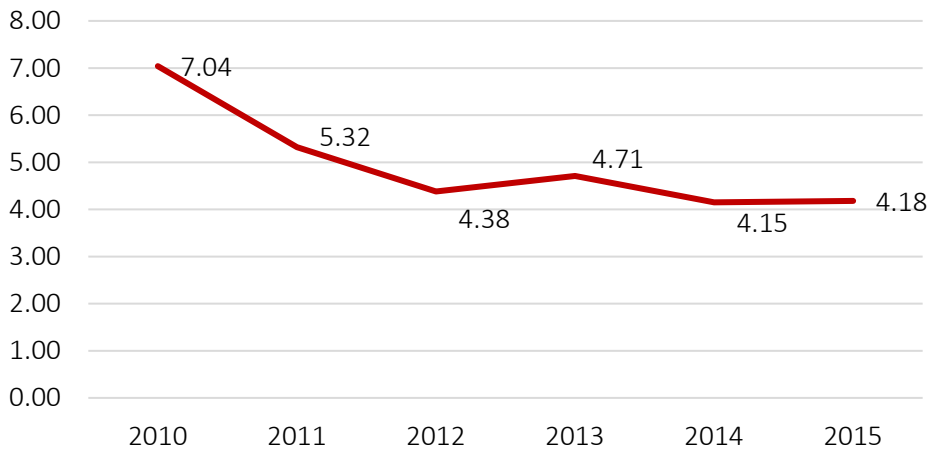
Overview

The Indian Wells Valley (IWV) Campus is the largest and most developed of the campuses of Cerro Coso Community College. The Ridgecrest area that supports the IWV Campus has the largest population-base of any of the municipalities in Eastern Kern County. It is home (China Lakes) to the Naval Air Weapons Center, Warfare Center (NAWCWD). This military operation drives the economy and the population dynamics of the IWV Campus service area. The IWV / Ridgecrest area is growing slowly (less than 1% per year) and is trending older than younger. The 0-14 year population, although less than 20%, is projected to remain fairly constant in terms of percentage share of the population over the next 15-years.

Historical Trends that Will Influence Future Growth

The trends for student enrollment at IWV follow a similar pattern as those of the College overall. Enrollments have shown steady gains over the past 15-years, increasing from 2,414 in 2001 to 3,509 in 2015, with a high-water mark of 3,667 reached in 2014. The 15-year increase represents a gain of 45.4% overall or an average of 3.0% annually. WSCH has trended downward over the past 15-years. First-census, Fall Semester WSCH has gone from 23,206 in 2001 to 15,222 in 2015. This represents an overall decline of 36.7% and translates to an annual average loss -2.5%. Data compiled for WSCH per enrollment is presented in the graphic that follows. It more accurately makes the connection between these two most significant measurables, student enrollment and WSCH.

Indian Wells Valley Campus: Past 5-Year Trend WSCH / Enrollment



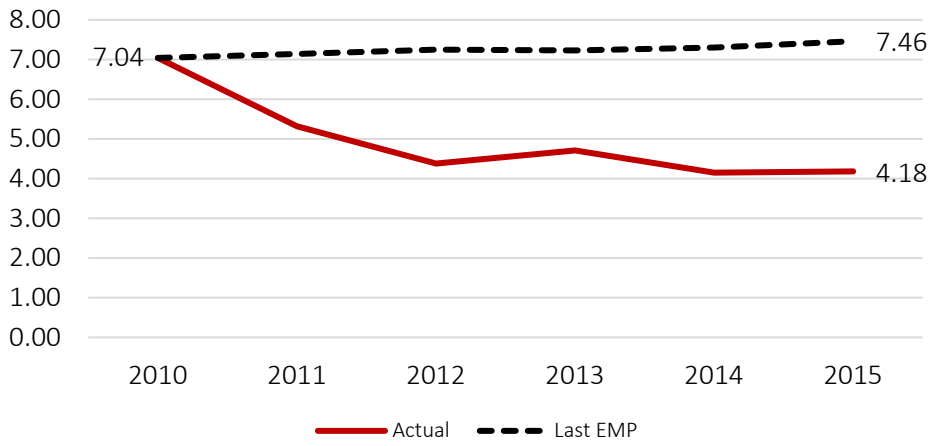
Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

While the measures for WSCH per enrollment at IWV outpaced those of the College in the aggregate, there has been steep and consistent decline that is evident in the course loads taken by students attending the IWV Campus over the past 5-years. Also evident, and a contributing factor for the measure of WSCH enrollment, has been the impact of the Administration of Justice program (Department of Public Services). This program presently accounts

for 70 of the 199 class sections offered at the IWV Campus. Overall, it represents 35% of all curricular offerings. Alternately, it generates slightly more than 20% of all WSCH. This would suggest a short-term course that accommodates a substantial enrollment with a small course load.

The following graphic compares WSCH per enrollment as projected in the last Educational Master Plan as compared to the actual level of WSCH per enrollment achieved.

Indian Wells Valley Campus: Actual vs. Projected WSCH / Enrollment



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

WSCH per enrollment, which ran as high as 11.50 in year 2008 and was consistently in the mid-9.0 range from 2001 to 2009, was projected to maintain a pace of at least 7.0 and above in the last Educational Master Plan over the period 2010 to 2015. As noted above, this projected range was never met. In fact, the gap between projected and actual WSCH per enrollment widened over the view term. By the 2015 Fall Semester, it reached a delta of 3.28.

Current Status

Existing Program of Instruction

The existing program of instruction (2015 Fall Semester) at Indian Wells Valley Campus is summarized, at the department level, in the table that follows. It provides an excellent starting point from which to build in the future. Whether it is for academic purposes, for accommodating support and administrative services or for defining the physical structures on the campus, all needs on campus relate to and emanate from the program of instruction.

Indian Wells Valley Campus: Characteristics of Fall 2015 Program of Instruction

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	FTES	FTEF	Lec. Hrs	Lab Hrs.	On-Line Hrs.	Indep. Study
Allied Health	16	222	13.88	1,188.82	74.30	36.91	4.50	1,496	1,188	234	792
CIS / Business	8	130	16.25	507.93	63.49	15.77	1.80	486	252	0	0
Child Dev./Education	2	168	84.00	102.42	51.21	3.18	0.25	0	0	0	108
Counseling	3	99	33.00	225.46	75.15	7.00	0.00	108	0	0	0
English	21	463	22.05	2079.06	99.00	64.55	5.20	1,944	0	0	0
Industrial Arts	10	206	20.60	953.05	95.31	29.59	2.80	756	648	0	0
Library	1	21	21.00	46.38	46.38	1.44	0.00	36	36	0	0
Mathematics	15	405	27.00	1,898.05	126.54	58.93	4.14	1,188	0	0	0
Physical Education	19	213	11.21	1,029.39	54.18	31.96	2.57	1,268	0	0	0
Public Service	70	919	13.13	3,040.81	43.44	94.41	0.40	1,849	1,080	0	0
Science	12	255	21.25	1,887.75	157.31	58.61	4.53	1,242	1,476	0	0
Social Science	13	230	17.69	797.81	61.37	24.77	2.21	972	0	0	0
Visual & Perf. Arts	9	178	19.78	926.00	102.89	28.75	2.37	792	432	0	0
TOTAL	**199**	**3,509**	**17.63**	**14,682.93**	**73.78**	**455.87**	**30.77**	**12,137**	**5,112**	**234**	**900**

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The current program of instruction is characterized as having thirteen departments. For the baseline semester used (Fall 2015), the program of instruction featured a total of 199 class sections. These class sections generated 14,683 WSCH and accounted for 455.87 full-time equivalent students (FTES). Overall, class sizes averaged 17.63 enrolled seats per section. The 199 classes sections generated, on average, 73.78 WSCH per section. The instructional delivery method favored lecture over laboratory. Lecture hours accounted for 12,137 of the total instructional hours taught while laboratory hours totaled 5,112. In terms of relative values, lecture hours comprised 70% of the instructional delivery hours while laboratory was responsible for 30%. The average WSCH per load (FTEF) for the 2015 Fall Semester was 477.18.

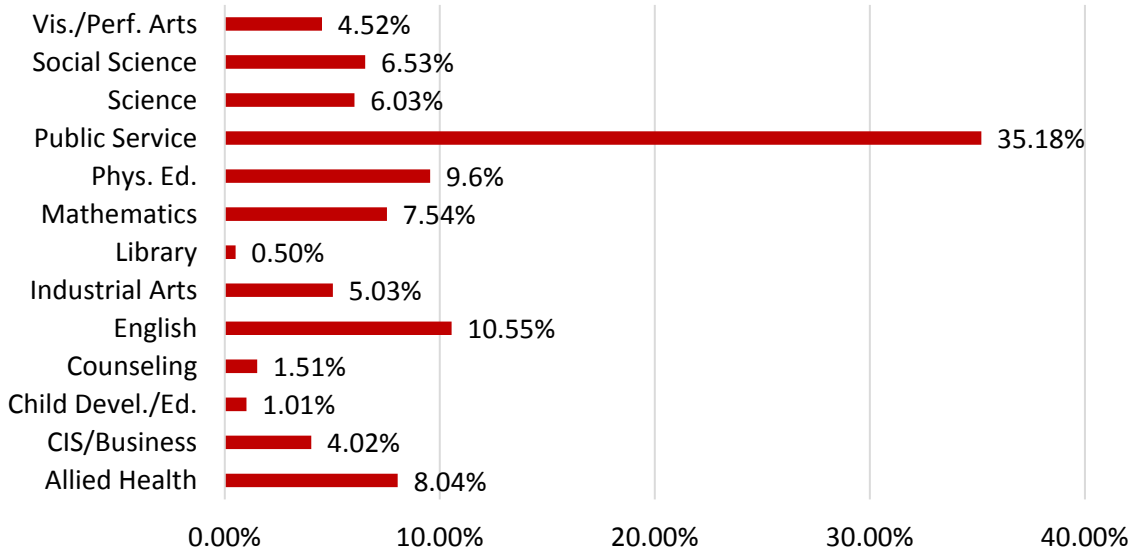
As compared to 2012 Educational Master Plan (2010 Fall Semester), the program of instruction at the IWV Campus has decreased in the number of sections offered. Class sections offered for 2010 totaled 214. There has also been a decline in WSCH from the 2010 Fall Semester. In 2010, WSCH generation was 16,972 as compared to 14,682 for the 2015 Fall Semester. The measure for enrolled seats per section increased slightly in 2015 (17.63) from the 17.10 measure in 2010.

Distribution of the Curriculum

The existing program of instruction at the Indian Wells Valley Campus is dominated by the Department of Public Service/Administration of Justice Program. This department alone accounts for more than one-third of the current curriculum at the IWV Campus. It is followed by English at 10.55% of the curriculum, Physical Education at 9.60% and Allied Health at 8.04%. Social Science and Science account for 6.53% and 6.03% respectively. Cumulatively, the top four departments (Public Service, English, Physical Education, and Allied Health) are responsible for 63.4% of the curriculum.

The graphic that follows captures the current curriculum distribution for all thirteen departments at the Indian Wells Valley Campus.

Indian Wells Valley: Current (2015) Distribution of the Curriculum

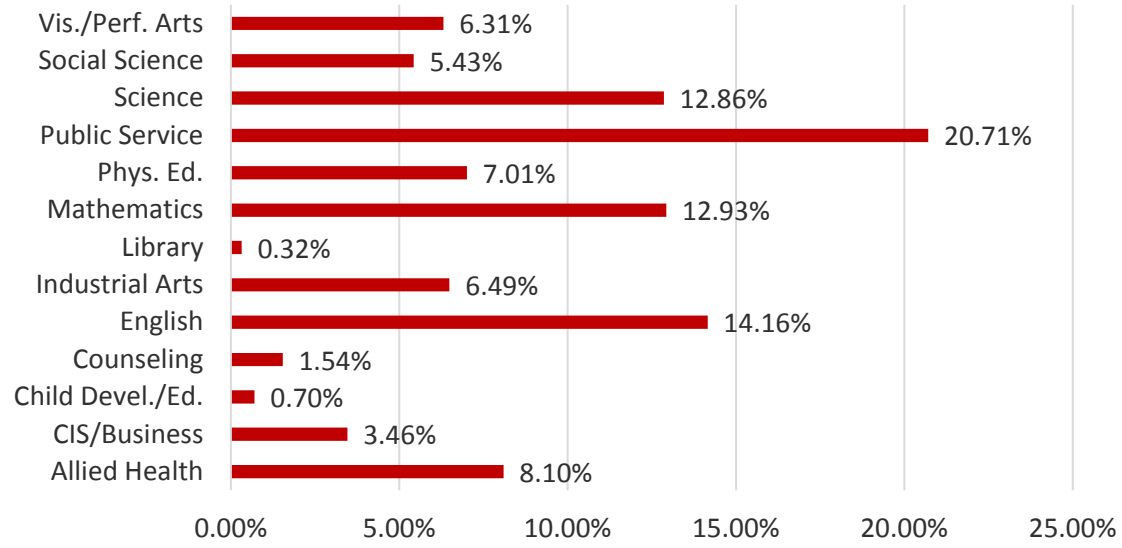


Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Distribution of WSCH

The current distribution of WSCH generation was also assessed as a characteristic of the current program of instruction. Public Service (Administration of Justice Program) led all departments, generating 20.71% of the WSCH at the IWV Campus. The departments of English (14.16%), Mathematics (12.93%) and Science (12.86%) followed. Combined, these four departments accounted for 60.66% of all WSCH at the Campus. The graphic that follows depicts the measure of WSCH generation for all thirteen departments.

Indian Wells Valley: Current (2015) Distribution of WSCH



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Balance of the Program of Instruction

While the IWV Campus offers a diversified curriculum, supporting General Education/Transfer Education, Career/Technical Education, And Basic Skills, it is vigilant in its efforts to identify new opportunities and curricular

direction that address the needs of its diverse service area. General and Transfer Education is a mainstay at the IWV Campus. Additionally, there is a very strong orientation to the provision of opportunities for Career/Technical Education. Stronger links with existing business and industry are anticipated to be the catalyst for future changes in the CTE area. Basic Skills Education to support underprepared students is also well represented at the IWV Campus. A significant majority of students attending the IWV Campus avail themselves of course offerings in Basic Skills Education. It is anticipated that this will be a continued need in the future.

Current Space Holdings to Support the Program of Instruction

Space holdings are defined as the physical facilities owned by the District and used by each campus to support the program of instruction and support services.

For the 2015 Fall Semester, the IWV Campus recorded total space availability of 162,469 assignable square feet (ASF). Currently, 37,469 ASF is classified as "inactive space" – i.e. space that is either under repair or not usable for other reasons. The remaining "usable" space not only supports the 199 class sections offered, the 14,683 WSCH generated, and 456 FTES produced but it also accommodates all of the administrative and support services space required for operating the Campus. In contrast, when the last Educational Master Plan was completed, the program of instruction was supported by 139,117 ASF.

Comparing 2010 data with 2015 data, there has been a decrease in lecture space holdings of approximately 800 ASF at the IWV Campus. Alternately, laboratory instructional space increased significantly, with more than 10,000 ASF added to the space inventory. In other key space categories, Office space on campus increased by approximately 6,500 ASF while Library space added almost 4,000 ASF. Instructional Media (AV/TV) space decreased slightly more than 2,000 ASF. Overall, the District's Report 17 reflects a change of +23,352 ASF from 2010 to 2015. The IWV Campus still reflects a significant amount of Inactive space. This is up approximately 17,000 ASF from the space inventory of 2010. Plans to bring this space back on-line are expected to materialize over the next 5-years.

A comparison of the space holdings from when the last Educational Master Plan was completed (data from 2010) and the current Educational Master Plan (data from 2015) is provided in the table that follows.

Indian Wells Valley Campus: Space Holdings

State Rm. Code	Description	2010 Space Inventory
0	Inactive	20,120
100	Classroom	7,174
210-230	Laboratory	17,732
235-255	Non-Class Laboratory	-
300	Office/Conference	11,318
400	Library	17,690
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	24,552
530-535	(AV/TV)	4,057
540-555	Clinic/Demonstration	6,643
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	3,880
630-635	Food Service	3,640
650-655	Lounge/Lounge Service	2,730
660-665	Merchandizing	144
670-690	Meeting /Recreation	588
710-715	Data Processing/Comp.	-
720-770	Physical Plant	18,849
800	Health Services	-
	Totals	**139,117**

State Rm. Code	Description	2015 Space Allocation
0	Inactive	37,469
100	Classroom	6,345
210-230	Laboratory	27,846
235-255	Non-Class Laboratory	-
300	Office/Conference	17,821
400	Library	21,537
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	26,367
530-535	(AV/TV)	2,123
540-555	Clinic/Demonstration	5,238
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	1,401
630-635	Food Service	117
650-655	Lounge/Lounge Service	180
660-665	Merchandizing	972
670-690	Meeting /Recreation	1,458
710-715	Data Processing/Comp.	-
720-770	Physical Plant	13,595
800	Health Services	-
	Totals	**162,469**

Source: Cerro Coso Community College 2012 Educational Master Plan; Kern Community College District Report 17, analysis MAAS Companies

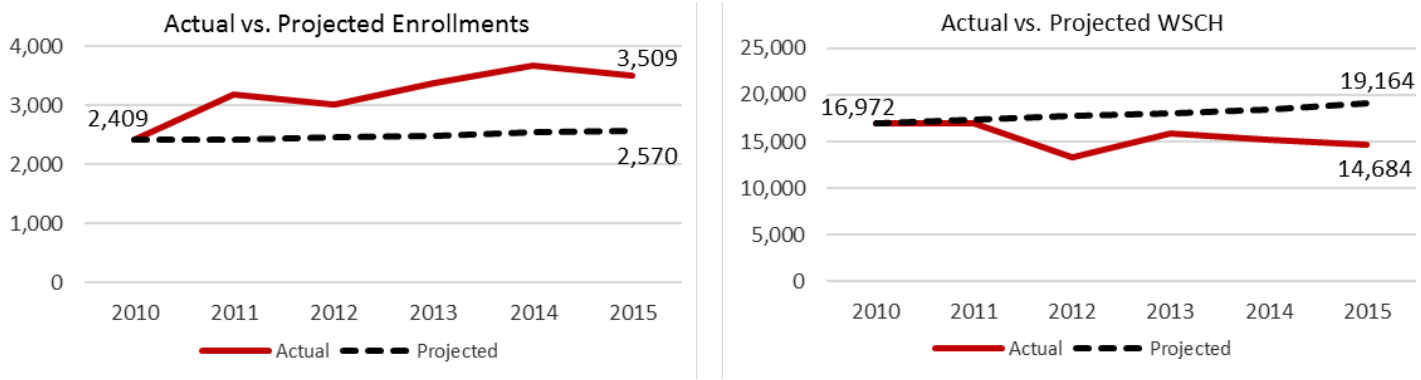
Future Projections

The Campus Capacity for Growth

What is the Campus' future capacity for growth? When the 2012 Educational Master Plan was completed, the annual student enrollment growth rate from 2010 to 2015 was projected to be 1.34%; WSCH was projected to grow at 2.58% annually. For the 2015 Fall Semester, the actual annual rate of student enrollment growth averaged an impressive 9.13%. WSCH growth, however, declined at an average annual rate of -2.70%. The ability to retain and expand the course loads of the students who are coming to the Indian Wells Valley Campus will be imperative for future growth.

The graphic that follows shows the projected versus the actual values for both enrollment and WSCH based on the projections from the 2012 Educational Master Plan. The capacity of the Campus' future growth will be significantly influenced by the growth capacity it has been able to achieve in the past.

Indian Wells Valley: Forecasted Projections Versus Actual 2010 – 2015



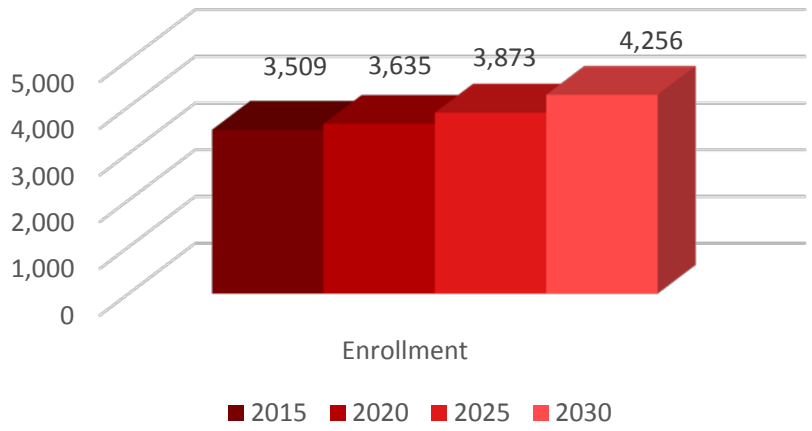
Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; analysis MAAS Companies

Projected Forecast for Growth

WSCH generation for the future should be in excess of the historic trends that have been recorded over the past several years, while student enrollment should continue to grow but at a slower pace. Factoring in all the elements that could affect future growth (i.e. the data driven tangibles derived from research, the External Environmental Scan and the intangibles that are indigenous to the IWV Campus, annual growth rate capacity over the next 15-years is projected at 1.42% for student enrollment and 3.94% for WSCH. For student enrollment, this translates to an 21.3% increase in enrollment from a starting point that begins with the 2015 Fall Semester. For WSCH, the long-term growth rate projects at an overall increase of 59.1%. It should be noted that the forecast for growth addresses the potential for the IWV Campus. It is primarily based on quantifiable data obtained through research.

Projected enrollment growth in absolute values is captured for the 5-year benchmark years from 2015 to 2030 in the graphic that follows. Overall, enrollment growth is projected to reach 4,256 by the year 2030.

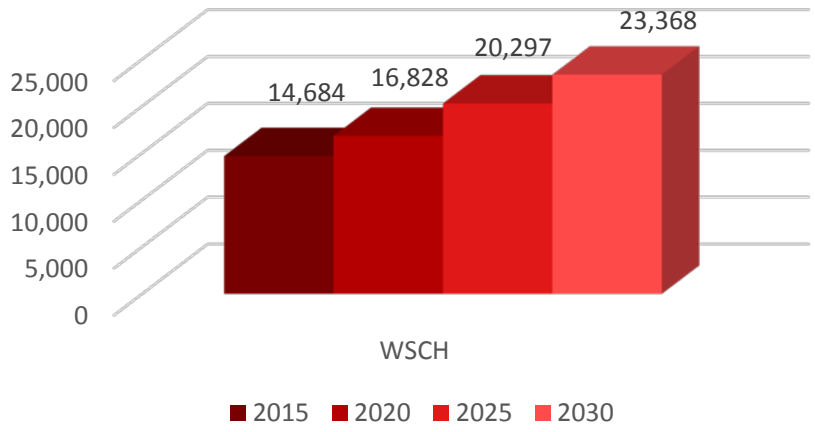
Indian Wells Valley Campus: Projected Growth for Enrollments



Source: MAAS Companies Projections

The revised projections for WSCH show an ambitious rate of growth from a relative perspective. Historically, the absolute values for WSCH have been (and should again be) in excess of 20,000. Using the 2015 Fall Semester as a baseline, WSCH is projected to grow from 14,684 in 2015 to 23,368 by the year 2030. The impact of WSCH projections are captured in the graphic that follows.

Indian Wells Valley Campus: Projected Growth for WSCH



Source: MAAS Companies Projections

The Application of Growth to the Future Program of Instruction

Growth as applied to the future program was done on program/discipline basis and then assembled back into the department level. It was not applied equally across the board. Stronger performing programs/disciplines were given a greater range for growth than programs/disciplines performing at a sub-par level. Based on the forecasts for enrollments and WSCH, the program of instruction is projected for incremental expansion. Applying the growth forecasts previously noted, the characteristics of the 2030 program of instruction are captured as follows.

Indian Wells Valley Campus: Characteristics of Projected Program of Instruction for the Year 2030

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	Lec. WSCH	Lab WSCH	FTES	% of Curr.	% of WSCH
Allied Health	21	324	15.45	1,736.70	82.70	1,026.47	710.33	53.92	8.68%	7.43%
CIS / Business	10	234	23.39	913.80	91.38	692.75	221.00	28.37	4.13%	3.91%
Child Dev./Education	2	225	112.39	137.12	68.56	0.00	0.00	4.26	0.83%	0.59%
Counseling	4	127	31.75	289.20	72.30	289.20	0.00	8.98	1.65%	1.24%
English	27	707	26.18	3,174.12	117.56	3,174.20	0.00	98.55	11.16%	13.58%
Industrial Arts	15	328	21.87	1,517.25	101.15	897.58	619.74	47.11	6.20%	6.49%
Library	1	27	26.56	58.66	58.66	29.33	29.33	1.82	0.41%	0.25%
Mathematics	20	584	29.20	2,737.00	136.85	2,737.00	0.00	84.98	8.26%	11.71%
Physical Education	23	379	16.49	1,832.87	79.69	1,832.77	0.00	56.91	9.50%	7.84%
Public Service	74	1,681	22.71	5,561.10	75.15	3,503.49	2,058.00	172.66	30.58%	23.80%
Science	16	338	21.13	2,502.40	156.40	1,181.01	1,321.41	77.69	6.61%	10.71%
Social Science	17	472	27.74	1,635.74	96.22	1,635.71	0.00	50.79	7.02%	7.00%
Visual & Perf. Arts	12	245	20.38	1,272.00	106.00	810.53	461.42	39.49	4.96%	5.44%
TOTAL	**242**	**5,669**	**23.43**	**23,367.96**	**96.56**	**17,810.04**	**5,421.23**	**725.52**		

Source: MAAS Companies Projections

The future program of instruction is projected to be driven by the departments of Public Service, English, Mathematics and Science. Combined, these four departments are expected to account for more than 60% of the WSCH generated at the IWV Campus. Overall, the Indian Wells Valley Campus is projected to generate 23,368 total WSCH on a semester basis and have 242 class sections by the year 2030.

For a final look at the future program of instruction a composite breakdown is provided from the baseline year of 2015 to the year 2030. The breakdown includes projected growth at benchmark, five-year intervals. For this

analysis, the key elements of net sections, WSCH, FTES, lecture WSCH and laboratory WSCH were used to characterize the projected program of instruction.

Indian Wells Valley Campus: Composite Profile of the Program of Instruction Projections 2015 – 2030

	Actual					Projected														
	YR 2015					YR 2020					YR 2025					YR 2030				
Department	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES
Allied Health	16	666	523	1,189	36.9	17	793	564	1,358	42.1	18	890	648	1,538	47.7	21	1,026	710	1,737	53.9
CIS / Business	8	335	173	508	15.8	8	436	148	585	18.2	9	598	176	774	24.0	10	693	221	914	28.4
Child Dev./Education	2	0	0	102	3.2	2	0	0	120	3.7	2	0	0	131	4.1	2	0	0	137	4.3
Counseling	3	225	0	225	7.0	3	241	0	241	7.5	3	254	0	254	7.9	4	289	0	289	9.0
English	21	2,079	0	2,079	64.5	22	2,267	0	2,267	70.4	24	2,675	0	2,675	83.0	27	3,174	0	3,174	98.6
Industrial Arts	10	353	600	953	29.6	12	653	440	1,093	33.9	13	762	517	1,279	39.7	15	898	620	1,517	47.1
Library	1	23	23	46	1.4	1	24	24	48	1.5	1	27	27	54	1.7	1	29	29	58	1.8
Mathematics	15	1,898	0	1,898	58.9	16	2,016	0	2,016	62.6	18	2,490	0	2,490	77.3	20	2,737	0	2,737	85.0
Physical Education	19	1,029	0	1,029	31.9	19	1,243	0	1,243	38.6	21	1,471	0	1,471	45.7	23	1,833	0	1,833	56.9
Public Service	70	1,916	1,125	3,041	94.4	70	2,392	1,405	3,798	117.9	72	3,105	1,824	4,928	153.0	74	3,503	2,059	5,562	172.7
Science	12	868	1,019	1,888	58.6	13	940	1,072	2,012	62.5	15	1,123	1,259	2,382	74.0	16	1,181	1,321	2,502	77.7
Social Science	13	798	0	798	24.8	13	962	0	962	29.9	14	1,147	0	1,147	35.6	17	1,636	0	1,636	50.8
Visual & Perf. Arts	9	602	324	926	28.8	10	666	420	1,086	33.7	10	732	442	1,175	36.5	12	811	461	1,272	39.5
TOTAL	199	10,792	3,788	14,683	455.9	206	12,634	4,074	16,828	522.5	220	15,273	4,893	20,297	630.2	242	17,810	5,422	23,368	725.5

Source: MAAS Companies Projections

Qualification for Space

Space needs as defined by the State's Title V guidelines are largely predicated on the program of instruction's ability to generate WSCH – i.e. the need for space is directly tied to the growth or decline of the program of instruction. The application of growth is not limited to just classroom (lecture) and laboratory spaces but to all space on the campus. While there are other criteria and measures for space, generally, the more WSCH generated, the greater the need for space; lesser values for WSCH decrease the need for space.

While important benchmarks for calculating growth (or decline) over time, the Indian Wells Valley Campus should not direct its entire focus on achieving the levels established for WSCH at each five-year interval between 2015 and 2030. Rather, the emphasis should be placed on ensuring that the appropriate types of space are in place whenever the WSCH milestones are met – that may be sooner or later than the established benchmarks.

Campus Space Needs to Support the Program of Instruction

The following table depicts total space needs / qualifications for the Indian Wells Valley Campus through the year 2030. The space needs / qualifications are based on the State's Title V guidelines. The formulas derived for space are tied directly to WSCH generation, FTES, student enrollment, full-time equivalent faculty (FTEF) and day-graded enrollment. There are five space categories that are closely monitored by the State. These are used to determine funding worthiness when monies from the State are available. Space needs, however, include not only those directly related to the program of instruction (lecture and laboratory), office, library and instructional media but also fourteen non-state monitored spaces that are integral to providing students with a complete campus. The need /qualification for space from the State's perspective is predicated on a program of instruction that maintains a healthy level of efficiency.

The table that follows depicts the qualification for space via the State Title V standards for IWV Campus.

Indian Wells Valley Campus: Total Space Needs Via State Title 5 Standards

Key Space Categories Monitored by the State					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
100	Classroom	6,345	8,406	2,061	2,061
210-230	Laboratory	27,846	10,994	(16,852)	0
235-255	Non-Class Laboratory	-	404	404	404
300	Office/Conference	17,821	6,609	(11,212)	0
400	Library	21,537	16,658	(4,879)	0
530-535	(AV/TV)	2,123	8,304	6,181	6,181
	sub total	**75,672**	**51,375**	**(24,297)**	**8,646**
Non-State Monitored Space Categories					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
0	Inactive	37,469	0	(37,469)	0
510-515	Armory/Armory Service	-	0	0	0
520-525	Phys. Ed. (Indoor)	26,367	27,500	1,133	1,133
540-555	Clinic/Demonstration	5,238	1,702	(3,536)	0
580	Greenhouse	-	0	0	0
590	Other	-	0	0	0
610-625	Assembly/Exhibition	1,401	4,256	2,855	2,855
630-635	Food Service	117	2,554	2,437	2,437
650-655	Lounge/Lounge Service	180	486	306	306
660-665	Merchandizing	972	2,926	1,954	1,954
670-690	Meeting /Recreation	1,458	1,417	(41)	0
710-715	Data Processing/Comp.	-	650	650	650
720-770	Physical Plant	13,595	4,908	(8,687)	0
800	Health Services	-	680	680	680
	sub total	**86,797**	**47,079**	**(39,718)**	**10,015**
	TOTAL	**162,469**	**98,454**	**(64,015)**	**18,661**

Source: Kern Community College District Report 17 2017/2018; State Title V Standards; analysis MAAS Companies

Note: All space needs have been calculated via the Title V standards, using WSCH, headcount, FTES, Day graded Enrollments and FTEF as the common measures

Via Title V standards and growth allocated to the projected program of instruction, the IWV Campus will show a need for 2,061 ASF of additional Lecture space by the year 2030. Laboratory space for 2030 will be more than be accommodated by the Campus' existing inventory of 27,846 ASF. The 2030 program of instruction is projected to need only 10,994 ASF of laboratory space plus another 404 ASF of non-class laboratory space for this category.

In other key space categories monitored by State, Office/Conference space, with current space holdings of 17,821 ASF will not need additional space by 2030. In fact, it is projected to have 11,212 ASF in excess of the Title V qualification for space. Library space, with a current inventory of 21,537 ASF and qualification for 16,658 ASF in 2030 will also not have a need for space. Of the key space categories monitored by the State, only Instructional Media (AV/TV) will qualify for additional space. By 2030, that will amount to 6,181 ASF. Overall, the key space categories monitored by the State are projected to show an additional need of 8,646 ASF as projected in the year 2030.

The State guidelines for the non-state monitored space categories show space deficits in 2030 for Physical Education (+1,133 ASF), Assembly/Exhibition (+2,855 ASF), Food Service (+2,437 ASF), Lounge / Lounge Service (+306 ASF), Merchandizing (+1,954 ASF), Data Processing (+650) and Health Services (+680 ASF). Overall, needs/ qualification for non-state monitored space translates to +10,015 ASF.

On-Line Education

Overview

The virtual campus at Cerro Coso Community College is referred to as CC On-Line. It provides students with an opportunity to take courses from a distance. The delivery of the on-line formant is one that allows students to interact with faculty in a virtual classroom setting. Its goal is to provide a quality educational experience while at the same time allowing students maximum flexibility and convenience in the pursuit of their educational endeavors.

Overall, the On-Line Program of Instruction offers 18 accredited (on-line) associate degrees, 17 on-line certificates, and more than 160 courses per year. It has a strong history of success and has served as a model for other postsecondary institutions who have pursued distance education as a method for delivering a program of instruction.

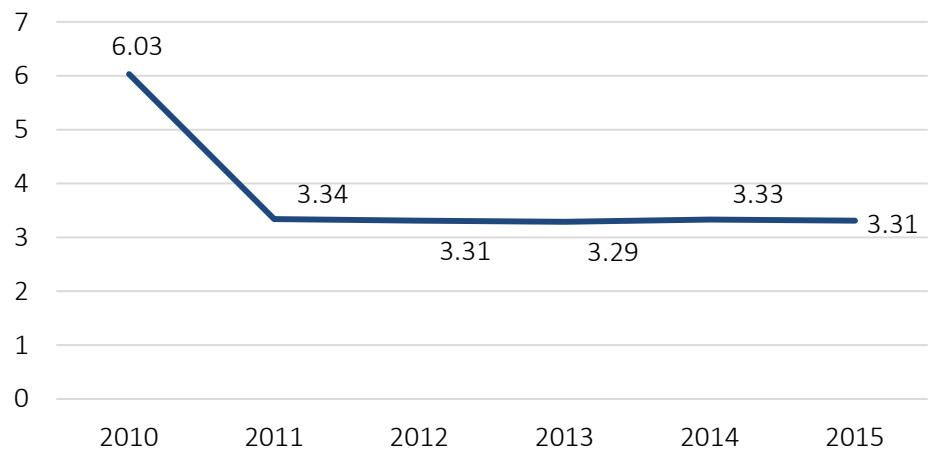
Historical Trends that Will Influence Future Growth

The On-Line Program of Education has shown steady and consistent growth in student enrollment over the past 15-years. Using 2001 as starting point, enrollment has increased from 1,596 to 5,255 in 2015. The On-Line Program reached its highest point in 2011 when it registered 6,410 for the Fall Semester. From 2010 to 2015, student enrollment increased by 35.16% overall and produced an annual average gain of 7.03%.

The production of WSCH has also shown significant gains over the past 15-years. It more than doubled from its starting point of 9,466 WSCH in 2001 to reach its high-water mark of 23,425 WSCH in 2010. WSCH, over past 5-years, however, has trended downward. It dropped to a low of 16,761 in 2014 and rebounded only slight in 2015. The downward trend has resulted in an overall loss of -18.65% and an annual average decline of -3.73% from 2011 to 2015.

Data compiled for WSCH generated per student enrollment over the past 5-years more accurately captures the connection between and the impact of these two key measures.

On-Line Education: Past 5-Year Trend WSCH / Enrollment

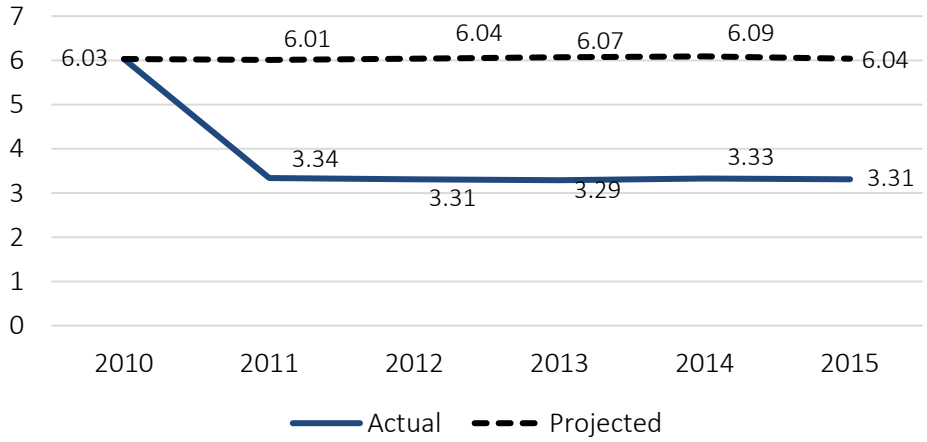


Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

While enrollment has increased, WSCH generation has decreased. This has had the impact of more students availing themselves of the On-Line Program but carrying smaller course loads. Using a three-credit course as a basis for comparison, students from 2011 to 2015 took on average, 1.11 classes through the On-line Program per (Fall) semester. For the 2010 Fall Semester, students took the equivalent of 2.01 classes through the On-Line Program, almost twice the current average. For further perspective, WSCH per enrollment has average 5.21 over the past 15-years. This underscores a significant concern for the On-line Program going forward.

The graphic that follows depicts the actual WSCH per enrollment generated over the past five years with what was projected in the 2012 Educational Master Plan.

On-Line Education: Actual vs. Projected WSCH / Enrollment



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

WSCH per enrollment averaged 6.16 from 2001 to 2010. In the 2012 Educational Master Plan, it was projected to maintain a pace that was slightly over 6.0 for the period 2010 to 2015. Beginning in 2011 and continuing through 2015, WSCH per enrollment has averaged only 3.32.

Current Status

Existing Program of Instruction

The current On-line Program of Instruction is summarized in the table that follows. For this review, analysis was conducted at the section level for each program/discipline. The information obtained was then aggregated at the department level. The current program of instruction provides an excellent starting point from which to view the health and status of the On-Line Program. It also provides an excellent foundation for forecasting a future program of instruction.

On-line Education: Characteristics of Fall 2015 Program of Instruction

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	FTES	FTEF	Lec. Hrs	Lab Hrs.	On-Line Hrs.	Indep. Study
Allied Health	19	471	24.79	1,166.27	61.38	36.21	2.60	810	0	126	180
CIS / Business	41	1032	25.17	3518.47	85.82	109.24	9.19	1746	1476	810	0
Child Dev./Education	30	1044	34.80	3160.31	105.34	98.12	6.13	1494	90	162	0
Counseling	6	200	33.33	383.93	63.99	11.92	0.47	180	108	18	0
English	16	469	29.31	1937.99	121.12	60.17	4.80	810	0	666	0
Library	2	66	33.00	143.01	71.51	4.44	0.13	72	72	0	0
Mathematics	15	468	31.20	1898.05	126.54	58.93	4.07	666	0	936	0
Physical Education	3	98	32.67	294.06	98.02	9.13	0.60	108	0	108	0
Public Service	4	132	33.00	395.85	98.96	12.29	0.80	270	0	0	0
Science	4	115	28.75	532.09	133.02	16.52	1.20	270	216	54	0
Social Science	28	840	30.00	2,520.00	90.00	78.24	5.60	1,512	0	54	0
Visual & Perf. Arts	9	321	35.67	1,445.84	160.65	44.89	2.60	702	432	0	0
TOTAL	**177**	**5,256**	**29.69**	**17,395.87**	**98.28**	**540.10**	**38.19**	**8,640**	**2,394**	**2,934**	**180**

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The current program of instruction for on-line is characterized as having twelve departments. For the baseline semester used (Fall 2015), the On-line Program of Instruction featured a total of 177 class sections. These class sections generated 17,396 WSCH and accounted for 540.10 full-time equivalent students (FTES). Overall, class sizes averaged 29.69 enrolled seats per section. The 177 classes sections generated, on average, 98.28 WSCH per section. The average WSCH per load (FTEF) for the 2015 Fall Semester was 476.33.

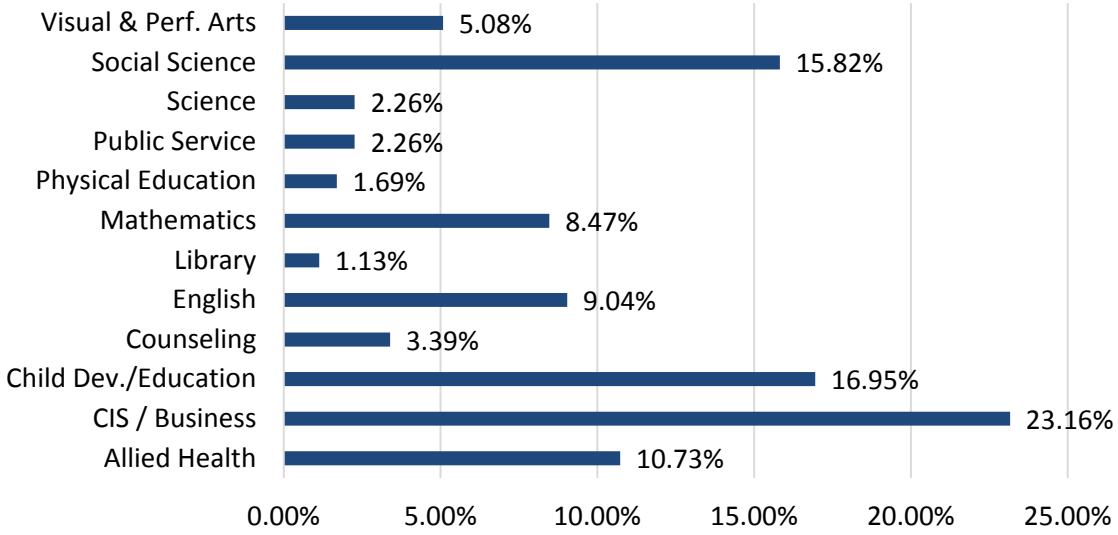
As previously noted, there has been a decline in the WSCH generated since the last Educational Master Plan was completed (2012). In 2010 (the baseline year for last Educational Master Plan) WSCH generation was 21,383. For the 2015 Fall Semester, it was 17,396. The number of class sections also declined from 212 in 2010 to 177 in 2015. When the last Educational Master Plan was completed, enrolled seats per section averaged 33.55 as compared to the 29.69 for the 2015 Fall Semester.

Distribution of the Curriculum

The current On-line Program of Instruction program is led by CIS/Business. This department accounts for 23.16% of the on-line curriculum. It is followed by Child Development/Education with 16.95% of the curriculum share and Social Science with 15.82%. The fourth greatest percentage share of the curriculum is Allied Health with 10.73%. Combined, these four departments account for two-thirds of all curricular offerings of the on-line program of instruction.

The graphic that follows captures the current curriculum distribution for the twelve departments that comprise the On-Line Program of Instruction.

On-Line Education: Current (2015) Distribution of the Curriculum

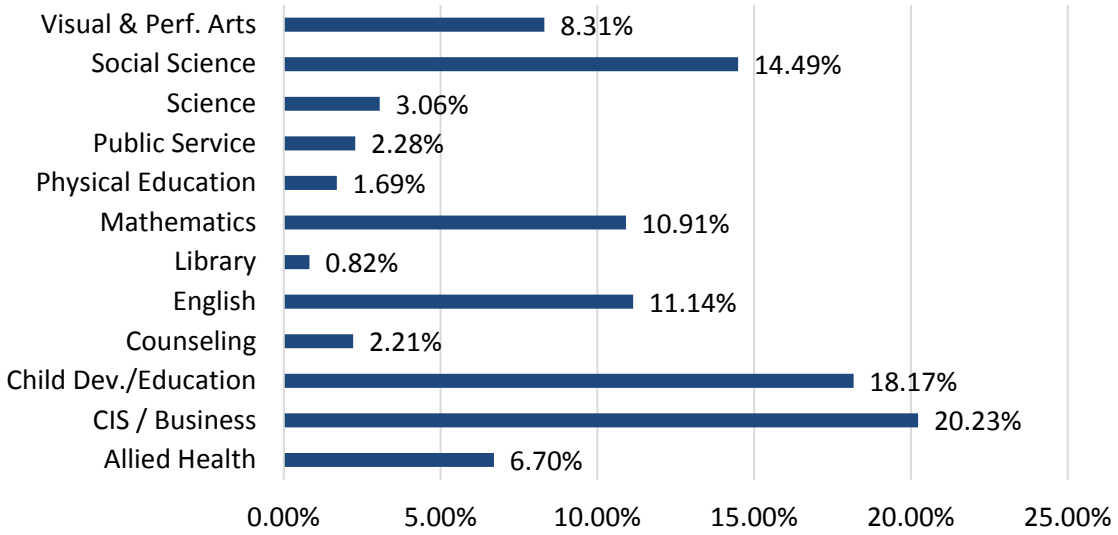


Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Distribution of the WSCH

This curricular measure for WSCH generation was led by three of the four Departments that held the greatest percentage shares of the curriculum. CIS/Business accounted for 20.23% of all WSCH generated for the on-line program of instruction. It was followed by Child Development/Education at 18.17% and Social Science at 14.49%. English and Mathematics were the two newcomers. They posted double digit shares of 11.14% and 10.91% respectively. Combined, these five departments accounted for 75% of all WSCH generated via the on-line program of instruction for the 2015 Fall Semester. The measure of WSCH generation for all twelve departments is captured in the graphic that follows.

On-Line Education: Current (2015) Distribution of WSCH



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Current Space Holdings for the On-line Program of Instruction

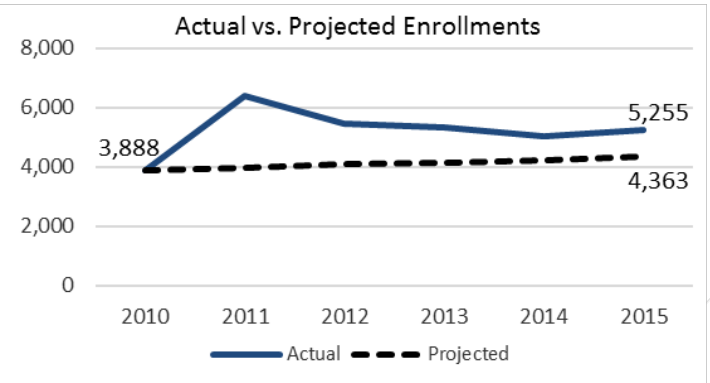
Because the on-line program of instruction is offered as "distance education" it is not supported by lecture and laboratory space and/or other similar space that would normally sustain students that were "on-campus". Space to support the on-line program of instruction would be found in designated office space on the campuses as well as in Instructional Media.

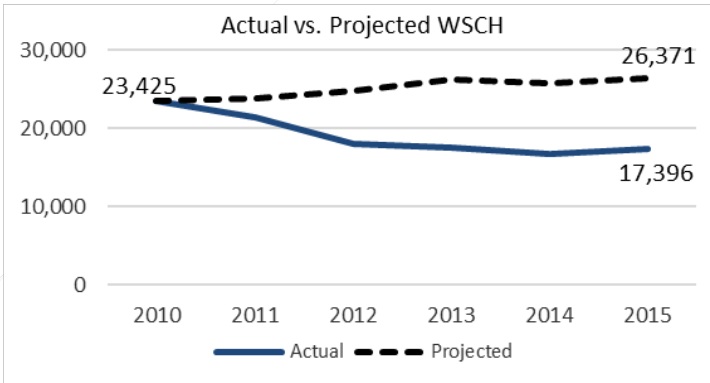
Future Projections

The Campus' Capacity for Growth

When the last Educational Master Plan 2012 was completed, the annual student enrollment growth rate for the initial 5-years (from 2010 to 2015) was projected to be 2.04%; WSCH was projected to grow at 2.10% annually. At the end of the 2015 Fall Semester, the actual annual rate of student enrollment growth averaged 5.86% while WSCH growth declined at an average annual rate of -4.29%. The following graphic shows how the On-line Program of Instruction actually fared against the projections from the 2012 Educational Master Plan relative to student enrollment and WSCH generation. The capacity of the On-line Program's future growth will be significantly influenced by the level of growth it has been able to achieve in the past.

On-line Education: Forecasted Projections Versus Actual 2010 – 2015



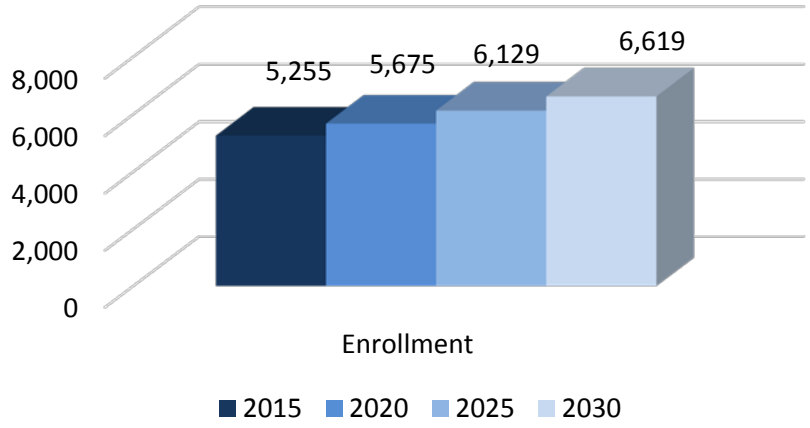


Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; analysis MAAS Companies

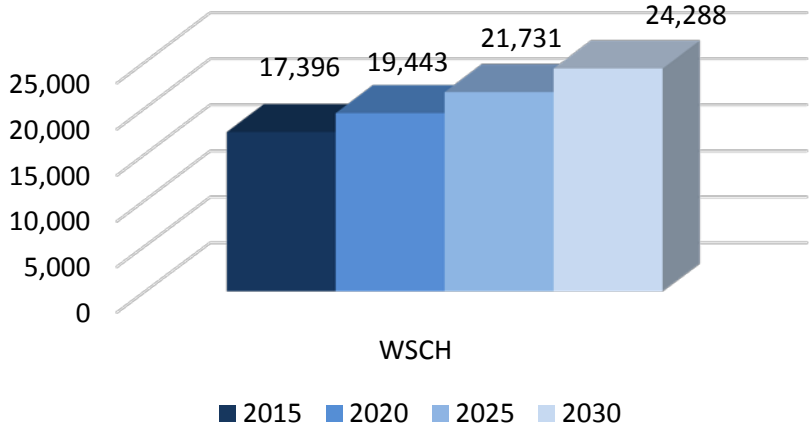
Projected Forecast for Growth

Considering all of the factors (i.e. past historical performance, capacity to serve students who may be less prepared, the emphasis placed on student retention and academic success and a strong track record in distance education), the forecast for the On-Line Program of Instruction is for moderate but continuing growth for student enrollment and for more aggressive growth (in excess of the recent historic trends) for WSCH generation. The annual growth rate for student enrollment is projected at 1.73%; for WSCH it is 2.64%. For student enrollment, this translates to a 26.0% overall increase from 2015 to 2030. The long-term growth rate for WSCH projects to an overall increase of 39.6%. The projected growth for enrollment and WSCH in terms of absolute values is captured in the graphics that follow.

On-Line Education: Projected Growth for Enrollments



On-Line Education: Projected Growth for WSCH



Source: MAAS Companies Projections

The Application of Growth to the Future Program of Instruction

Similar to the analysis conducted for review of the current program of instruction, growth for the future program was done on a program/discipline basis and assembled back into the department level. Growth allocation, as applied to the future program of instruction, was not done equally across the board. Stronger performing programs/disciplines were given a greater range for growth than programs/disciplines performing at a subpar level. Based on the forecasts for student enrollments and WSCH, the program of instruction is projected for incremental expansion. The priority for the On-line Program of Instruction will be on curricular efficiency, recapturing some of the ground lost, particularly for WSCH, and for improving the course loads of students who are enrolled. Applying the growth forecasts previously noted for enrollment and WSCH, the characteristics of the 2030 program of instruction are captured in the table that follows.

On-Line Education: Characteristics of Projected Program of Instruction for the Year 2030

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	Lec. WSCH	Lab WSCH	FTES	% of Curr.	% of WSCH
Allied Health	23	652	28.34	1,614.14	70.18	1,614.14	0.00	50.12	9.87%	6.65%
CIS / Business	49	1403	28.63	4,782.56	97.60	3,154.59	1627.97	148.49	21.03%	19.69%
Child Dev./Education	33	1163	35.23	3,519.45	106.65	3,308.28	211.17	109.27	14.16%	14.49%
Counseling	8	304	38.00	583.71	72.96	400.08	183.63	18.12	3.43%	2.40%
English	24	669	27.89	2,765.56	117.56	2,765.56	0.00	85.86	10.30%	11.39%
Library	3	109	36.40	236.64	58.66	118.32	118.32	7.35	1.29%	0.97%
Mathematics	21	620	29.51	2,513.70	136.85	2,513.70	0.00	78.04	9.01%	10.35%
Physical Education	5	181	36.23	543.70	79.69	543.70	0.00	16.88	2.15%	2.24%
Public Service	7	246	35.19	738.78	75.15	738.78	0.00	22.94	3.00%	3.04%
Science	8	238	29.78	1,102.42	156.40	613.41	489.01	34.23	3.43%	4.54%
Social Science	38	1325	34.86	3,974.45	96.22	3,974.45	0.00	123.40	16.31%	16.36%
Visual & Perf. Arts	14	425	30.34	1,913.00	106.00	1,311.49	601.51	59.39	6.01%	7.78%
TOTAL	233	7,335	31.48	24,288.11	104.24	21,056.50	3,231.61	754.09		

Source: MAAS Companies Projections

Based on the application of the growth rate capacities, the 2030 On-line Program of Instruction is projected have 233 course offerings that generate a total of 24,288.11 WSCH and 754.09 FTES. WSCH produced per class section is projected to reach 104.24 and enrolled seats per section average 31.48. The future on-line program of instruction is projected to be primarily driven by the departments of CIS/Business, Social Science, Child Development/Education, English and Mathematics. Combined, these departments project to account for more than 70% of the curricular offerings and generate more than 70% of the WSCH and FTES produced.

A look at the On-line Program of Instruction is provided via a composite breakdown from the baseline year of 2015 to the year 2030. For this analysis, the key elements of net sections, WSCH, FTES, lecture WSCH and laboratory WSCH were used to provide a frame of reference and a basis for comparison.

On-line Education: Composite Profile of the Program of Instruction Projections 2015 – 2030

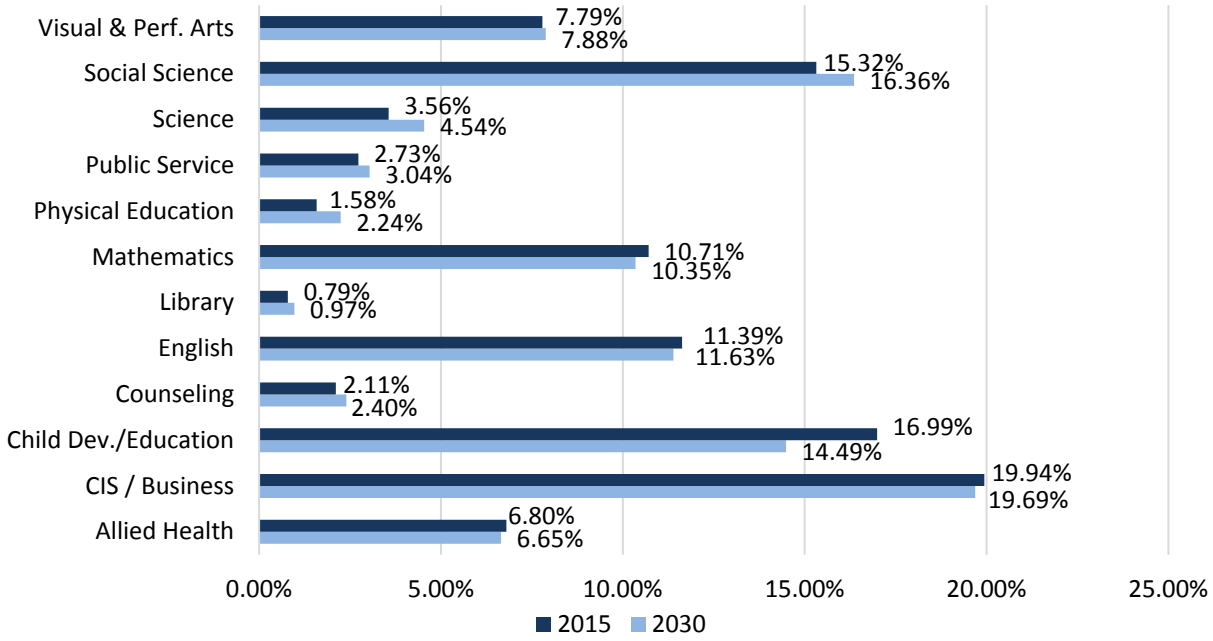
	Actual					Projected														
	YR 2015					YR 2020					YR 2025					YR 2030				
Department	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES
Allied Health	19	1,166	-	1,166	36.2	20	1,323	0	1,323	41.1	21	1,513	0	1,513	47.0	23	1,614	0	1,614	50.1
CIS / Business	41	1,900	1,618	3,518	109.2	43	2,575	1,303	3,878	120.4	46	2,874	1,463	4,336	134.6	49	3,155	1,628	4,783	148.5
Child Dev./Education	30	2,971	190	3,160	98.1	31	3,106	198	3,304	102.6	32	3,252	208	3,460	107.4	33	3,308	211	3,519	109.3
Counseling	6	384	0	384	11.9	6	277	133	410	12.7	6	305	148	453	14.1	8	400	184	584	18.1
English	16	1,938	0	1,938	60.2	19	2,261	0	2,261	70.2	21	2,507	0	2,507	77.8	24	2,766	0	2,766	85.9
Library	2	72	72	143	4.4	2	76	76	153	4.7	3	111	111	223	6.9	3	118	118	237	7.3
Mathematics	15	1,898	0	1,898	58.9	17	2,081	0	2,081	64.6	19	2,245	0	2,245	69.7	21	2,514	0	2,514	78.0
Physical Education	3	294	0	294	9.1	3	307	0	307	9.5	4	401	0	401	12.4	5	544	0	544	16.9
Public Service	4	396	0	396	12.3	5	531	0	531	16.5	6	633	0	633	19.7	7	739	0	739	22.9
Science	4	298	234	532	16.5	5	382	310	692	21.5	6	478	374	852	26.5	8	613	489	1,102	34.2
Social Science	28	2,520	0	2,520	78.2	31	2,978	0	2,978	92.5	35	3,454	0	3,454	107.2	38	3,974	0	3,974	123.4
Visual & Perf. Arts	9	896	549	1,446	44.9	11	1,026	488	1,514	47.0	12	1,161	494	1,655	51.4	14	1,311	602	1,913	59.4
TOTAL	177	14,733	2,663	17,396	540.1	193	16,925	2,508	19,433	603.3	211	18,933	2,798	21,731	674.7	233	21,057	3,232	24,288	754.1

Source: MAAS Companies Projections

WSCH Generation: Current and Projected Programs of Instruction

The following graphic provides a visual comparison of the On-line Program of Instruction (in terms of department percentage shares) for WSCH generation as it currently is (year 2015) and as it is projected (year 2030).

On-line Education: Relative Values for WSCH Generation 2015 – 2030



Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; MAAS Companies projections

Qualification for Space

The State does not recognize the need for space for virtual campuses, as the nature of the On-line Program of Instruction is based on providing education outside of the bricks and mortar of the institution. Space designated for Instructional Media and Office (to accommodate faculty providing the distance learning courses) is expected to be allocated at each campus site that is engaged in the provision of on-line education. While WSCH and FTES are accounted for in the funding formulas of the College, designated space for the provision of on-line instruction is not.

Eastern Sierra College Center

Overview

The Eastern Sierra College Center is comprised of two sites. One is situated in Bishop, California, the other in Mammoth, California. Both are located on the eastern side of the Sierra Nevada Mountain Range. The Bishop Center is physically located in Inyo County. Its population base is scattered along Highway 395 in small communities that are roughly within a 20-mile range. The Mammoth Center is located to the north in Mono County. It has population-base that is primarily clustered around the Mono Lakes area. The two campuses are approximately an hour's drive from each other. Because the centers are so different, they will be viewed both separately and collectively in this section of the Educational Master Plan.

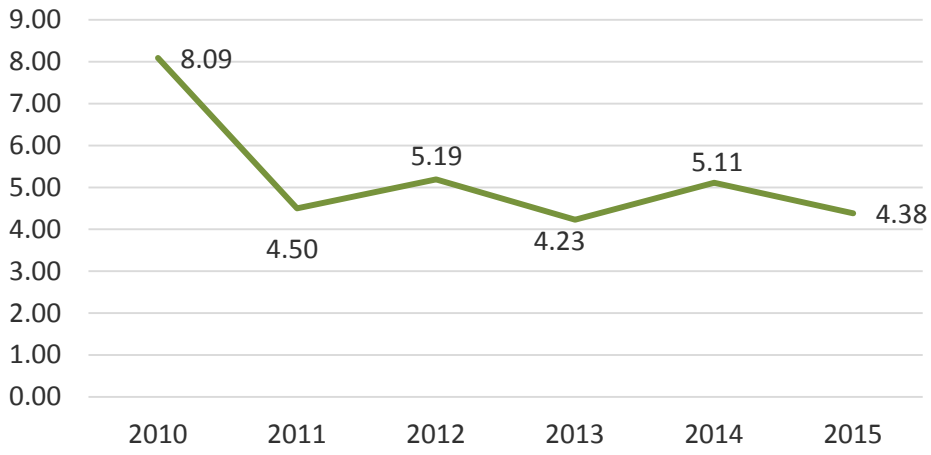
Historical Trends that Will Influence Growth Capacity

The trends for the two key measures of growth or decline at the Eastern Sierra College Center, i.e. student enrollment and WSCH generation, share commonalities with other campuses that comprise the College. At the Bishop Center, student enrollment has fluctuated significantly over the past 15-years. Starting in the Fall Semester of 2001, when student enrollment was 529, it dipped to a low of 273 in 2005, rebounded to a 15-year high of 830 in 2006, declined to 312 in 2010 and rose to a second all-time high of 577 in 2011. Since that time, student enrollment has averaged 457. Over the past 5-years, it has been declining. WSCH, over the same 15-year view period, started at 2,303 in 2001, and, after declining from 2002 to 2005, rebounded with a highwater mark of 3,160 in 2008. Over the past 5-years, WSCH has been is a state of decline. For 2015 Fall Semester, it was down to 1,907.

At the Mammoth Center, student enrollment, after hitting a low of 161 in 2006, has been on the upswing, particularly over the past 5-years. In 2010, it was 228. From 2011 to 2015, however, it averaged 441. For the 2015 Fall Semester, it was 458. The pattern for WSCH production at the Mammoth Center, however, shows a loss of approximately 300 WSCH from 2010 to 2015. This represents -14.03% overall or an annual average decline of -2.81%.

Data compiled in the graphic that follows melds the measures of student enrollment and WSCH into a hybrid relationship – the amount of WSCH generated per student enrollment.

Bishop Center: Past 5-Year Trend WSCH / Enrollment

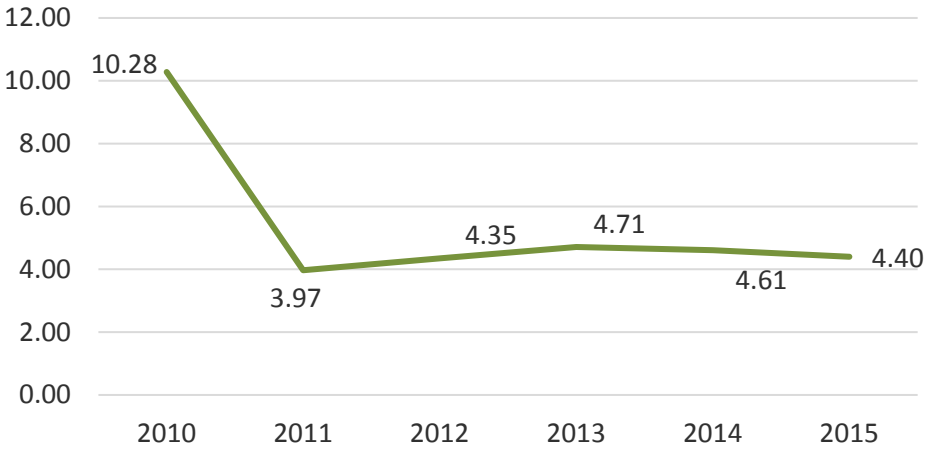


Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The measure for WSCH per enrollment at the Bishop Center shows a consistent pattern of decline in the course loads taken by students over the past 5-years. For the 2015 Fall Semester, students took, on average (using a three-credit course as the basis for comparison), course loads of only 1.46. For 2015, the WSCH per enrollment at the Bishop Center was 4.38. As a basis for comparison, the WSCH per enrollment average over the past 15-years has been 5.32.

The trend at the Mammoth Center was similar. Over the past 5-years, there has been a decline in WSCH production and a new plateau established at a much lower level. Reference to the current condition for WSCH generated per enrollment is captured in the graphic that follows.

Mammoth Center: Past 5-Year Trend WSCH / Enrollment



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

For the 2015 Fall Semester, the Mammoth Center registered 4.40 WSCH per enrollment. It has averaged 5.26 WSCH per enrollment over the past 15-years. The measures for the past 5-years have all fallen under that average. The for 2015 data suggest that students took, on average (using a three-credit course as the basis for comparison), a course load of only 1.47. This is down considerably from the highwater mark of 2010, when WSCH per enrollment rendered equivalent student course loads of 3.43. For comparative purposes, when the 2012 Educational Master Plan was completed, WSCH per enrollment at the Bishop Center was projected to maintain a pace that ranged between a high of 8.09 to a low of 6.42. At the Mammoth Center, the 2012 Educational Master Plan forecast was for a range of 10.28 to 10.10.

Current Status

The Existing Program of Instruction

The existing program of instruction (2015 Fall Semester) for the at the Bishop Center is summarized, at the department level, in the table that follows. The program of instruction serves to not only provide a snapshot of the current curricular status at the Bishop Center but it also facilitates the planning process by providing an excellent foundation from which to build the program of instruction for the future. Whether it is to meet future space needs for academic purposes, to address the requirements of support and administrative services, to define the physical structures on the campus or to support campus logistics, all needs on campus relate to and emanate from the program of instruction.

Bishop Center: Characteristics of Fall 2015 Program of Instruction

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	FTES	FTEF	Lec. Hrs	Lab Hrs.	On-Line Hrs.	Indep. Study
Allied Health	4	30	7.50	199.69	49.92	6.20	0.70	306	162	108	144
CIS / Business	1	11	11.00	37.36	37.36	1.16	0.10	0	0	54	0
Child Dev./Education	2	16	8.00	5.15	2.58	0.16	0.25	0	0	0	108
Counseling	1	45	45.00	103.39	103.39	3.21	0.00	36	0	0	0
English	2	59	29.50	271.52	135.76	8.43	0.60	144	0	0	0
Mathematics	2	53	26.50	243.82	121.91	7.57	0.53	144	0	0	0
Physical Education	2	24	12.00	83.42	41.71	2.59	0.15	108	0	0	0
Science	2	44	22.00	299.22	149.61	9.29	0.80	324	324	0	0
Social Science	4	82	20.50	278.93	69.73	8.66	0.40	216	0	0	0
Visual & Perf. Arts	5	71	14.20	383.28	76.66	11.90	0.98	432	324	0	0
TOTAL	**25**	**435**	**17.40**	**1,905.78**	**76.23**	**59.17**	**4.51**	**1,710**	**810**	**162**	**252**

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The current program of instruction at the Bishop Center is characterized as having ten departments. For the 2015 Fall Semester, the program of instruction featured 25 class sections. These class sections generated 1,905.78 WSCH and accounted for 59.17 FTES. The average enrolled seats per section was 17.40. Class sections generated, on average, 76.23 WSCH per section. Lecture hours accounted for 1,710 of the total instructional hours taught while laboratory hours tallied 810. Additionally, the Bishop Center logged a total of 162 hours of on-line education and 252 hours of independent study. The average WSCH per load (FTEF) for the 2015 Fall Semester was 422.57. In contrast, the Bishop Center had 35 class sections that generated 2,524 WSCH and produced 78.38 FTES in the 2012 Educational Master Plan. The measures for enrolled seats per section was lower in 2012 (15.83) as was the WSCH generated per section (72.13).

The table that follows depicts the current program of instruction at the Mammoth Center.

Mammoth Center: Characteristics of Fall 2015 Program of Instruction

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	FTES	FTEF	Lec. Hrs	Lab Hrs.	On-Line Hrs.	Indep. Study
Allied Health	4	46	11.50	258.96	64.74	8.04	0.77	362	342	108	0
CIS / Business	1	20	20.00	67.96	67.96	2.11	0.10	0	0	54	0
Child Dev./Education	2	6	3.00	2.58	1.29	0.08	0.25	0	0	0	108
Counseling	1	45	45.00	103.39	103.39	3.21	0.00	36	0	0	0
English	4	104	26.00	455.43	113.86	14.14	1.13	288	0	0	0
Mathematics	2	46	23.00	211.61	105.81	6.57	0.53	144	0	0	0
Science	2	49	24.50	333.04	166.52	10.34	0.80	216	216	0	0
Social Science	4	82	20.50	278.93	69.73	8.66	0.40	216	0	0	0
Visual & Perf. Arts	3	60	20.00	303.08	101.03	9.41	0.58	216	108	0	0
TOTAL	**23**	**458**	**19.91**	**2,014.98**	**87.61**	**62.56**	**4.56**	**1,478**	**666**	**162**	**108**

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

For the 2015 Fall Semester, the Mammoth Center program of instruction was characterized as having 23 class sections that generated 2,015 WSCH and 62.56 FTES. Lecture hours dominated laboratory hours by more than a 2 to 1 margin, 1,478 hours of lecture to 666 hours of laboratory. On-line instruction at the Campus accounted for 162 hours while independent study was responsible for 108 hours of instructional time. The WSCH generated per section was 87.61 and enrolled seats per section averaged 19.91. Compared to the data presented in the 2012 Educational Master Plan (2010 Fall Semester used as a baseline), class sections offered equaled 24, while WSCH and FTES were significantly higher at 2,346 and 72.85 respectively. The measures for WSCH per section and enrolled seats per section was also higher at 97.77 and 22.75 respectively.

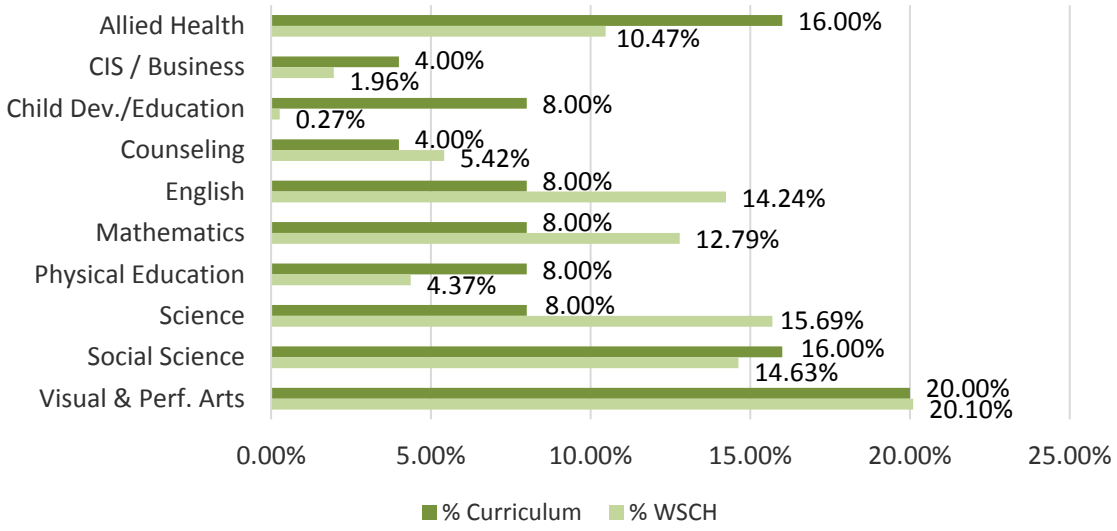
Distribution of the Curriculum / Distribution of WSCH Generation

The current program of instruction at the Bishop Center is dominated by the departments of Visual and Performing Art, Social Science, Allied Health and Science. Combined, these departments account for 60% of the curriculum and generate 61% of the WSCH produced. Individually, Visual and Performing Arts represents 20.0% of all curricular offerings and 20.10 % of all WSCH generated. Social Science maintains a 16.0% share of the curriculum and produces 14.63% of all WSCH. Allied Health represents 16.00% of the overall curriculum and is responsible for 10.47% of the WSCH at the Bishop Center. Science, English and Mathematics have the distinction of accounting for smaller shares of the curriculum but generating substantial comparative WSCH. Each accounts for 8.00% of the curricular offerings; each, however, generates double digit percentage shares relative to WSCH production (15.69%, 14.25% and 12.79% respectively).

The Mammoth Center has English as its dominate department. It represents 17.39% of the curriculum and produces almost one-fourth (22.59%) of all WSCH. It is followed by Social Science, which accounts for 17.39% of the curriculum and generates 13.84% of all WSCH, and Visual and Performing Arts, which represents 13.04% of the curriculum and is responsible for 15.03% of the WSCH produced. Allied Health commands a healthy portion of the curriculum at 17.39% with total WSCH production of 12.85%. Science, with 8.70% of the curriculum, almost doubles the commensurate output for the percentage share of WSCH produced with 16.53%. It is the most efficient department of nine departments at the Mammoth Center.

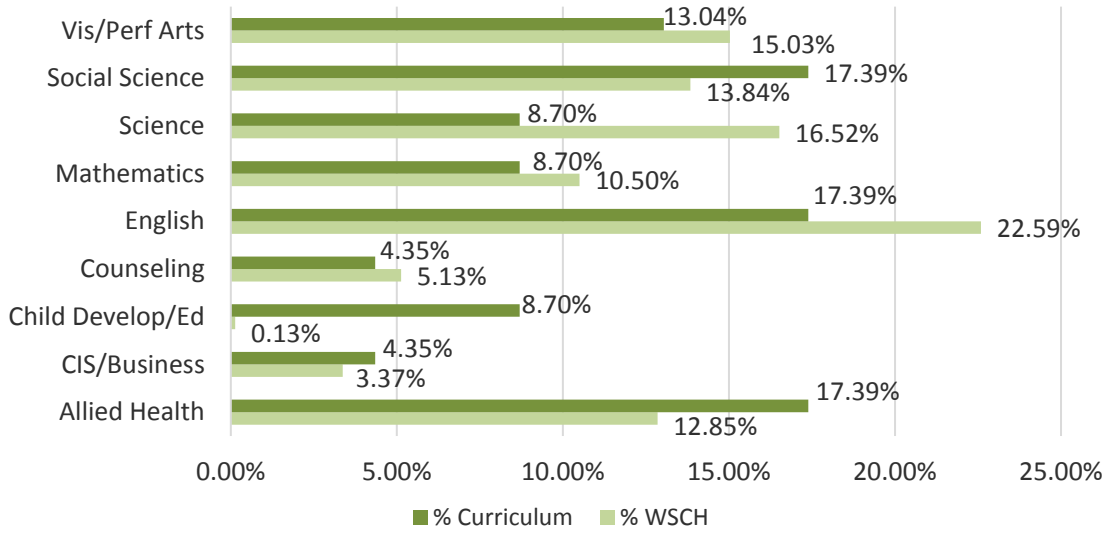
The graphics that follow capture both the current curriculum distribution and the distribution for WSCH for all departments at both the Bishop and Mammoth Centers.

Bishop Center: Percent of Curriculum vs. Percent of WSCH



Mammoth Center: Percent of Curriculum vs. Percent of WSCH

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies



Current Space Holdings to Support the Program of Instruction

Space holdings are defined as the physical facilities owned and used to support the program of instruction and support services on a campus. For the purposes of this perspective, space holdings will be viewed via the official Report 17 of the Kern Community College District, a state mandated document submitted to the State Chancellor's Office annually. The perspective presented views the space holdings of the Bishop and Mammoth Centers as one – Eastern Sierra Community College (ESCC). A comparison of the space holdings from the 2012 Educational Master Plan (2010 Fall Semester used as the baseline) and the current Educational Master Plan (2015 Fall Semester used as the baseline) is provided in the table that follows.

Eastern Sierra College Center: Space Holdings

State Rm. Code	Description	2010 Space Inventory
0	Inactive	-
100	Classroom	2,397
210-230	Laboratory	7,785
235-255	Non-Class Laboratory	-
300	Office/Conference	3,422
400	Library	3,145
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	612
530-535	(AV/TV)	2,151
540-555	Clinic/Demonstration	-
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	2,970
630-635	Food Service	-
650-655	Lounge/Lounge Service	1,447
660-665	Merchandizing	832
670-690	Meeting /Recreation	2,042
710-715	Data Processing/Comp.	-
720-770	Physical Plant	3,135
800	Health Services	-
	Totals	**29,938**

State Rm. Code	Description	2015 Space Allocation
0	Inactive	367
100	Classroom	8,506
210-230	Laboratory	8,079
235-255	Non-Class Laboratory	-
300	Office/Conference	3,860
400	Library	3,451
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	206
530-535	(AV/TV)	-
540-555	Clinic/Demonstration	115
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	2,650
630-635	Food Service	-
650-655	Lounge/Lounge Service	1,191
660-665	Merchandizing	1,341
670-690	Meeting /Recreation	618
710-715	Data Processing/Comp.	942
720-770	Physical Plant	-
800	Health Services	-
	Totals	**31,326**

Source: Cerro Coso Community College 2012 Educational Master Plan; Kern Community College District Report 17; analysis MAAS Companies

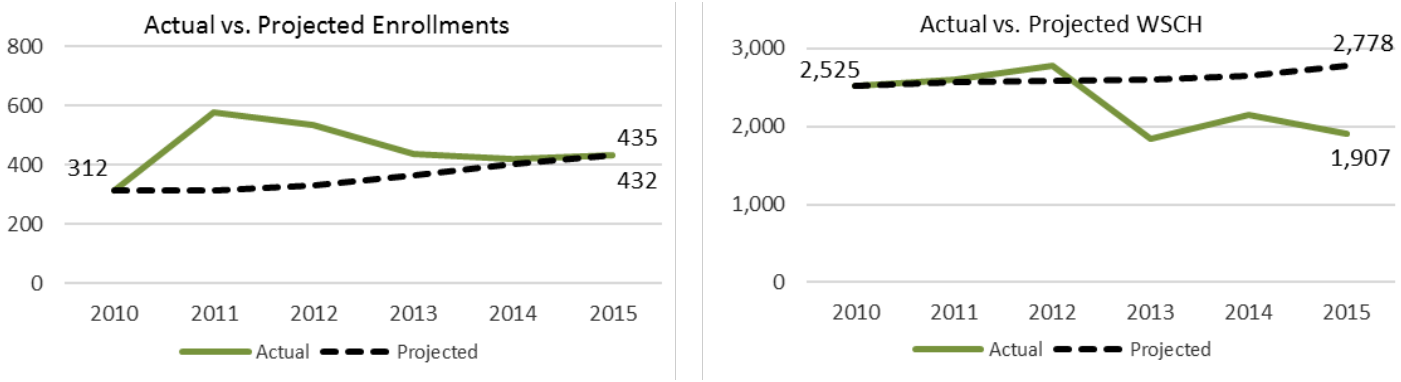
Future Projections

The Campus' Capacity for Growth

The Eastern Sierra College Center will not be bound by what has occurred in the past but growth for the future will be significantly influenced by the growth capacities that have been achieved in the past. When the last Educational Master Plan 2012 was completed, the annual student enrollment growth rate from 2010 to 2015 for the Bishop Center was projected to be 6.41% on annual basis (i.e. through the first 5-years); WSCH was projected to grow at 1.70% annually. For the 2015 Fall Semester, the actual annual rate of growth for student enrollment averaged 6.57% while WSCH growth declined at an average annual rate of -4.08%.

The graphic that follows shows the projected values forecasted in the 2012 Educational Master Plan versus the actual values attained for measures of student enrollment and WSCH.

Bishop Center: Forecasted Projections Versus Actual 2010 – 2015

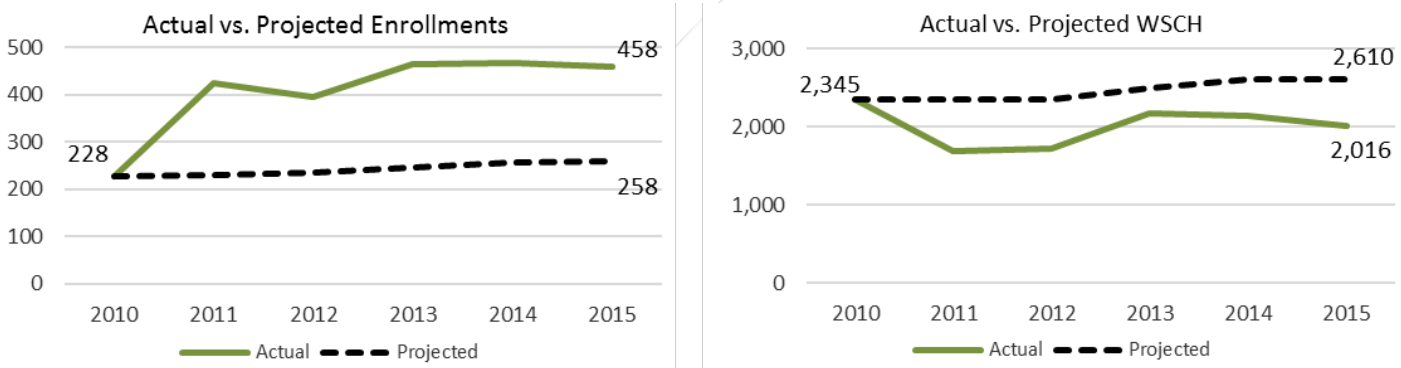


Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; analysis MAAS Companies

The dynamics for projected versus actual student enrollment and WSCH growth from 2010 to 2015 for the Mammoth Center showed an actual annual growth rate of 16.81% for enrollment against a projected annual growth rate of 2.19%. In absolute values, student enrollment at the Mammoth Center went from 228 students to 458 students over the 5-year period. Alternately, WSCH was projected to grow at an annual average rate of 1.88% over the past five years. The actual annual average growth rate, however, was -2.34%. In 2010, WSCH recorded for the Mammoth Center was 2,345. It was down to 2,016 in for the 2015 Fall Semester.

The graphic that follows portrays the actual versus projected rates of growth for both student enrollment and WSCH at the Mammoth Center.

Mammoth Center: Forecasted Projections Versus Actual 2010 – 2015



Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; analysis MAAS Companies

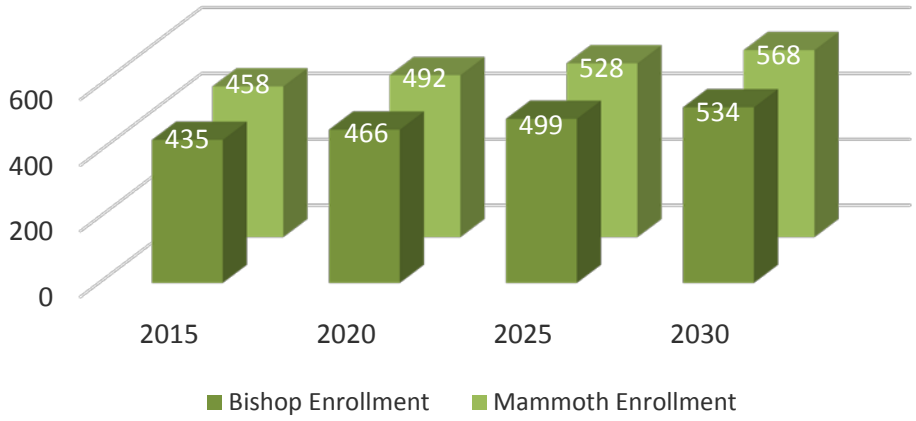
Projected Forecast for Growth

Considering the key factors, including the past track record of ESCC, the population dynamics and capacities of the service areas, the projected rates of high school graduation, the ability to retain students, the ability to attract new students and an appreciation for the need to improve the level of curricular productivity/efficiency, the forecast for the Eastern Sierra College Center is for continued but slower gains for student enrollment and for significant gains in WSCH generation. The Bishop Center annual growth rate capacity over the next 15-years is projected at 1.52% for student enrollment and 2.64% for WSCH. This translates to a cumulative 22.8% increase in student enrollment over the next 15-years. For WSCH, the long-term growth rate projects at an overall increase of 39.6%.

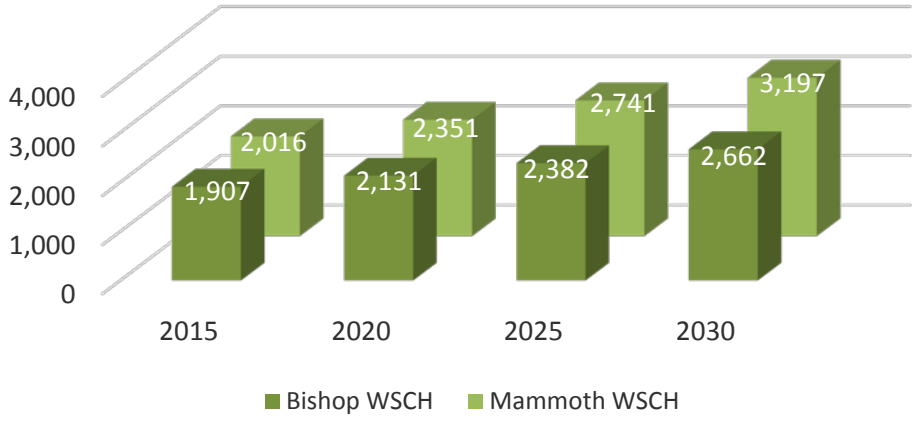
The annual growth rate capacity at the Mammoth Center is projected to be 1.59% for student enrollment and 3.90% for WSCH. This represents a 23.9% gain in student enrollment over the next 15-years. The long-term forecast for WSCH equates to a gain of 58.5%.

It should be noted that the forecast for growth addresses the potential for both the Bishop and Mammoth Centers as viewed from the current demographic markers and area trends. The projected growth for both is captured in absolute values for the 5-year benchmark years from 2015 to 2030 in the graphics that follows.

Eastern Sierra College Center: Projected Enrollment Growth



Eastern Sierra College Center: Projected WSCH Growth



Source: Maas Companies Projections

The Application of Growth to the Future Program of Instruction

Based on the forecasts for student enrollment and WSCH, the program of instruction is projected for incremental expansion only. The relative growth of student enrollment and WSCH at the Mammoth Center will be a little higher than that of the Bishop Center. The priority for both campuses will be on curricular efficiency, recapturing some of the ground lost in WSCH generation, particularly over the past five-years, and for expanding the course load dynamics of enrolled students. Applying the growth forecasts previously noted for student enrollment and WSCH, the characteristics of the 2030 program of instruction at both campuses are captured in the tables that follow.

Bishop Center: Characteristics of Projected Program of Instruction for the Year 2030

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	Lec. WSCH	Lab WSCH	FTES	% of Curr.	% of WSCH
Allied Health	5	47	9.35	311.20	62.24	196.04	110.12	9.66	16.13%	11.69%
CIS / Business	1	14	14.19	48.18	48.18	0.00	0.00	1.50	3.23%	1.81%
Child Dev./Education	2	21	10.41	24.00	12.00	0.00	0.00	0.75	6.45%	0.90%
Counseling	1	50	49.67	114.12	114.12	114.12	0.00	3.54	3.23%	4.29%
English	4	92	22.93	422.16	105.54	422.16	0.00	13.11	12.90%	15.86%
Mathematics	4	100	25.05	461.04	115.26	461.04	0.00	14.31	12.90%	17.32%
Physical Education	2	29	14.46	100.50	50.25	100.50	0.00	3.12	6.45%	3.78%
Science	3	60	20.13	410.64	136.88	205.32	205.32	12.75	9.68%	15.43%
Social Science	4	94	23.59	320.96	80.24	320.97	0.00	9.97	12.90%	12.06%
Visual & Perf. Arts	5	83	16.65	449.30	89.86	283.92	165.36	13.95	16.13%	16.88%
TOTAL	**31**	**590**	**19.04**	**2,662.10**	**85.87**	**2,104.07**	**480.80**	**82.65**		

Source: Maas Companies Projections

The future program of instruction at the Bishop Center is projected to be driven by the departments of Allied Health, Visual and Performing Arts, English, Mathematics and Social Science. Combined, these departments are expected to account for 77% of the WSCH generated at the Bishop Center. In total, the Bishop Center is projected to have 31 class sections that generate 2,662 total WSCH and 82.65 FTES on a semester basis by the year 2030.

Mammoth Center: Characteristics of Projected Program of Instruction for the Year 2030

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	Lec. WSCH	Lab WSCH	FTES	% of Curr.	% of WSCH
Allied Health	4	55	13.70	308.60	77.15	145.15	139.45	9.58	12.90%	9.65%
CIS / Business	1	25	24.79	84.24	84.24	0.00	0.00	2.62	3.23%	2.63%
Child Dev./Education	2	12	5.81	5.00	2.50	0.00	0.00	0.16	6.45%	0.16%
Counseling	1	56	55.99	128.64	128.64	128.64	0.00	3.99	3.23%	4.02%
English	7	182	26.03	798.00	114.00	798.00	0.00	24.78	22.58%	24.96%
Mathematics	3	84	28.02	386.64	128.88	386.64	0.00	12.00	9.68%	12.09%
Science	4	91	22.84	620.96	155.24	310.48	310.48	19.28	12.90%	19.42%
Social Science	5	115	23.00	391.16	78.23	391.16	0.00	12.14	16.13%	12.24%
Visual & Perf. Arts	4	94	23.46	473.96	118.49	305.52	168.44	14.72	12.90%	14.83%
TOTAL	**31**	**714**	**23.02**	**3,197.20**	**103.14**	**2,465.59**	**618.37**	**99.27**		

Source: Maas Companies Projections

The future program of instruction at the Mammoth Center is projected to have 31 class sections that generate 3,197 WSCH and 99.27 FTES by the year 2030. It is projected to be driven by the departments of English, Science, Visual and Performing Arts, Social Science and Mathematics. Together, these departments are forecasted to produce 84% of the WSCH at the Mammoth Center.

A progressive perspective is provided for the forecasted program of instruction in a by-department-breakdown from the baseline year of 2015 to the year 2030. For this analysis, the key elements of net sections, WSCH, FTES, lecture WSCH and laboratory WSCH were used to provide a basis for comparison. These perspectives are provided individually for both the Bishop and Mammoth Centers.

Bishop Center: Composite Profile of the Program of Instruction Projections 2015 – 2030

	Actual					Projected														
	YR 2015					YR 2020					YR 2025					YR 2030				
Department	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES
Allied Health	4	100	100	200	6.2	4	132	71	203	6.3	5	138	65	203	6.3	5	196	110	306	9.5
CIS / Business	1	-	-	37	1.2	1	0	0	40	1.2	1	0	0	44	1.4	1	0	0	48	1.5
Child Dev./Education	2	0	0	5	0.2	2	0	0	9	0.3	2	0	0	16	0.5	2	0	0	24	0.7
Counseling	1	103	0	103	3.2	1	104	0	104	3.2	1	108	0	108	3.4	1	114	0	114	3.5
English	2	272	0	272	8.4	3	364	0	364	11.3	4	435	0	435	13.5	4	422	0	422	13.1
Mathematics	2	244	0	244	7.6	3	337	0	337	10.5	3	357	0	357	11.1	4	461	0	461	14.3
Physical Education	2	83	0	83	2.6	2	89	0	89	2.8	2	97	0	97	3.0	2	101	0	101	3.1
Science	2	150	150	299	9.3	2	149	149	298	9.2	2	152	152	304	9.5	3	205	205	411	12.7
Social Science	4	279	0	279	8.7	4	293	0	293	9.1	4	310	0	310	9.6	4	321	0	321	10.0
Visual & Perf. Arts	5	218	165	383	11.9	5	249	145	394	12.2	5	263	151	414	12.9	5	284	165	449	13.9
TOTAL	25	1,449	414	1,906	59.2	27	1,717	364	2,131	66.2	29	1,861	368	2,290	71.1	31	2,104	481	2,657	82.5

Mammoth Center: Composite Profile of the Program of Instruction Projections 2015 – 2030

	Actual					Projected														
	YR 2015					YR 2020					YR 2025					YR 2030				
Department	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES
Allied Health	4	132	127	259	8.0	4	135	130	265	8.2	4	135	129	284	8.8	4	145	139	309	9.6
CIS / Business	1	-	-	68	2.1	1	0	0	70	2.2	1	0	0	44	1.4	1	0	0	84	2.6
Child Dev./Education	2	0	0	3	0.1	2	0	0	3	0.1	2	0	0	16	0.5	2	0	0	5	0.2
Counseling	1	103	0	103	3.2	1	105	0	105	3.3	1	119	0	119	3.7	1	129	0	129	4.0
English	4	455	0	455	14.1	5	520	0	520	16.2	6	667	0	667	20.7	7	798	0	798	24.8
Mathematics	2	212	0	212	6.6	2	225	0	225	7.0	3	359	0	359	11.1	3	387	0	387	12.0
Science	2	167	167	333	10.3	3	221	221	441	13.7	3	237	237	473	14.7	4	310	310	621	19.3
Social Science	4	279	0	279	8.7	4	302	0	302	9.4	4	322	0	322	10.0	5	391	0	391	12.1
Visual & Perf. Arts	3	203	100	303	9.4	4	262	158	421	13.1	4	275	162	437	13.6	4	306	168	474	14.7
TOTAL	23	1,551	393	2,015	62.6	26	1,770	509	2,351	73.0	28	2,113	528	2,721	84.5	31	2,466	618	3,197	99.3

Source: Maas Companies Projections

Qualification for Space

The qualification for space, as defined by the State's Title V guidelines, is largely predicated on the program of instruction's ability to generate WSCH. In this regard, it is directly tied to the growth or decline of the program of instruction. While there are other criteria and measures for space qualification, generally, the more WSCH generated, the greater the need for space; lesser values for WSCH decrease the need for space.

In pursuit of the qualification for space, attention should not be directed exclusively to achieving the specific WSCH values for the five-year intervals from 2015 to 2030. Rather, the emphasis should be placed on ensuring that the appropriate types of spaces are in place whenever the WSCH milestones are met – that may be sooner or later than the established benchmarks.

Campus Space Needs to Support the Program of Instruction

The space inventory submitted to the State Chancellor's Office by the Kern Community College District represents the Bishop and Mammoth Centers as a single entity – the Eastern Sierra College Center. To provide each campus with more usable data, a room-by-room analysis was conducted using the Eastern Sierra College Center Report 17 information and assembling the findings into separate space inventories – one for the Bishop Center and one for the Mammoth Center. Space needs were based on the State's Title V guidelines for each category of space. Where necessary and / or appropriate, the guidelines were adapted to reflect the smaller size of the two campuses.

Generally, there are five space categories that are closely monitored by the State: Classroom (lecture) space, Laboratory space, Office space, Library space and Instructional Media space. These are used to determine funding worthiness when monies are available from state sources. Space needs, however, include not only those that directly support and / or are related to the program of instruction but also fourteen other space categories that are integral to providing students with a complete campus. Per the formulas derived for space qualification, the measures of WSCH generation, FTES, student enrollment, full-time equivalent faculty (FTEF) and day-graded enrollment were used to make the space determinations for all spaces on the two campus.

The table that follows depicts the qualification for space via the State Title V standards for the Bishop Center.

Bishop Center: Total Space Needs Via State Title 5 Standards

Key Space Categories Monitored by the State					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
100	Classroom	3,796	995	(2,801)	0
210-230	Laboratory	5,580	1,139	(4,441)	0
235-255	Non-Class Laboratory	-	51	51	51
300	Office/Conference	2,176	785	(1,391)	0
400	Library	1,909	2,343	434	434
530-535	(AV/TV)	-	2,153	2,153	2,153
	sub total	**13,461**	**7,466**	**(5,995)**	**2,638**
Non-State Monitored Space Categories					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
0	Inactive	367	0	(367)	0
510-515	Armory/Armory Service	-	0	0	0
520-525	Phys. Ed. (Indoor)	206	1,200	994	994
540-555	Clinic/Demonstration	115	220	105	105
580	Greenhouse	-	0	0	0
590	Other	-	0	0	0
610-625	Assembly/Exhibition	2,650	534	(2,116)	0
630-635	Food Service	-	320	320	320
650-655	Lounge/Lounge Service	324	55	(269)	0
660-665	Merchandizing	1,048	1,154	106	106
670-690	Meeting /Recreation	336	178	(158)	0
710-715	Data Processing/Comp.	836	325	(511)	0
720-770	Physical Plant	-	593	593	593
800	Health Services	-	410	410	410
	sub total	**5,882**	**4,989**	**(893)**	**2,528**
	TOTAL	**19,343**	**12,455**	**(6,888)**	**5,166**

Source: Kern Community College District Report 17 2017/2018; State Title V Standards; analysis MAAS Companies

As interpreted through the State's Title V standards, the Bishop Center does not show a long-term need for academic space. Based on the projections, it will qualify for only 995 ASF of classroom space by 2030 but have 3,796 ASF (already) available. Laboratory space will qualify for 1,139 ASF of space in 2030 but it presently has 5,580 ASF available. Overall, the need / qualification for space in the key areas monitored by the state will be 2,638 ASF. Non-classroom laboratory space will account for +51 ASF, Library +434 ASF and Instructional Media +2,153 ASF.

Non-State monitored categories will show and overall need for 5,166 ASF, with space needs / qualification in the specific categories of Physical Education (+994), Clinic/Demonstration (+105), Food Service (+320), Merchandizing (+106), Physical Plant (+593) and Health Services (+410).

The need / qualification for space at the Mammoth Center shows that the current inventory of Classroom (lecture) and Laboratory will be sufficient to accommodate the needs of the future program of instruction through the year 2030. In the other three space categories monitored by the state, the Mammoth Center is projected to qualify for 1,402 ASF overall, 54 ASF in Non-Class Laboratory and 1,348 ASF in Instructional Media.

For the non-state monitored space categories, the Mammoth Center is projected to qualify for an additional 3,013 ASF by the year 2030. This will include Physical Education +1,200 ASF, Clinic Demonstration +221 ASF, Assembly Exhibition +568 ASF, Food Service +341 ASF, Merchandizing +422 ASF, Data Processing +219 ASF, Physical Plant +525 ASF, and Health Services +410 ASF.

Because of their smaller size, the Campuses of Bishop and Mammoth will need to distinguish between the qualification for space and adequacy of space that it has to support its educational mission. The guidelines for state-monitored space categories are tied to WSCH generation and compliance is closely monitored by the State Chancellor's Office within the Districts 5-Year (Capital) Construction Plan. The guidelines for the non-state monitored space categories, however, offer some room for flexibility.

The long-term needs / qualification for space at the Mammoth Center is depicted in the graphic that follows.

Mammoth Center: Total Space Needs Via State Title 5 Standards

Source: Kern Community College District Report 17 2017/2018; State Title V Standards; analysis MAAS Companies

Key Space Categories Monitored by the State					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
100	Classroom	4,710	1,166	(3,544)	0
210-230	Laboratory	2,499	1,495	(1,004)	0
235-255	Non-Class Laboratory	-	54	54	54
300	Office/Conference	1,684	942	(742)	0
400	Library	1,542	1,452	(90)	0
530-535	(AV/TV)	-	1,348	1,348	1,348
	sub total	**10,435**	**6,457**	**(3,978)**	**1,402**
Non-State Monitored Space Categories					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
0	Inactive	-	0	0	0
510-515	Armory/Armory Service	-	0	0	0
520-525	Phys. Ed. (Indoor)	-	1,200	1,200	1,200
540-555	Clinic/Demonstration	-	221	221	221
580	Greenhouse	-	0	0	0
590	Other	-	0	0	0
610-625	Assembly/Exhibition	-	568	568	568
630-635	Food Service	-	341	341	341
650-655	Lounge/Lounge Service	867	67	(800)	0
660-665	Merchandizing	293	715	422	422
670-690	Meeting /Recreation	282	189	(93)	0
710-715	Data Processing/Comp.	106	325	219	219
720-770	Physical Plant	-	525	525	525
800	Health Services	-	410	410	410
	sub total	**1,548**	**4,561**	**3,013**	**3,013**
	TOTAL	**11,983**	**11,018**	**(965)**	**4,415**

East Kern Center (Including Tehachapi)

Overview

The East Kern Center is comprised of two locations – Edwards AFB and the community of Tehachapi. The education center at Edwards AFB serves primarily serves a military-based population, although civilians from the surrounding area are allowed to avail themselves of the courses offered. The presence of Cerro Coso Community College at Edwards AFB is a unique dynamic. It is the only community college in the state to have a physical presence on a military base. Student enrollment at Edwards AFB has fluctuated over the past years. Deployments, matching full-semester commitments with the transient nature of the military and the ability of military personnel to take courses on-line has caused student enrollments to change rather quickly. The East Kern Center presence in Tehachapi represents a change at the District level. Prior to 2015, the Tehachapi location was included as part of the Bakersfield College. For the purposes of this forecast, the two areas will be referenced as one – the East Kern Center.

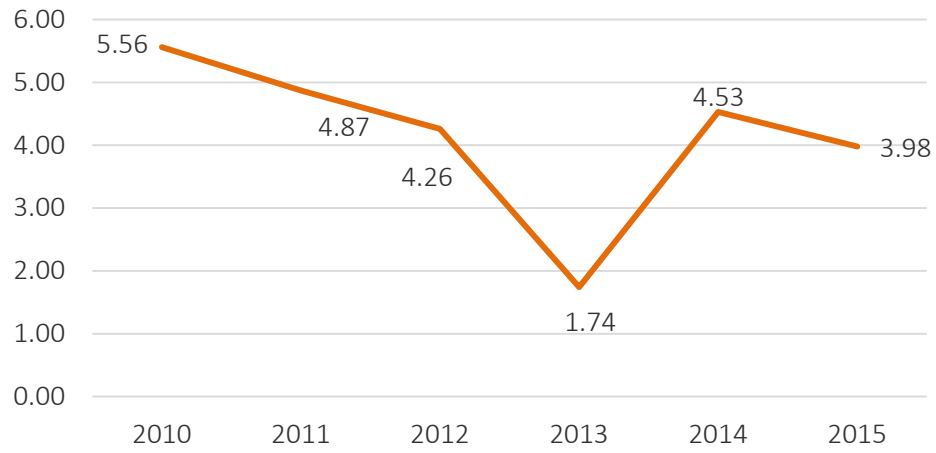
Historical Trends that Will Influence Growth Capacity

Student enrollment at the East Kern Center has decreased significantly over the past 15-years. From a high point of 838 enrolled students in 2001, it tumbled to an all-time low of 80 for the Fall Semester of 2010. It plateaued near this level through 2013 but had an uptick in 2014 when it enrolled 165 students for the Fall Semester. In a year-over comparison, 2015 saw an almost doubling of student enrollment, when 365 students registered for courses. The significant change in student enrollment was primarily the result of the assimilation of the Tehachapi Campus as part of the East Kern Center.

WSCH, over the same 15-year view period has had a similar trend line. Beginning in 2001, 4,055 WSCH were generated at the East Kern Center. It declined to a low of 193 WSCH in 2013. Over this 13-year period, WSCH had an annual average rate of decline of -7.33%. It rebounded substantially in 2014, rising to 747 WSCH. In 2015, it managed to reach four-digit numbers for the first time since 2006, when it generated 1,292 WSCH for the 2015 Fall Semester. Again, the uptick in WSCH can be credited to the addition of the Tehachapi Campus in 2015.

Data compiled in the graphic that follows melds the measures of student enrollment and WSCH into the relationship of WSCH generated per each enrollment. Like the other campuses that comprise Cerro Coso Community College, the trend line shows that student loads on the campus declined over the past five years. Using a three-credit class as the basis for comparison, the current student, on average, is taking 1.33 courses per semester as compared to 1.85 courses in 2015.

East Kern Center: Past 5-Year Trend WSCH / Enrollment



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Current Status

The Existing Program of Instruction

The existing program of instruction at the East Kern Center is summarized, at the department level, in the table that follows. It provides not only a snapshot of the current curricular status at the East Kern Center but it also provides an excellent starting point for building a future foundation determining growth capacity and the future need for space. All needs for space ultimately relate to and emanate from the program of instruction.

East Kern Center: Characteristics of Fall 2015 Program of Instruction

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	FTES	FTEF	Lec. Hrs	Lab Hrs.	On-Line Hrs.	Indep. Study
East Kern											
Allied Health	2	37	18.50	230.61	115.31	7.16	0.67	523	513	0	0
Counseling	1	19	19.00	41.87	41.87	1.30	0.13	36	0	0	0
English	2	35	17.50	133.34	66.67	4.14	0.20	126	0	0	0
Social Science	1	26	26.00	88.25	88.25	2.74	0.20	54	0	0	0
sub total	**6**	**117**	**19.50**	**494.07**	**82.35**	**15.34**	**1.20**	**739**	**513**	**0**	**0**
Tehachapi											
Allied Health	4	72	18.00	154.92	38.73	4.81	0.00	144	0	0	0
English	2	21	10.50	106.61	53.31	3.31	0.66	162	0	0	0
Mathematics	3	43	14.33	210.97	70.32	6.55	0.27	252	0	0	0
Science	2	24	12.00	163.30	81.65	5.07	0.43	162	108	0	0
Social Science	2	36	18.00	122.39	61.20	3.80	0.40	108	0	0	0
Visual & Perf. Arts	1	12	12.00	40.90	40.90	1.27	0.20	54	0	0	0
sub total	**14**	**208**	**14.86**	**799.09**	**57.08**	**24.81**	**1.96**	**882**	**108**	**0**	**0**
TOTAL	**20**	**325**	**16.25**	**1,293.16**	**64.66**	**40.15**	**3.16**	**1,621**	**621**	**0**	**0**

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

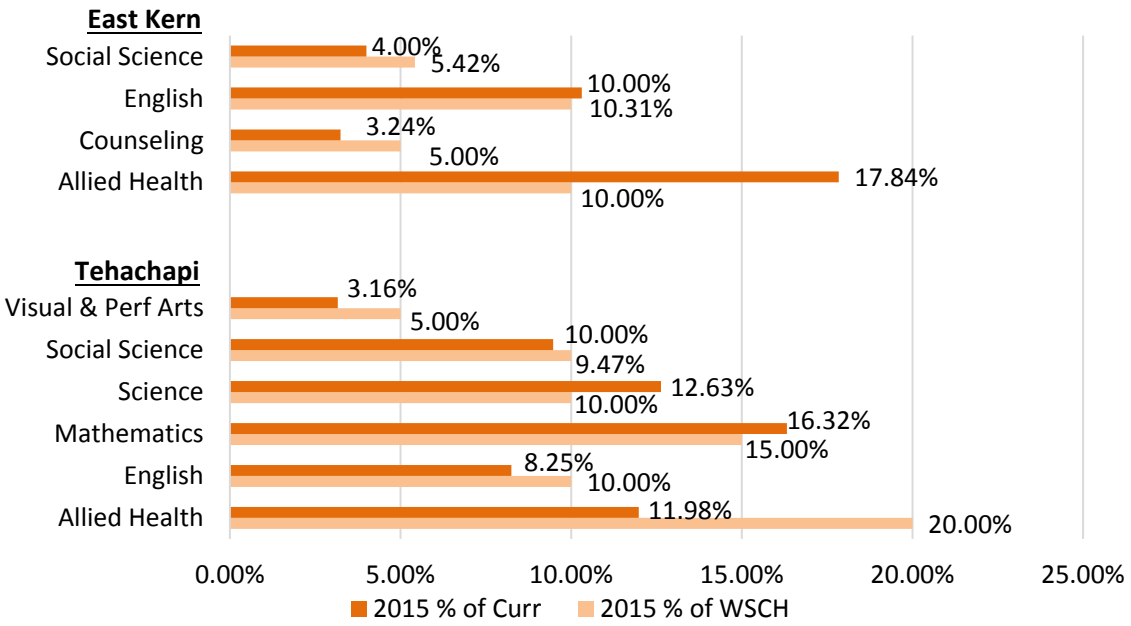
The existing program of instruction (2015 Fall Semester) at the East Kern Center is characterized as having four departments at Edwards AFB Center and six departments at the Tehachapi Campus. It consists of a total of 20 class sections. For the 2015 Fall Semester, these class sections generated 1,293.16 WSCH and accounted for 40.15 FTES. The average enrolled seats per section was 16.25. Class sections generated, on average, 64.66 WSCH per section. Lecture hours accounted for 1,621 of the total instructional hours taught while laboratory hours totaled 621. There were no on-line or independent study hours associated with the current program of instruction of the East Kern Center. The average WSCH per load (FTEF) for the 2015 Fall Semester was 409.23.

Distribution of the Curriculum / Distribution of WSCH Generation

The existing program of instruction is dominated by the departments of Allied Health and English at the Edwards AFB Center. Combined, these departments account for 27.84% of the overall curriculum of the East Kern Center and they generate 20.00% of all WSCH produced. At the Tehachapi Campus, the departments of Mathematics, Allied Health and Science are responsible for 40.93% of the curriculum and produce 45.0% of all WSCH. Social Science, at the Tehachapi Campus, is also a significant department contributor, accounting for 10.0% of the curriculum and generating 9.47% of the WSCH.

The graphics that follow capture both the current curriculum distribution and the distribution for WSCH for all departments that comprise the East Kern Center.

East Kern Center: Percent of Curriculum vs. Percent of WSCH



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Current Space Holdings to Support the Program of Instruction

Report 17 of the Kern Community College District was used as primary reference for identifying the space holdings for the East Kern Center. The most current Report 17, finds the Edwards AFB Center, the California City Child Development Center and Kern River Valley Campus in Lake Isabella under the combined under the single reference of the "Southern Outreach Center", not as the East Kern Center. No data was found for the Tehachapi Campus. Facilities used in delivering the program of instruction at the Tehachapi Campus, therefore, were not included in the space inventory analysis.

Following is a comparison of the space holdings from the last Educational Master Plan and from current EMP (data from 2015). These include EDWARDS AFB and facilities in California City.

East Kern Center (Not Including Tehachapi): Space Holdings

State Rm. Code	Description	2010 Space Inventory
0	Inactive	-
100	Classroom	770
210-230	Laboratory	770
235-255	Non-Class Laboratory	-
300	Office/Conference	450
400	Library	-
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	-
530-535	(AV/TV)	770
540-555	Clinic/Demonstration	1,135
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	-
630-635	Food Service	-
650-655	Lounge/Lounge Service	-
660-665	Merchandizing	-
670-690	Meeting /Recreation	-
710-715	Data Processing/Comp.	90
720-770	Physical Plant	100
800	Health Services	-
	Totals	**4,085**

State Rm. Code	Description	2015 Space Allocation
0	Inactive	-
100	Classroom	1,950
210-230	Laboratory	
235-255	Non-Class Laboratory	-
300	Office/Conference	280
400	Library	-
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	-
530-535	(AV/TV)	-
540-555	Clinic/Demonstration	1,135
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	-
630-635	Food Service	-
650-655	Lounge/Lounge Service	-
660-665	Merchandizing	-
670-690	Meeting /Recreation	-
710-715	Data Processing/Comp.	-
720-770	Physical Plant	90
800	Health Services	-
	Totals	**3,455**

Source: Cerro Coso Community College 2012 EMP; Kern Community College District Report 17; analysis MAAS Companies

The total space availability for the sites at Edwards AFB and California City currently amounts to 3,455 assignable square feet (ASF). This space supports the combined 6 sections of classes, the 494.07 WSCH generated, and 15.34 FTES produced at the EDWARDS AFB site. When the last Educational Master Plan was completed, the program of instruction was supported by 4,085 ASF. This translates to a decrease of 630 ASF over the past five years.

In comparing data from 2010 data with that of 2015, there has been a significant change in the amount of Lecture space holdings of +1,180 ASF. Laboratory instructional space, alternately, lost 770 ASF of space. In other key space categories monitored by the state, Office space decreased by 170 ASF from 2010 to 2015. On the non-state monitored space side of the equation, space for Clinic/Demonstration (Child Care facility) and Data Processing remained the same at 1,135 ASF and 90 ASF, respectively, while Physical Plant space (storage) lost 100 ASF.

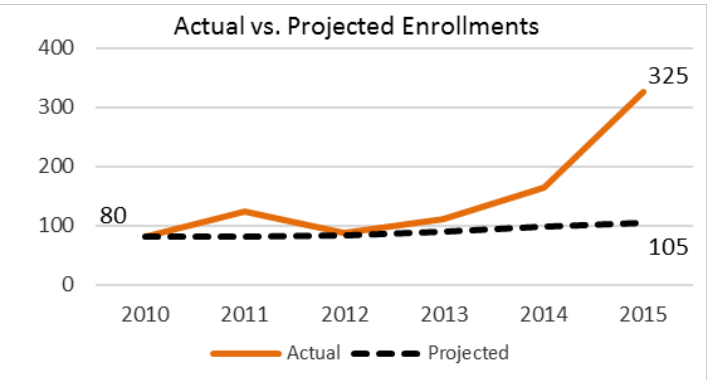
Future Projections

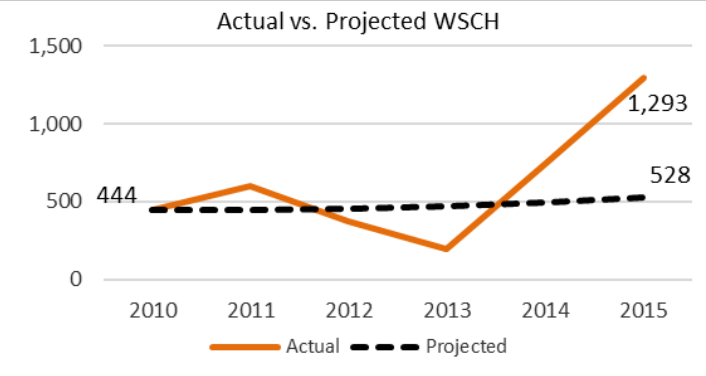
The Campus' Capacity for Growth

When the last Educational Master Plan 2012 was completed, the annual East Kern Center student enrollment growth rate was projected to be 5.2% on annual basis over the period 2010 to 2015; WSCH was projected to grow at 3.2% annually over that same period. The actual annual rate of student enrollment growth outperformed this projection; it averaged 51.0% on an annual basis. The generation of WSCH at the East Kern Center also exceeded the projections from the last Educational Master Plan with an annual average growth rate of 31.9% from 2010 to 2015. The growth rates for both student enrollment and WSCH were skewed by the addition of the Tehachapi Campus in 2015. This impact needs to considered in the future capacity for growth at the East Kern Center. The capacity of the Campus' future growth will be significantly influenced by the level of growth it has been able to achieve in the past.

The graphic that follows shows the projected versus the actual values for both enrollment and WSCH based on the projections from the last Educational Master Plan.

East Kern Center: Forecasted Projections Versus Actual 2010 – 2015





Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; analysis MAAS Companies

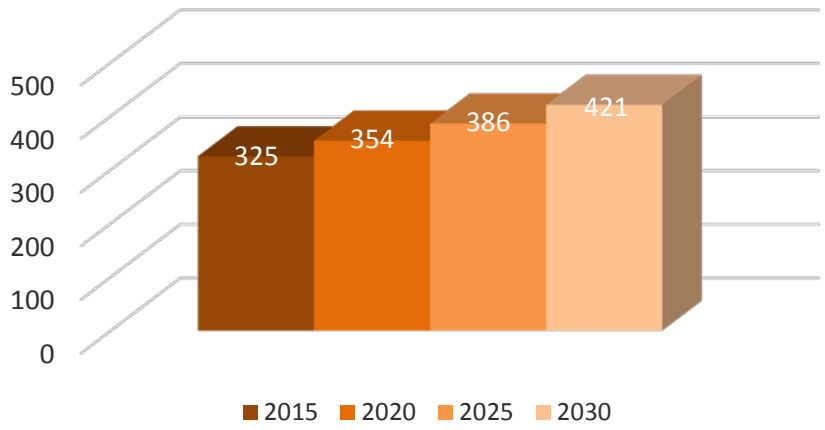
While the relative (percentage) actual growth rates appear to be substantial, when compared to projected growth rates, they need to be put in perspective. In absolute values, enrollment experienced its all-time, 15-year low of 80 students in 2010. It grew to 325 students, a gain of 245 students over 5-year window from 2010 to 2015. The consideration was similar for the generation of WSCH. It went from a low of 444 WSCH in 2010 to a high of 1,293 WSCH in 2015, i.e. 5-year gain of 849 WSCH overall. Both measures (student enrollment and WSCH) began at extremely low starting points in 2010; again, both benefited significantly from the inclusion of the Tehachapi Campus, as part of the East Kern Center mix, in the latter stages of the 5-year view window.

Projected Forecast for Growth

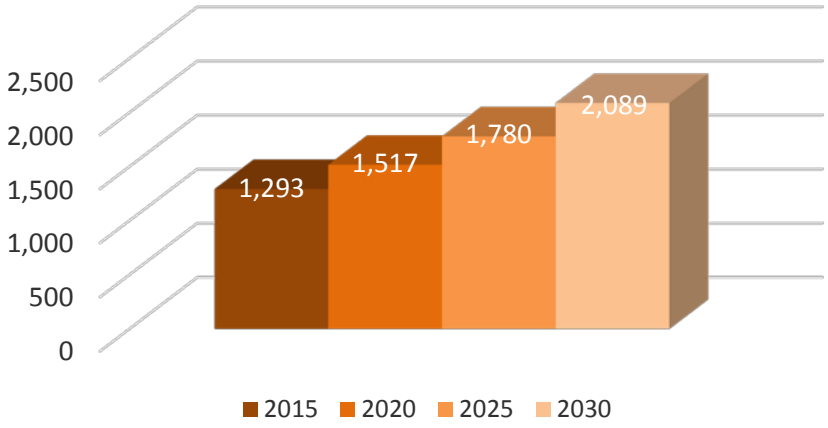
Considering the key factors for growth capacity, including the historical trends and tendencies, the population dynamics, the forecasted rates of high school graduation, the Campus' capacity to serve students who may be less academically prepared, the emphasis placed on student retention and academic success and improving standards of curricular productivity/efficiency, the future forecast for the East Kern Center is for slower gains in both enrollment and WSCH generation. Overall, the annual growth rate capacity over the next 15-years is projected at 1.97% for student enrollment and 4.10% for WSCH. This translates to a 29.5% increase in student enrollment from the starting point of the 2015 Fall Semester to the 2030 Fall Semester. For WSCH, the long-term growth rate projects to an overall increase of 61.6%. It should be noted that this growth forecast addresses the potential and capacity for the East Kern Center based on the demographic markers, the area trends and the continued presence of the Tehachapi Campus.

The graphics that follow depicts projected growth for the East Kern Center in terms of absolute values.

East Kern Center Projected Enrollment Growth



East Kern Center: Projected WSCH Growth



Source: MAAS Companies Projections

The Application of Growth to the Future Program of Instruction

The approach to applying growth capacity to the future program of instruction was based on a detailed analysis at the program / discipline level. It was then assembled in the various educational departments at the East Kern Center. Stronger performing programs/disciplines were given a greater range for growth than programs/disciplines performing on a sub-par level. Using this approach and based on the forecasts for student enrollments and WSCH, the East Kern Center program of instruction is projected for modest expansion. The priority going forward in the future will be on curricular efficiency and for improving upon the measure of student course loads. Applying the growth forecasts previously noted for student enrollment and WSCH, the characteristics of the 2030 program of instruction are captured in the table that follow.

East Kern Center: Characteristics of Projected Program of Instruction for the Year 2030

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	Lec. WSCH	Lab WSCH	FTES	% of Curr.	% of WSCH
East Kern										
Allied Health	2	41	20.59	256.64	128.32	128.32	128.32	7.97	7.69%	12.29%
Counseling	1	22	22.16	48.84	48.84	0.00	0.00	1.52	3.85%	2.34%
English	3	63	20.92	239.13	79.71	239.12	0.00	7.42	11.54%	11.45%
Social Science	3	52	17.49	178.11	59.37	178.12	0.00	5.53	11.54%	8.53%
sub total	**9**	**179**	**81.17**	**722.72**	**80.30**	**545.56**	**128.32**	**22.44**	**34.6%**	**34.6%**
Tehachapi										
Allied Health	5	134	26.70	287.25	57.45	287.25	0.00	8.92	19.23%	13.75%
English	2	31	15.29	155.22	77.61	155.22	0.00	4.82	7.69%	7.43%
Mathematics	3	67	22.39	329.58	109.86	329.58	0.00	10.23	11.54%	15.78%
Science	2	34	16.82	228.84	114.42	137.30	91.54	7.10	7.69%	10.95%
Social Science	4	89	22.30	303.32	75.83	303.32	0.00	9.42	15.38%	14.52%
Visual/Perf. Arts	1	18	18.27	62.26	62.26	62.26	0.00	1.93	3.85%	2.98%
sub total	**17**	**521**	**30.66**	**1,366.47**	**80.38**	**1,533.59**	**256.64**	**58.62**	**65.4%**	**65.4%**
TOTAL	**26**	**700**	**26.92**	**2,089.19**	**80.35**	**2,079.15**	**384.96**	**81.05**		

Source: MAAS Companies Projections

The 2030 program of instruction at the East Kern Center is anticipated to have the following characteristics: A total of 26 class sections offered, WSCH generation of 2,089.19, 81.05 FTES, a 5.4 to 1 ratio of lecture versus laboratory generated WSCH, WSCH per class section of 80.35 and enrolled seats per class section offered of 26.92. At the Edwards AFB Center, the future program of instruction is projected to be driven by the departments of Allied Health, English and Social Science. Combined, these departments are expected to account for almost one-third of all WSCH generated at the East Kern Center. Departments at the Tehachapi Campus that are expected to have the greatest impact for WSCH generation are Mathematics, Social Science, Allied Health and Science. These departments are projected to account for 55.0% of all WSCH produced at the East Kern Center.

A progressive perspective is provided for the forecasted program of instruction via a by-department-breakdown from the baseline year of 2015 to the year 2030. For this analysis, the key elements of net sections, WSCH, FTES, lecture WSCH and laboratory WSCH were used to provide a basis for comparison.

East Kern Center: Composite Profile of the Program of Instruction Projections 2015 – 2030

	Actual					Projected														
	YR 2015					YR 2020					YR 2025					YR 2030				
Department	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES
East Kern																				
Allied Health	2	115	115	231	7.2	2	119	119	238	7.4	2	123	123	247	7.7	2	128	128	257	8.0
Counseling	1	0	0	42	1.3	1	0	0	45	1.4	1	0	0	46	1.4	1	0	0	48	1.5
English	2	133	0	133	4.1	2	141	0	141	4.4	3	209	0	209	6.5	3	239	0	239	7.4
Social Science	1	88	0	88	2.7	2	147	0	147	4.6	2	159	0	159	4.9	3	178	0	178	5.5
sub total	**6**	**337**	**115**	**494**	**15.3**	**7**	**407**	**119**	**570**	**17.7**	**8**	**492**	**123**	**661**	**20.5**	**9**	**546**	**128**	**722**	**22.4**
Tehachapi																				
Allied Health	4	155	0	155	4.8	4	168	0	168	5.2	4	192	0	192	6.0	5	287	0	287	8.9
English	2	107	0	107	3.3	2	117	0	117	3.6	2	131	0	131	4.1	2	155	0	155	4.8
Mathematics	3	211	0	211	6.6	3	248	0	248	7.7	3	284	0	284	8.8	3	330	0	330	10.2
Science	2	98	65	163	5.1	2	108	72	180	5.6	2	119	79	198	6.1	2	137	92	229	7.1
Social Science	2	122	0	122	3.8	3	186	0	186	5.8	4	260	0	260	8.1	4	303	0	303	9.4
Visual/Perf Arts	1	41	0	41	1.3	1	47	0	47	1.4	1	54	0	54	1.7	1	62	0	62	1.9
sub total	**14**	**734**	**65**	**799**	**24.8**	**15**	**875**	**72**	**947**	**29.4**	**16**	**1,040**	**79**	**1,119**	**34.7**	**17**	**1,275**	**92**	**1,366**	**42.4**
TOTAL	20	1,071	181	1,293	40.1	22	1,281	191	1,517	47.1	24	1,532	202	1,780	55.3	26	1,820	220	2,089	64.8

Source: MAAS Companies Projections

Qualification for Space

While important measures for growth, the East Kern Center should not direct its entire focus on the level of performance achieved via the established five-year intervals for WSCH (2015 to 2030). Rather, the emphasis should be placed ensuring that the appropriate types of space are in place whenever the WSCH milestones are met – that may be sooner or later than the stated benchmarks.

Campus Space Needs to Support the Program of Instruction

The analysis for space needs / space qualifications that define the East Kern Center will be limited to Edwards AFB and the Child Development Center in California City for the reasons aforementioned, i.e. no specific space inventory found in the District's Report 17 that addresses the Tehachapi Campus. Otherwise, space needs were based on the State's Title V guidelines for each type or category of space and, where necessary, adapted to fit the nature of this small educational center. The formulas derived for space qualifications are tied directly to WSCH generation, FTES, student enrollment, full-time equivalent faculty (FTEF) and day-graded enrollment. There are five space categories that are closely monitored by the State and tied to funding: Classroom (lecture) space, Laboratory space, Office space, Library space and Instructional Media space. Space qualification, however, also includes fourteen other space categories that are integral to providing students with a complete campus.

The table that follows depicts the qualification for space via the State Title V guidelines for the East Kern Center including the sites at Edwards AFB and the Child Development Center in California City. As previously stated, it does not include that part of the East Kern Center that is located in Tehachapi.

East Kern Center (Not Including Tehachapi): Total Space Needs Via State Title 5 Standards

Key Space Categories Monitored by the State					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
100	Classroom	1,950	258	(1,692)	0
210-230	Laboratory	-	275	275	275
235-255	Non-Class Laboratory	-	40	40	40
300	Office/Conference	280	688	408	408
400	Library	-	350	350	350
530-535	(AV/TV)	-	450	450	450
	sub total	**2,230**	**2,061**	**(169)**	**1,523**
Non-State Monitored Space Categories					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
0	Inactive	-	0	0	0
510-515	Armory/Armory Service	-	0	0	0
520-525	Phys. Ed. (Indoor)	-	0	0	0
540-555	Clinic/Demonstration	1,135	168	(967)	0
580	Greenhouse	-	0	0	0
590	Other	-	0	0	0
610-625	Assembly/Exhibition	-	421	421	421
630-635	Food Service	-	253	253	253
650-655	Lounge/Lounge Service	-	43	43	43
660-665	Merchandizing	-	341	341	341
670-690	Meeting /Recreation	-	140	140	140
710-715	Data Processing/Comp.	-	100	100	100
720-770	Physical Plant	90	186	96	96
800	Health Services	-	200	200	200
	sub total	**1,225**	**1,852**	**627**	**1,594**
	TOTAL	**3,455**	**3,913**	**458**	**3,117**

Source: Kern Community College District Report 17 2017/2018; State Title V Standards; analysis MAAS Companies

Based on the factors for WSCH generation and the forecast for growth, the East Kern Center (not including the Tehachapi Campus) will not see a need for Classroom (lecture) space through year 2030. The current space inventory has Classroom (lecture) space of 1,950 ASF; the projected WSCH generation will only qualify for 275 ASF out to the year 2030. Obviously, it is not feasible to have a classroom of 275 ASF. However, that is the qualification based on the WSCH generation projected and the classroom allotment factor of 15 square feet per student. Suffice it to say, that the two classrooms that are presently allocated for academic instruction will serve the Edwards AFB Center well into the future. There is no current allocation for Laboratory space, but the projected growth for the future program of instruction supports such a need for the Allied Health Program (EMT specifically). There will, therefore, be a small need for combined laboratory space of 315 ASF by 2030. Otherwise, Office space is projected to have a future space need of 688 ASF (+408 ASF above the current inventory of 280 ASF). Additionally, Library and Instructional Media (AV/TV) will qualify for 350 ASF and 450 ASF respectively out to the year 2030.

The non-state monitored spaces (i.e. those not factored into the funding equation from the state) show a net 2030 qualification for 1,594 ASF. Space needs / qualification at the Edwards AFB Center will include those for Assembly/Exhibition (+421), Food Service (+253 ASF), Lounge/Lounge Service (+43), Merchandizing (+341), Meeting/Recreation (+140), Data Processing (+100), Physical Plant (Storage +96) and Health Services (+200).

The macro perspective for the Edwards AFB Center (including the Child Development Center in California City) shows a current space inventory of 3,455 ASF and qualification for space downrange of 3,117 ASF. That is to say, that space at the East Kern Center (not including the Tehachapi Campus) will be sufficient to meet the projected curriculum of year 2030.

Kern River Valley Campus

Overview

The Kern River Valley Campus is located in the Lake Isabella area. It serves the communities of Lake Isabella, Bodfish, Wooford Heights, Kernville, Weldon and Onyx. The economy is primarily supported by tourism and recreation. Recreation activities are based around Lake Isabella and the Kern River. The area has become a popular place for an older population-base that enjoys the outdoors and the water amenities that are afforded in the area. Their retirement incomes bolster the local economy and support the service and retail industries that are present.

The population base is growing a little faster than most of the other campus sites that comprise Cerro Coso Community College. Over the next 5-years, it is projected to average annual growth of 1.08%. The median age is projected to be 57 years of age by year 2021. The population segment 0 – 14 years of age is slowly declining. Overall, the Kern River Valley is an economically challenged area. The prospects for meaningful employment are on the lower end of the job spectrum. All of these factors contribute to the challenge of delivering a postsecondary program of education. The Kern River Valley Campus is a place that offers hope for the age groups to 18 to 38 years of age and for those who wish to better their place in life.

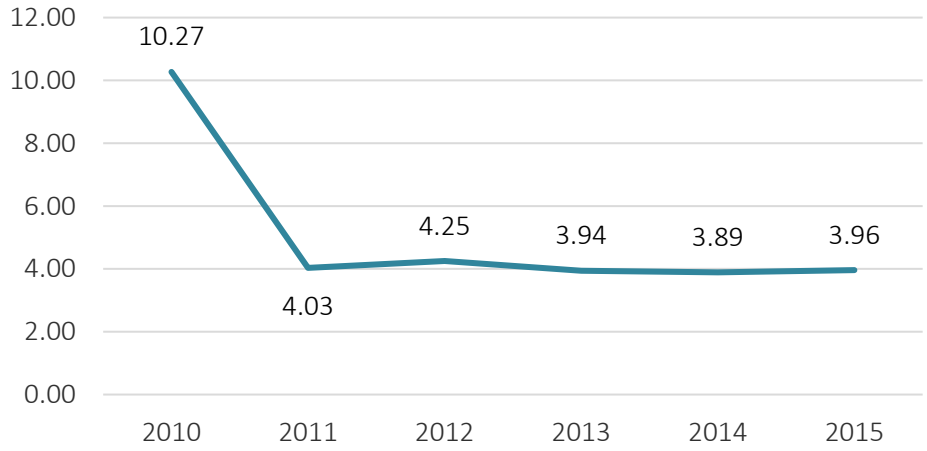
Historical Trends that Will Influence Growth Capacity

Student enrollment at the Kern River Valley Campus has decreased significantly over the past 15-years. It has declined, on average, at an annual rate average of -2.89%. In 2001, student enrollment, in absolute values, was 684. It declined steadily until 2011 when it spiked to 981. It has been trending downward since that time. For 2015, student enrollment was at its lowest mark of 387. The 15-year average for student enrollment has been 545.

WSCH, over the same 15-year view period has had a greater an even greater decline, averaging annual losses of -4.56%. The highwater mark for WSCH was in the initial of the 15-year view period (2001), when it was 4,844. After plummeting to 1,641 in 2009, it rebounded to 4,425 in the following year, only to fall to its lowest point in 2015 to 1,533. From 2001 to 2016, the annual average for WSCH was 3,625.

Data compiled and analyzed in the graphic that follows melds the measures of student enrollment and WSCH into a more significant relationship – the amount of WSCH generated per student enrollment. It supports the notion that students attending the Kern River Valley Campus are taking lesser course loads.

Kern River Valley: Past 5-Year Trend WSCH / Enrollment



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The relationship of WSCH generated per student enrollment directly relates to the course loads taken by students. On average (using a three-credit class as the measure for comparison), the current student (2015 Fall Semester) took 1.32 courses per semester as compared to 3.42 courses in 2010. The average for WSCH per enrollment over a 15-year period has been 7.44. This represents a course load measure of 2.48. The significant drop in WSCH per enrollment correlates with the decline seen at the Kern River Valley Campus in overall FTES.

Current Status

The Existing Program of Instruction

The existing program of instruction at the Kern River Valley (KRV) Campus is summarized, at the department level, in the table that follows. It provides not only a snapshot of the current status of the KRV Campus curriculum but it also provides an excellent foundation for applying growth capacity and ultimately determining the future need for space. All needs for space on campus relates to and emanates from this starting point – i.e. the program of instruction.

Kern River Valley Campus: Characteristics of Fall 2015 Program of Instruction

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	FTES	FTEF	Lec. Hrs	Lab Hrs.	On-Line Hrs.	Indep. Study
Allied Health	4	37	9.25	214.19	53.55	6.65	0.83	576	324	0	144
Child Dev./Education	2	17	8.50	13.85	6.93	0.43	0.25	0	0	0	108
Counseling	1	27	27.00	70.21	70.21	2.18	0.13	36	0	0	0
English	4	94	23.50	381.99	95.50	11.86	1.07	270	0	0	0
Mathematics	3	55	18.33	243.82	81.27	7.57	0.80	216	0	0	0
Physical Education	1	19	19.00	64.74	64.74	2.01	0.20	54	0	0	0
Public Service	1	18	18.00	57.65	57.65	1.79	0.20	54	0	0	0
Social Science	4	95	23.75	319.50	79.88	9.92	0.80	216	0	0	0
Visual & Perf. Arts	1	25	25.00	167.48	167.48	5.20	0.40	108	108	0	0
TOTAL	**21**	**387**	**18.43**	**1,533.43**	**73.02**	**47.61**	**4.68**	**1,530**	**432**	**0**	**252**

Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

The current program of instruction at the Kern River Valley Campus has nine departments. It is characterized as having 21 class sections that generate 1,533.43 WSCH and account for 47.61 FTES. The average enrolled seats per section for the 2015 Fall Semester was 18.43. On average, class sections generated 73.02 WSCH per section. The ratio of lecture to laboratory hours was 3.54 to 1. Lecture hours accounted for 1,530 of the total instructional hours taught and laboratory 432. Independent study hours (Allied Health and Child Development) accounted for

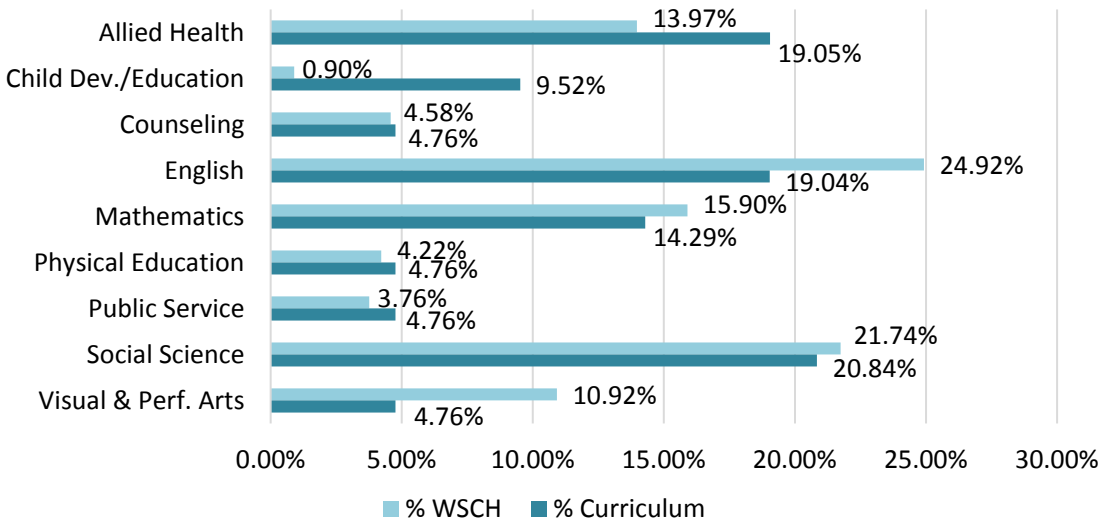
252 additional hours of independent study time. The average WSCH per load (FTEF) for the 2015 Fall Semester was very low. It registered only 327.66.

Distribution of the Curriculum / Distribution of WSCH Generation

The current program of instruction is dominated by the departments of Social Science, English, Allied Health and Mathematics. These four departments account for 73% of the overall curriculum at the Kern River Valley Campus and generate 77% of the WSCH produced. Social Science commands the greatest percentage share of the curriculum. At 20.84%, it represents one-fifth of all curricular offerings at KRV Campus. English and Allied Health are close seconds, each representing approximately 19.00% of the curriculum. English is greatest producer of WSCH. It accounts for 24.92% of all WSCH at the Kern River Valley Campus. It is closely followed by Social Science at 21.74%.

The graphic that follow depicts both the current curriculum distribution and the distribution for WSCH for all departments at the Kern River Valley Campus.

Kern River Valley Campus: Percent of Curriculum vs. Percent of WSCH



Source: Department of Institutional Research, Cerro Coso Community College, analysis MAAS Companies

Current Space Holdings to Support the Program of Instruction

Space holdings for the Kern River Valley Campus are included in the Kern Community College District's official inventory report (the State Chancellor's Office *Report 17 ASF/OGSF Summary & Capacities Summary*) as part of the "Southern Outreach Center", a listing that also includes the Edwards AFB location and the Child Development Center in California City. A room-by-room analysis of the KRV Campus site was conducted using the data from the Southern Outreach Center space inventory to construct a separate inventory for the Kern River Valley Campus. Following is a comparison of the current (2015) space holdings with those from the 2012 Educational Master Plan (2010).

Kern River Valley Campus: Space Holdings

State Rm. Code	Description	2010 Space Inventory
0	Inactive	72
100	Classroom	2,200
210-230	Laboratory	3,696
235-255	Non-Class Laboratory	-
300	Office/Conference	1,472
400	Library	460
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	1,659
530-535	(AV/TV)	820
540-555	Clinic/Demonstration	-
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	-
630-635	Food Service	-
650-655	Lounge/Lounge Service	-
660-665	Merchandizing	88
670-690	Meeting /Recreation	712
710-715	Data Processing/Comp.	100
720-770	Physical Plant	115
800	Health Services	-
	Totals	**11,394**

State Rm. Code	Description	2015 Space Allocation
0	Inactive	-
100	Classroom	2,200
210-230	Laboratory	2,443
235-255	Non-Class Laboratory	-
300	Office/Conference	1,569
400	Library	612
510-515	Armory/Armory Service	-
520-525	Phys Ed. (Indoor)	1,659
530-535	(AV/TV)	725
540-555	Clinic/Demonstration	1,742
580	Greenhouse	-
590	Other	-
610-625	Assembly/Exhibition	-
630-635	Food Service	-
650-655	Lounge/Lounge Service	-
660-665	Merchandizing	-
670-690	Meeting /Recreation	646
710-715	Data Processing/Comp.	244
720-770	Physical Plant	-
800	Health Services	-
	Totals	**11,840**

Source: Cerro Coso Community College 2012 EMP; Kern Community College District Report 17; analysis MAAS Companies

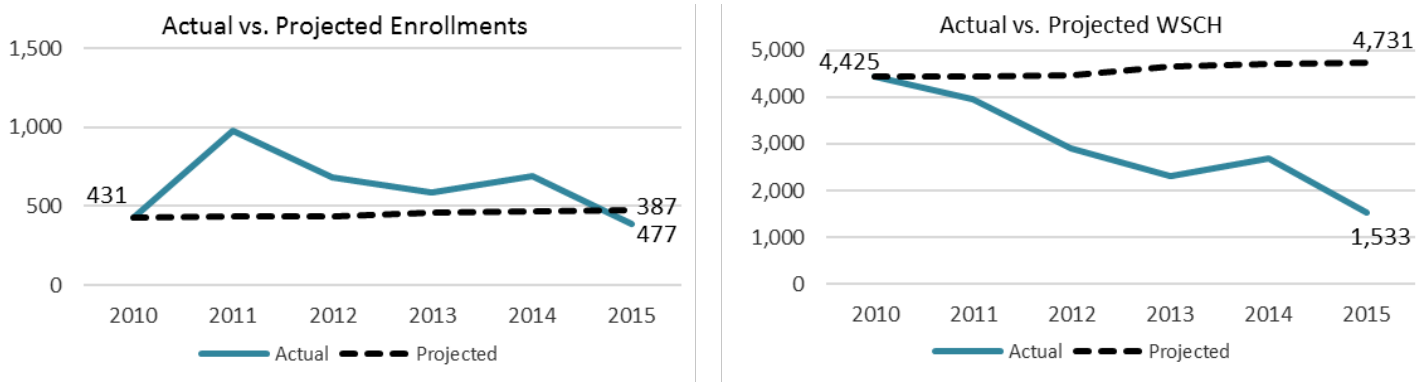
The space inventory for the 2015 Fall Semester showed total space availability of 11,840 assignable square feet (ASF). This was only a slight variation from the 2012 Educational Master Plan, when the usable space was reported at 11,394 ASF. What changed over the 5-year view period was the distribution of space. While Classroom (lecture) remained the same, Laboratory space lost almost 1,200 ASF. Office space gained approximately 100 ASF along with Library space which added approximately 150 ASF. Clinic Demonstration space gained 1,742 ASF while Merchandizing space lost 88 ASF and Physical Plant space lost 115 ASF. Data Processing, otherwise, registered a small space gain of 144 ASF.

Future Projections

The Campus' Capacity for Growth

Based on the projections from the 2012 Educational Master Plan, the annual student enrollment growth rate at the Kern River Valley Campus was projected to be 1.78% (i.e. from 2010 to 2015). WSCH, over the same period, was projected to grow at an annual average rate of 1.15%. The actual annual rate of student enrollment growth, however, declined at an annual average rate of -1.70%. WSCH growth averaged an even steeper annual rate of decline at -10.89%. It should be noted that absolute values for student enrollment and WSCH were at all time low points when viewed for year 2015 (387 enrolled students and 1,533 WSCH). Not that far removed, in 2011, student enrollment was actually at its 15-year highpoint of 981 enrolled students. While student enrollment had early success in the 5-year view window, it ended at a point that was considerably lower than 2012 Educational Master Plan projections. The values for WSCH generation never recovered from the downturn that began the first (2010) year. The graphic that follows shows the projected versus the actual values for both student enrollment and WSCH based on the projections from the 2012 Educational Master Plan. The capacity of the Campus' future growth will be significantly influenced by the level of growth it has been able to achieve in the past.

Kern River Valley Campus: Forecasted Projections Versus Actual 2010 – 2015



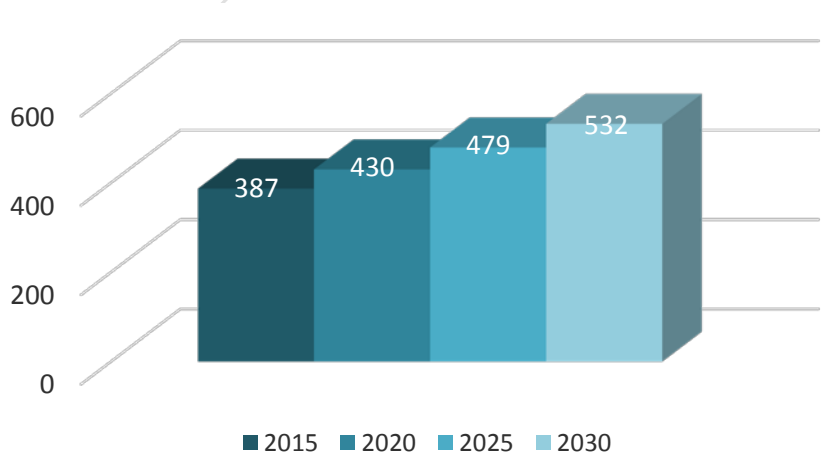
Source: Cerro Coso Community College 2012 Educational Master Plan and data from the Office of Institutional Research; analysis MAAS Companies

Projected Forecast for Growth

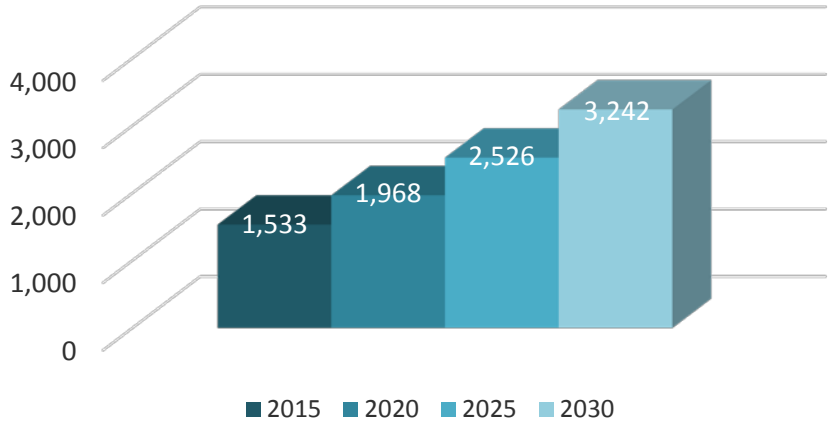
Considering the factors that had the greatest impact on determining growth, including historical trends for key measures of growth, data from the External Environmental Scan and the intangibles that are specific to the Kern River Valley Campus, the forecast for the Kern River Valley Campus is for modest gains in both student enrollment and WSCH and a goal for gaining back the ground that has been lost over the last several years. The annual average growth rate is projected at 2.51% for student enrollment and 7.43% for WSCH over the next 15-years. This translates to an 37.6% overall increase in student enrollment from the starting point of the 2015 Fall Semester to year 2030. For WSCH, it projects at an overall (15-year) increase of 111.15%. While the relative values seem lofty, they are tempered when viewed from the perspective of absolute values. The relative values translate to an increase of 145 enrolled students and a gain of 1,709 WSCH from the period of 2015 to 2030.

The graphics that follow depict projected growth for the Kern River Valley Camus in terms of absolute values for the view period 2015 to 2030.

Kern River Valley Campus: Projected Enrollment Growth



Kern River Valley Campus: Projected WSCH Growth



Source: MAAS Companies Projections

The Application of Growth to the Future Program of Instruction

Growth, as applied to a future program, was done at program/discipline level and then assembled back into the department level. Growth was not applied equally across the board. Stronger performing programs/disciplines were given greater latitude for growth as opposed to programs/disciplines performing on a sub-par level. For all departments, the priority for the future should be on greater curricular efficiency, improving the measure of WSCH generated per enrollment and encouraging and incentivizing students to carry greater course load.

Applying the growth forecasts previously noted for enrollment and WSCH, the characteristics of the 2030 program of instruction at the KRV Campus are captured in the table that follows.

Kern River Valley Campus: Characteristics of Projected Program of Instruction for the Year 2030

Department	Sections	Enroll. Seats	Seats/ Sec.	WSCH	WSCH/ Sec.	Lec. WSCH	Lab WSCH	FTES	% of Curr.	% of WSCH
Allied Health	5	67	13.31	385.35	77.07	259.04	110.36	11.96	16.13%	11.89%
Child Dev./Education	2	21	10.74	17.50	8.75	0.00	0.00	0.54	6.45%	0.54%
Counseling	1	33	32.55	84.65	84.65	0.00	0.00	2.63	3.23%	2.61%
English	6	179	29.81	753.60	125.60	753.62	0.00	23.40	19.35%	23.25%
Mathematics	4	102	25.60	453.92	113.48	453.92	0.00	14.09	12.90%	14.00%
Physical Education	1	29	28.98	98.76	98.76	98.76	0.00	3.07	3.23%	3.05%
Public Service	1	28	27.68	88.64	88.64	88.64	0.00	2.75	3.23%	2.73%
Science	2	38	19.00	279.18	139.59	139.59	139.59	8.67	6.45%	8.61%
Social Science	7	214	30.55	744.59	106.37	744.59	0.00	23.12	22.58%	22.97%
Visual & Perf. Arts	2	50	25.06	335.72	167.86	167.86	167.86	10.42	6.45%	10.36%
TOTAL	**31**	**760**	**24.53**	**3,241.91**	**104.58**	**2,706.02**	**417.81**	**100.65**		

Source: MAAS Companies Projections

The overall 2030 program of instruction at the Kern River Valley Campus is projected to have a total of 31 class sections that generate 3,241.91 WSCH and 100.65 FTES. The ratio of lecture to laboratory WSCH is forecasted at a 6.5 to 1 ratio. WSCH generated per class section is anticipated to reach 80.35 and enrolled seats per class section 24.53. The future program of instruction is projected to be driven by the departments of English, Social Science, Allied Health and Mathematics. These four departments can be expected to generate 70% of the WSCH produced at the Kern River Valley Campus.

A composite profile of the projected program of instruction is provided in the table that follows. The breakdown provided uses 5-year intervals as benchmarks, beginning in 2015 and ending in year 2030. The key elements of net sections, WSCH, FTES, lecture WSCH and laboratory WSCH were used to provide a basis a frame of reference and a basis for comparison.

Kern River Valley Campus: Composite Profile of the Program of Instruction Projections 2015 – 2030

	Actual					Projected														
	YR 2015					YR 2020					YR 2025					YR 2030				
Department	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES	Net Sec.	Lec. WSCH	Lab. WSCH	Total WSCH	FTES
Allied Health	4	137	77	214	6.7	4	173	56	237	7.4	5	225	64	335	10.4	5	110	123	385	12.0
Child Dev./Education	2	-	-	14	0.4	2	0	0	15	0.5	2	0	0	16	0.5	2	0	0	18	0.5
Counseling	1	0	0	70	2.2	1	0	0	77	2.4	1	0	0	80	2.5	1	0	0	85	2.6
English	4	382	0	382	11.9	4	413	0	413	12.8	5	578	0	578	18.0	6	754	0	754	23.4
Mathematics	3	244	0	244	7.6	3	307	0	307	9.5	3	313	0	313	9.7	4	454	0	454	14.1
Physical Education	1	65	0	65	2.0	1	71	0	71	2.2	1	78	0	78	2.4	1	99	0	99	3.1
Public Service	1	58	0	58	1.8	1	66	0	66	2.1	1	70	0	70	2.2	1	89	0	89	2.8
Science	0	-	0	0	0.0	0	0	0	0	0.0	1	62	62	125	3.9	2	140	140	279	8.7
Social Science	4	320	0	320	9.9	5	461	0	461	14.3	6	592	0	592	18.4	7	745	0	745	23.1
Visual & Perf. Arts	1	84	84	167	5.2	2	161	161	322	10.0	2	169	169	337	10.5	2	168	168	336	10.4
TOTAL	21	1,289	161	1,533	47.6	23	1,651	217	1,968	61.1	27	2,088	295	2,526	78.4	31	2,557	430	3,242	100.7

Source: MAAS Companies Projections

Qualification for Space

Space needs, as defined by the State's Title V guidelines, are largely predicated on the program of instruction's ability to generate WSCH. While there are other criteria and measures for space, generally, the more WSCH generated, the greater the need for space; lesser values for WSCH decrease the need for space.

Based on the shortfalls for WSCH generation at the Kern River Valley Campus, the need / qualification for space in the 2015 Educational Master Plan will be less than that which was identified in the 2012 Educational Master Plan. This will apply to all spaces at the Campus that are driven by formulas involving WSCH, FTES and / or headcount.

In terms of space that is WSCH-driven, Kern River Valley should not direct its entire focus on the performance achieved relative to the established five-year intervals for WSCH generation (from years 2015 to 2030). Rather, the emphasis should be placed on ensuring that the appropriate types of space are in place whenever the WSCH milestones are met – that may be sooner or later than the established benchmarks.

Campus Space Needs to Support the Program of Instruction

As previously noted, the space inventory for the Kern River Valley Campus was assembled via a room-by-room analysis excerpted from the data provided in the space inventory of the District (under the heading "Southern Outreach Center"). The data derived from this analysis was then measured against the State's Title V guidelines for each category of space. Where necessary, the data was adapted to fit the nature of the format for determining space needs. The formulas used for determining the need / qualification for space were directly tied to WSCH generation, FTES, student headcount, full-time equivalent faculty (FTEF) and day-graded enrollments. Five of the space categories are closely monitored by the State and tied to funding. These include the space categories of Classroom (lecture), Laboratory, Office, Library and Instructional Media. Space needs, however, also include fourteen other space categories that are integral to providing students with a complete campus.

The table that follows depicts the qualification for space via the State Title V guidelines for the East Kern Center.

Kern River Valley Campus: Total Space Needs Via State Title 5 Standards

Key Space Categories Monitored by the State					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
100	Classroom	2,200	1,280	(920)	0
210-230	Laboratory	2,443	1,011	(1,432)	0
235-255	Non-Class Laboratory	-	51	51	51
300	Office/Conference	1,569	1,068	(501)	0
400	Library	612	1,550	938	938
530-535	(AV/TV)	725	1,650	925	925
	sub total	**7,549**	**6,610**	**(939)**	**1,914**
Non-State Monitored Space Categories					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
0	Inactive	-	0	0	0
510-515	Armory/Armory Service	-	0	0	0
520-525	Phys. Ed. (Indoor)	1,659	1,700	41	41
540-555	Clinic/Demonstration	1,742	213	(1,529)	0
580	Greenhouse	-	0	0	0
590	Other	-	0	0	0
610-625	Assembly/Exhibition	-	532	532	532
630-635	Food Service	-	319	319	319
650-655	Lounge/Lounge Service	-	67	67	67
660-665	Merchandizing	-	839	839	839
670-690	Meeting /Recreation	646	177	(469)	0
710-715	Data Processing/Comp.	244	350	106	106
720-770	Physical Plant	-	700	700	700
800	Health Services	-	425	425	425
	sub total	**4,291**	**5,322**	**1,031**	**3,029**
	TOTAL	**11,840**	**11,932**	**92**	**4,943**

Source: Kern Community College District Report 17 2017/2018; State Title V Standards; analysis MAAS Companies

From a macro perspective, the Kern River Valley Campus shows a current space inventory of 11,840 ASF and qualification for space downrange of 12,771 ASF. It will have, however, space category specific needs of 5,782 ASF for both state-monitored and non-state monitored space categories combined.

For the state-monitored space categories, the Kern River Valley Campus will not have a need for Classroom (lecture) or Laboratory space through year 2030. The current space inventory has Classroom (lecture) space of 2,200 ASF and projected WSCH generation that will only qualify for 1,280 ASF in 2030. Laboratory space will qualify for 1,011 ASF but will carry an inventory of 2,443 ASF. Based on the growth forecast as applied to the future program instruction, the space currently available for direct academic use will be more than sufficient to support the curriculum of the Kern River Valley Campus through the year 2030. Additionally, Office space, with a current inventory of 1,569 ASF and need for only 1,068 ASF in year 2030 will have a projected excess of 501 ASF while Library and Instructional Media (AV/TV) will qualify for additional space of 938 ASF and 925 ASF respectively.

The non-state monitored spaces (i.e. those not factored into the funding equation of the state) show a net 2030 qualification for 3,868 ASF by year 2030. Qualifying space allocations will include those for Assembly/Exhibition

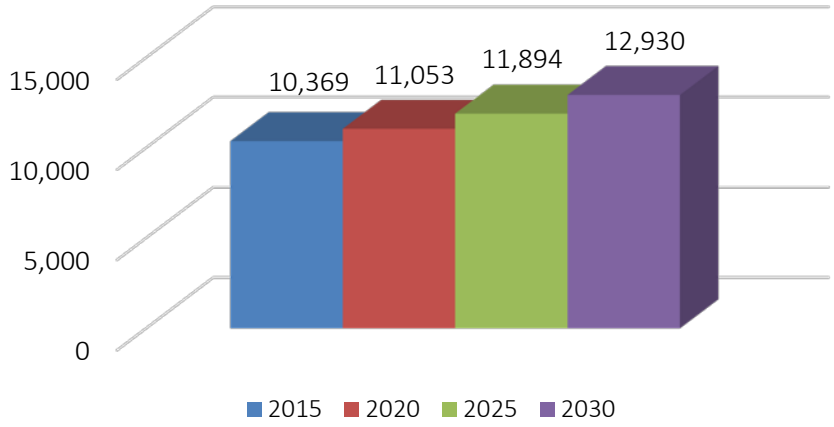
(+532), Food Service (+319 ASF), Lounge/Lounge Merchandizing (+839), Data Processing (+106), Physical Plant (+700) and Health Services (+425).

A Final Look from the Perspective of the College

As the final note in the forecast for the future program instruction is a view of growth and qualification for space from the perspective of the College - i.e. what the College will look like in the future, based on sum of its parts - i.e. the campuses and centers that comprise the College.

Based on the data analyzed, student enrollment at the College, over the next 15-years, is projected to have an overall annual rate of growth 1.65%. In terms of absolute values, it is projected to start at 10,369 in year 2015 and reach 12,930 by year 2030. The projected growth for student enrollment is captured for the 5-year benchmark years in the graphic that follows.

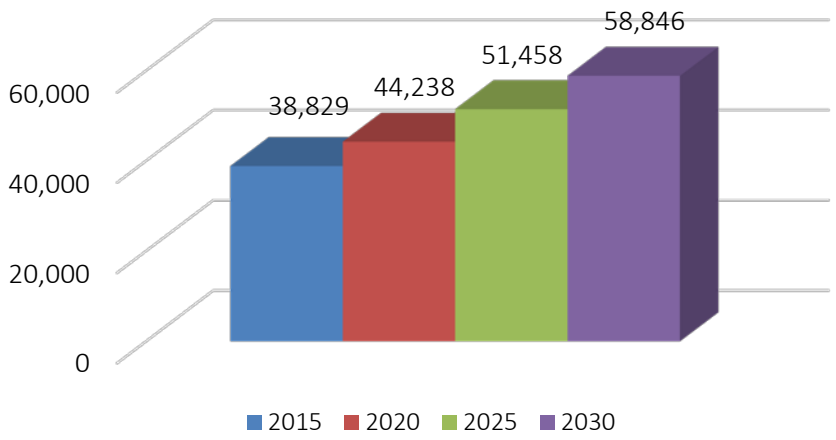
Cerro Coso College: Projected Enrollment Growth



Source: MAAS Companies Projections

WSCH, alternately, begins year 2015 with a value of 38,829 and is forecast to reach 58,846 by the year 2030. The relative rate of annual growth projects at 3.44%. The overall increase amounts to 51.6% over the period 2015 to 2030. In terms of absolute values, WSCH is projected to increase by 20,018.

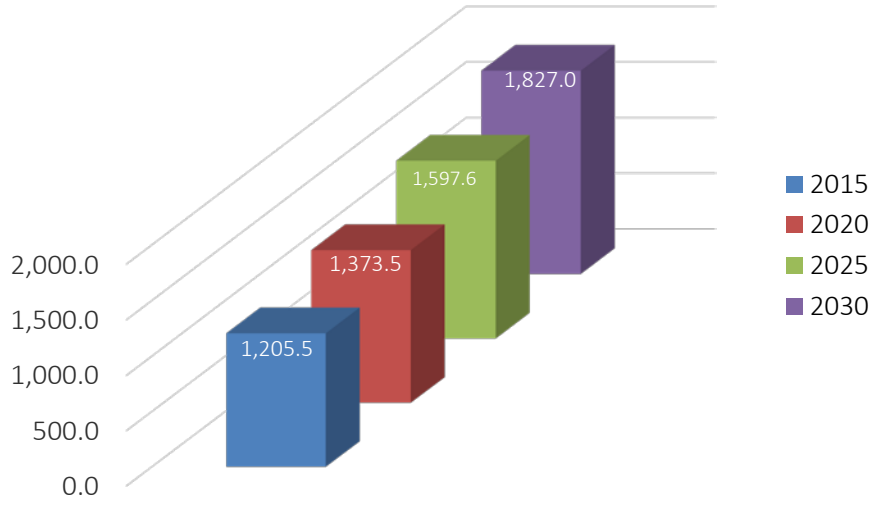
Cerro Coso College: Projected WSCH Growth



Source: MAAS Companies Projections

Full-time equivalent students (FTES), from the perspective of the College, will mirror the percentage increases of WSCH - i.e. a projected annual growth rate of 3.44%. The absolute values for FTES at the 5-year intervals are depicted in the graphic below.

Cerro Coso College: Projected FTES Growth



Source: MAAS Companies Projections

The future programs of instruction are unique to each of the campuses. As such, a relevant and accurate picture of the 2030 program of instruction cannot be painted from the viewpoint of the College. A picture can be painted, however, with regard to the qualification for space.

The graphic that follows presents the future space needs / qualification from the College's perspective.

Cerro Coso Community COllegeTotal Space Needs for the College Via Title 5 Standards

Key Space Categories Monitored by the State					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
100	Classroom	19,001	12,105	(6,896)	0
210-230	Laboratory	38,368	14,914	(23,454)	0
235-255	Non-Class Laboratory	-	600	600	600
300	Office/Conference	23,530	10,092	(13,438)	0
400	Library	25,600	21,353	(4,247)	0
530-535	(AV/TV)	2,848	13,905	11,057	6,181
	sub total	**109,347**	**72,969**	**(36,378)**	**6,781**
Non-State Monitored Space Categories					
Category	**Description**	**Current Space**	**2030 Space Title V Allow**	**Delta**	**Qualification for Space 2030**
0	Inactive	37,836	0	(37,836)	0
510-515	Armory/Armory Service	-	0	0	0
520-525	Phys. Ed. (Indoor)	28,232	31,600	3,368	3,368
540-555	Clinic/Demonstration	8,230	2,524	(5,706)	0
580	Greenhouse	-	0	0	0
590	Other	-	0	0	0
610-625	Assembly/Exhibition	4,051	5,890	1,839	1,839
630-635	Food Service	117	4,169	4,052	4,052
650-655	Lounge/Lounge Service	1,371	718	(653)	(653)
660-665	Merchandizing	2,313	5,553	3,240	3,240
670-690	Meeting /Recreation	2,722	2,101	(621)	0
710-715	Data Processing/Comp.	1,186	1,750	564	564
720-770	Physical Plant	13,685	6,912	(6,773)	0
800	Health Services	-	2,125	2,125	2,125
	sub total	**99,743**	**63,342**	**(36,401)**	**14,535**
	TOTAL	**209,090**	**136,311**	**(72,779)**	**21,316**

Source: MAAS Companies Analysis

From a Collegewide perspective, there will be space needs / qualification for 6,781 ASF of state-monitored space by year 2030. This will be limited, however, to Instructional Media space (+6,181 ASF) and Non-class Laboratory space (+600 ASF). For the non-state monitored space categories, there will be space needs / qualification for 14,535 ASF.

Based on the projections for growth, there will be a significant excess of academic and academic related space out to year 2030. Classroom space is forecast for an excess of 6,896 ASF, Laboratory space an excess of 23,454 ASF and Office space a surplus of 4,247 ASF.

From a Collegewide perspective, there is an imbalance of space across the campuses and centers – i.e. a concentration of space at a one location and the lack or absence of space at others. With the exception of 90 ASF of Physical Plant space at the East Kern Center, the remaining space (13,595 ASF) is located on the IWV Campus. Similar conditions exist for Physical Education space, where 26,367 ASF is located at the IWV Campus and a little more than 1,800 ASF spread over all the other locations. For Food Services, there is only 117 ASF at the IWV

Campus and none at the other campuses. In some of the space categories (e.g. Health Services), there is no space allocated at any of the campuses.

In addition to ensuring that the academic space needs are met, which they will be through the year 2030, barring an unforeseen population explosions within the service areas, the College may wish to consider embarking upon a program of "completing campuses" at the all of its locations. That would include making space provision for some of the non-academic spaces that make a campus a campus, that make a campus an inviting place for students to be and, more importantly, to stay. The idea of encouraging and incentivizing students to carry greater course loads would be greatly facilitated with the inclusion of important campus amenities.

Final Observations / Recommendations

In addition to the observations drawn from the other segments of the Educational Master Plan, the following observations and recommendations are offered for consideration.

Improve WSCH Generation / FTES Production

The College has demonstrated that it can attract students to its campuses. The problem has been that the values for WSCH and FTES productivity have not kept pace. In fact, they have declined. The result has been a reduced program of instruction and a limited ability to qualify for new space. Both of these conditions are driven by the production of WSCH. The College will need to take a look at the current dynamic and address how to continue the trend for increased student enrollment growth while improving the values for WSCH. This will require a proactive approach.

Actions to Consider:

Develop an implementable plan for greater creation of WSCH and FTES that is monitored, evaluated and adjusted each semester. Make WSCH generation / FTES production are the core foundation of each campus' enrollment management plan.

Encourage / Incentivize Students to Take Greater Course Loads

One of the key findings identified in this segment of the Educational Master Plan was the decline in course loads taken by students. The measure of courses taken per student has declined at an alarming rate. The College will need to determine what has changed within its service areas to create this trend and to look internally at what can be done to encourage students to take greater course loads. This is a condition that is prevalent at all campuses of the District.

Actions to Consider:

As part of the assessment and counseling processes, help students identify a plan to complete their educational goals within a time certain. Encourage students to take more than one class at time by emphasizing the value of attaining their goal sooner rather than later.

Create "Complete Campuses"

As a companion to encouraging / incentivizing student to take greater class loads, the College should strive to create "complete campuses" at each location. This applies, particularly, to the outlying campuses. At present, there is an overall imbalance of space across the campuses i.e. a plethora of space at one campus and little or no space at another. If there is an effort to encourage students to take greater course loads, there should be facilities present on the campus that support and that effort – i.e. make the campus a place where student want to be.

The "complete campus" concept also extends to the provision of course offerings that facilitate students achieving their respective educational missions. For example, there are a number of missed opportunities at some of the

outlying campuses because Science courses are either not offered or are offered on a limited basis. While laboratory space for the Sciences is not the easiest to create, students attending should not be impeded from reaching their educational goals because this type of space is absent. If it is impossible to create appropriate space on the campus for the Sciences, perhaps it could be made available at nearby high school locations. The same could be said for Physical Education space. Aside from the 26,000 usable square feet at the Indian Wells Valley Campus, there is only 1,800 usable square feet available at all other campus locations combined. Physical Education space does not have to be a gymnasium, it can be a multiuse room of 1,000 – 1,200 square feet that supports aerobic exercise, yoga, dance or fitness – all of which help to create the "complete campus", draw students to the campus and encourage them to avail themselves of other educational opportunities.

If the outlying campuses that comprise the College are asked to become successful, they need the resources that will support their success.

Actions to Consider:

Assess and addresses the deficiencies in both the curriculum and in facilities. Develop a comprehensive plan that targets "campus completion" at all of the campuses that comprise the College.

Distinguish between "Space Qualification" and "Space Adequacy"

Because space needs are interpreted via the Title V state guidelines, there is a tendency to use these guidelines as the bottom-line, absolute value for the need for space. The "adequacy of the space" that supports the College, however, is an equally important component to consider. While the cumulative amount of space may reflect an appropriate capacity with regard to WSCH production, its usefulness, or lack thereof, may fall short of the actual need for the campus. Accommodating growth for the future will involve "adequacy" as much as it will involve "qualification". It may come in the way of replacement, repurposing or reconfiguring. The end focus, however, should be that space needs are "adequate" to support the delivery of the program of instruction and serve the students at each campus.

Actions to Consider:

Assess and addresses the deficiencies of facilities from a functional perspective. Work with the concept of "campus completion" at all of the campuses of the College.

Evaluate the Instructional Delivery Modality

The delivery of the program of instruction should be revisited and reviewed. It has changed since the last Educational Master Plan was completed. Lecture hours as an instructional delivery modality has increased by 6% and laboratory hours have decreased by 6%. The Title V standards for space qualification favors laboratory space by a margin of at least 3 to 1 (in some cases, it is 5 to 1 or greater depending on the discipline or program) over lecture space. This dynamic has had an impact on the allowances for academic space.

Actions to Consider:

Revisit the Departments of Allied Health, CIS/Business, Industrial Arts, Mathematics, English, Science and Visual / Performing Arts to see where there may be opportunities to apportion more hours to laboratory-based instruction.

Develop Curricular Efficiency

The efficiency of the program of instruction has regressed since the last Educational Master Plan was completed. The College will need to address the issue of curricular efficiency on an ongoing basis as it moves into the future.

Actions to Consider:

Develop a plan to closely monitor the number of class sections offered and amount of WSCH generated for each class section. Expansion of the curriculum should occur only after the efficiency values of the disciplines /

programs are improved. Targets for WSCH per FTEF and enrolled students per section adjusted for load should also be considered.

Assess Basic Skills Support

The College can expect to see growth in the Basic Skills education courses. This notion is supported by the levels of educational attainment that exists within the College's service area. The College will need to be prepared to offer an expanded program in Basic Skills education, particularly to students who may be recruited to the College as first-time, postsecondary learners.

Actions to Consider:

Develop a plan to attract, and academically support, first-time, postsecondary learners and /or those who come underprepared to do work at the College level.

Improve CTE Relevance

Career and Technical Education should be reviewed for content and relevance at the campus sites. Some programs will need to be assessed, revamped, or released. There will also be opportunities for new programs to emerge that may have more enhanced pathways to employment. There is great need to provide students with "now" opportunities.

Actions to Consider:

Work with area resources in Business and Industry to reassess the current program for Career / Technical Education. Revise the curriculum to create a more direct connection for pathways to existing employment opportunities.

Develop Future Enrollment Growth from Within

Because of its geographic location, there will be very little opportunity for the College to capture "free flow" enrollment. If the College is to move forward in the future, it will need to maximize its efforts to draw students from its existing population base and even more importantly to retain the students who are already attending the campuses of the College. The population base of the College's service areas offers good possibilities for attracting, new first-generation postsecondary learners – students who are less academically prepared and who might not consider a college education without some encouragement and mentoring.

Actions to Consider:

Conduct periodic reviews and monitor closely the demographics of the service areas of the College. Develop strategies to maximize the potential that exists from within the College service areas.

Expand Partners in Education

The campuses that comprise the College will need to maintain strong working relationships with local high schools to ensure that graduating students are given the best opportunity to avail themselves of the educational opportunities provided by the College.

Actions to Consider:

Conduct monthly meetings with the area high schools that support the campuses of the College.

Create New Pathways for Education

Over the past 10 years, federal and state legislation has been enacted to help community colleges expand their reach to as many students as possible. Many of the initiatives have targeted keeping existing students in school, so that they can succeed and attain their educational objective. Others have addressed appealing to first generation, postsecondary learners who might not otherwise pursue an education beyond high school. Currently,

there are several state sponsored opportunities to partner with local education institutions and / or business and industry to improve the College's capacity to attract and retain students.

Actions to Consider:

State legislation (sponsored by the State Chancellor's Office) has opened-up new possibilities for community colleges. More support is now available for targeting first-generation, postsecondary students through state-approved programs and local partnerships (e.g. Dual Enrollment Program). The College should stand ready to take advantage of these opportunities.

Recruit Students Selectively

As part of its strategy for growth, the College might consider targeting student athletes. Student athletes are required to take a minimum of a 12-credit load to participate in their chosen athletic endeavor. Foreign students offer a similar possibility for growth. Additionally, the statistics favor transfer students for carrying greater course loads.

Actions to Consider:

Create a strategy to pursue students who are most likely to take full-time course loads, including student athletes, foreign students and transfer education students.

Final Point to Consider

The College can expect that there will be no one course of action to take in meeting the projected growth for student enrollment, WSCH, the future program of instruction and the corresponding needs for space. The approach will be a multifaceted effort with many smaller components contributing to a plan of action that leads to a successful outcome. In today's world, the "build it and they will come" mentality is no longer sufficient. It will take a great deal of work by many to direct the College to a place of growth and expansion. The College will need to set its sights on looking forward, not backwards.

Visions and Projections for the Future

Based on the environmental scan, both external and internal, and the analysis of space utilization at each college campus, Cerro Coso Community College is charting the following primary directions for the next five years:

Direction 1: Build Capacity in Tehachapi and Greater East Kern

As indicated in the external scan, the Tehachapi and Greater East Kern effective service areas (ESA's) comprise close to 50% of the entire population of Cerro Coso Community College's overall service area. Yet penetration into that market is still at a developing stage. Dual enrollment and inmate education have been promising areas of growth in the last five years, increasing from 2 to 29 sections per semester and from 0 to 17 sections respectively (the first section offered in the prison was Fall 2015). The more traditional community college offerings at the Tehachapi Educational Center, started in Fall 2015, have grown to 194 enrollments in 16 sections by Fall 2017.

It is expected that this market will be able to benefit from the development of a full-service college site in the city of Tehachapi, and there are no reasons why this campus should not, in time, become as large as the Indian Wells Valley campus in Ridgecrest. As indicated in the external scan, the Tehachapi campus, serving a prosperous financial area with a consistent level of growth and positive economic indicators, will provide a strong foundation

for the continued success of the campus in the future. To the extent Cerro Coso Community College can capitalize on it, this area represents the only potential for substantial growth the College sees in the foreseeable future.

Examples of Action Items

1. Establish long-term schedules for each campus location in the East Kern area, including Tehachapi, the Greater East Kern Area, Cal City Prison, and Tehachapi prison
2. Determine gaps in faculty resources, facilities, information technology, equipment, and staffing to serve the needs of the long-term schedules
3. Move to hire full-time faculty and/or staff, identify adjunct faculty, address facilities issues, and purchase IT and equipment needs as needed
4. Establish "succession plans" to ensure continuity of offerings for the high schools and correctional facilities

Building capacity to serve Tehachapi and Greater East Kern addresses the observation/recommendations that the College **improve WSCH generation and FTES production** by taking a proactive approach to continue the trend for increased student enrollment growth while improving the values for WSCH. By increasing the number of courses offered, varying the range of courses offered, and expanding course offerings into other parts of the day, it will also stand to address the recommendation to **encourage and incentivize students to take greater course loads**. And by sinking roots deep within the communities of the East Kern area, the college will discover new ways to **expand partners in education** by enhancing its connections to government, education, and industry.

Direction 2: Promote Future Enrollment Growth from Within

Because Cerro Coso Community College is landlocked and because the population is not expected to substantially increase in any of the ESA's over the next five years, any additional growth (outside of more fully serving the Tehachapi and Greater East Kern ESA will have to come from the customers that the College already serves. The College agrees with the recommendation of the external scan that it will need to maximize its efforts to draw students from its existing population base and even more importantly to retain the students who are already attending the campuses of the College. The population base of the College's service areas offers good possibilities for attracting, new first-generation postsecondary learners – students who are less academically prepared and who might not consider a college education without some encouragement and mentoring.

Examples of Action Items

1. Gather and analyze a variety of student quantitative and qualitative data to determine the College's most apparent "loss points"
2. Develop and implement best practices to improve retention and persistence at all levels: first contact to application, application to registration, registration to first day, first day to census, first semester to second semester, 30 units to graduation.
3. Develop high school to college pathways to encourage more high school students to opt for Cerro Coso as their first choice for college
4. Review and revise CTE program offerings to better serve career-focused students wanting to stay within the service area
5. Fully implement Navigate as a tool for helping students clarify the path, enter the path, and stay on the path
6. Implement the Cerro Coso Promise, guided pathways framework, and other programs and practices to incentivize students to take greater course loads
7. Use the superintendents/principals meetings to more firmly establish an educational collaborative

In making the promotion of future enrollment growth from within a high priority, the College will have to consider and address a number of the observations and recommendations that emerged from the external scan, including

encourage and incentivize students to take greater course loads, **improve CTE relevance**, **create new pathways for education**, and **expand partnerships**. Moreover, by finding out at each step why students are leaving, determining how those losses can be slowed or reversed, and implementing best practices for retention, the College will address the recommendation to **improve WSCH generation and FTES production.**

Direction 3: Expand Equitable Services and Maximize Unique Opportunities at all Campuses

This direction is the continuation of a similar goal in the 2012-2017 Educational Master Plan, to establish equitable opportunities and services at all campuses. As noted in the previous report, "This is an ongoing challenge at Cerro Coso Community College, with its five"--now six-- "physical campuses and one virtual campus—and part of what gives the college its unique character. In seeking to find the right adjustment of these programs and services at our different campuses, the key term is 'consistency'." Consistency is more important than ever, as the college strives to implement the student support and success program, student equity, strong workforce, and guided pathways across all of its campuses. In addition, since the last educational master plan, the college has started dual enrollment programs in local high schools and inmate education programs in two service area correctional facilities.

In the last five years, the college has expanded student services and learning support services to all campus locations, including the new one at Tehachapi. All campuses now have an advisement and counseling presence, an ACCESS program presence, a tutoring presence, and a library presence. In the next five years, the goal is to stabilize these services at the college's own physical locations and then expand them to the dual enrollment programs and prisons as appropriate.

At the same time, it is important and necessary that the college seek to leverage the unique opportunities at each of its campuses. As evidenced throughout the external/environmental scan, Cerro Coso Community College's communities are as different as they can be in makeup and outlook. Whether it's educational attainment, age, or economic prospects, no two of the college's effective service areas can be served identically. And while this is a challenge to expanding equitable services, it also provides the college the chance to maximize unique opportunities.

Examples of Action Items

1. Continue to assess and address gaps in curriculum, personnel, and facilities through the 3-year strategic planning and annual integrated planning processes, and adjust curriculum, personnel, and facilities as needed to establish and maintain equitable services.
2. Expand equitable services to dual enrollment and inmate education programs as needed and appropriate.
3. Monitor the implementation of the student success and support program, student equity, strong workforce, and guided pathways with an eye to equitability at all sites.
4. Identify unique instructional and co-curricular program opportunities at each campus location by closely monitoring the number of class sections offered at each location and amount of WSCH generated and planning expansion of programs and curriculum based on student and community need.
5. Continue to utilize Measure C and Measure G funding to expand and improve facilities in Mammoth Lakes and Ridgecrest:
    a. Main Building Modernization
    b. Science Classroom and Lab Expansion
6. Utilize Measure J funding to expand and improve facilities in Ridgecrest and Lake Isabella:
    a. Water conservation: xeriscape throughout the campus
    b. Occupational wing repurposing
    c. Remodel of the welding lab

d. Administration of Justice Academy Center
e. Elevator for East Wing
f. Water conservation: athletic turf fields
g. Gymnasium parking lot
h. Baseball/softball stadium press box
i. Field house for outdoor athletic teams
j. Snack bar/restrooms for athletic complex
k. Baseball/softball stadium seating
l. Track replacement
m. Path of travel within outdoor athletic complex

Expanding equitable services and maximizing the unique opportunities across the college addresses one of the crucial observations that emerged from the environmental scan, **to create complete campuses**. The college agrees with the recommendation by MAAS Companies that the "complete campus" concept has the capacity to draw students to the campus and encourage them to avail themselves of other educational opportunities and that if the outlying campuses are asked to become successful, they need the resources that will support their success. In addition, carrying forward with the implementation of Measure C, Measure G, and Measure J projects will help the college better address the recommendations of **evaluating its instructional delivery modality** and also **distinguishing between "space qualification" and "space adequacy."** Finally, complete campuses that provide equitable services and maximize unique opportunities in educational and co-curricular programs will help the college **recruit more selectively**.