



**ECONOMIC &
WORKFORCE
DEVELOPMENT**
through the
CALIFORNIA
COMMUNITY
COLLEGES

**BUSINESS AND WORKFORCE
PERFORMANCE IMPROVEMENT INITIATIVE**



**Environmental Scan Report
Greater Sacramento Region
Sacramento, El Dorado, Placer and Yolo Counties**

**Public Administration
Industry Profile**



Center of Excellence, Northern California Region

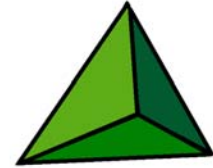
Los Rios Community College District

June 2007



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Environmental Scan for Sacramento Area Community Colleges

Public Administration Industry Profile

June 2007

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OUR MISSION IS TO STRENGTHEN CALIFORNIA'S WORKFORCE AND ADVANCE ECONOMIC GROWTH THROUGH EDUCATION, TRAINING AND JOB DEVELOPMENT.

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CURRENT PUBLIC ADMINISTRATION EMPLOYERS IN THE GREATER SACRAMENTO REGION EXPECT 12 PERCENT OF THEIR WORKFORCE, ON AVERAGE, TO RETIRE OVER THE NEXT THREE YEARS. – Source: Public Administration Employer Survey, BW Research, 2007

Executive Summary

The public sector faces significant challenges as the composition of its workforce is projected to change dramatically over the next 20 years. According to a recent survey by BW Research, public administration employers in the greater Sacramento region – Sacramento, El Dorado, Placer and Yolo Counties – expect 12 percent or nearly 15,000 employees to retire by 2010. Although most employers are aware of the upcoming retirement wave, only 38 percent of those surveyed had formal succession plans in place to groom younger workers to fill those vacancies.

Within the greater Sacramento region approximately 25 percent or 232,000 workers are employed in the public sector. This is significantly higher than the state average of 16.5 percent. This report focuses on the public administration industry, a category of the public sector that excludes publicly owned schools and hospitals. The demand for public administration occupations in the region is also high; public administration employs nearly 125,000 people¹.

Graduation from high school or its equivalency is a minimum requirement for all public administration employment opportunities. Most positions require additional on-the-job training, work experience or education. With the exception of office clerks, assistants and technicians and accounting and auditing clerks, over 65 percent of public administration employers expected at least some college, including a certificate or associate's degree for each of the positions evaluated in the survey.

Eighty percent of the 100 public administration employers surveyed provided tuition assistance and 89 percent provided paid outside training for their current employees. Seventy percent of public administration employers also indicated at least some interest in working with the community colleges for customized training for current employees.

Public administration employers surveyed expressed a high level of difficulty recruiting qualified entry and non-entry level employees for their public administration occupations. Additionally, 40 percent of employers surveyed indicated that they “Always” (18%) or “Frequently” (22%) recruit individuals from outside the greater Sacramento region to fill both entry-level and non-entry level positions, revealing a shortage of qualified workers available to fill those positions.

The community colleges have an opportunity to provide customized training and education programs to meet the workforce needs of the public administration industry. Specifically, a critical need exists to develop training programs to prepare current workers to move-up the career ladder as well as develop customize degree programs to prepare the next generation of workers.

¹ Source: CA EDD, 2005 data.

Introduction

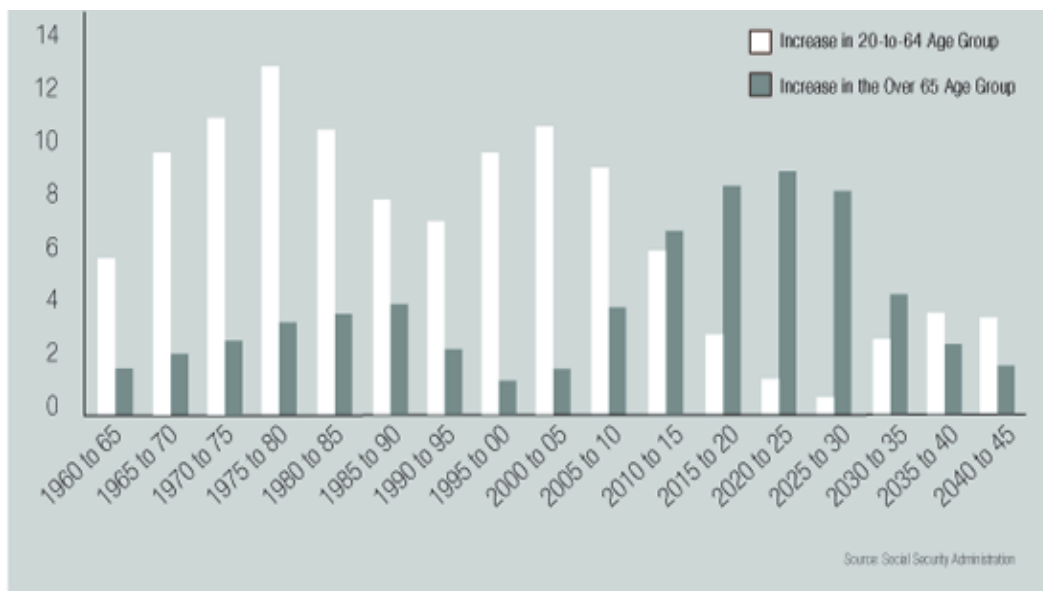
Driven both by the aging baby-boom generation and the much smaller number of younger workers behind them, the public sector is expected to be one of the industries hardest hit by the changing workforce demographics. Given the changing demographics and large size, this study clearly shows a gap between the projected workforce needs and regional community college program offerings.

For the purposes of this study, the public administration industry (NAICS 92) is defined as any public establishment other than a public school or hospital, whereas the larger public sector includes all government-owned establishments (including schools and hospitals). In areas where data for the public administration industry was not available, information for the larger public sector industry has been utilized. While there are unique differences between public sector and public administration data, public sector data provides a solid basis for understanding trends that impact the industry’s overall training needs.

Overview of Changing Demographics

The composition of the nation’s population is projected to dramatically change over the next 20 years, which will have a significant impact on California’s workforce. Nationally, a drastic shift is projected to occur in 2010 when growth among the 65 year and older age group will outpace that of the 20 to 64 year old age group for the first time. In the next five years, over 40 percent of the U.S. workforce will reach retirement age and the number of 35-44 year olds will actually decline by 10 percent².

Figure 1 United States: Change in Workforce and Retired Age Groups³



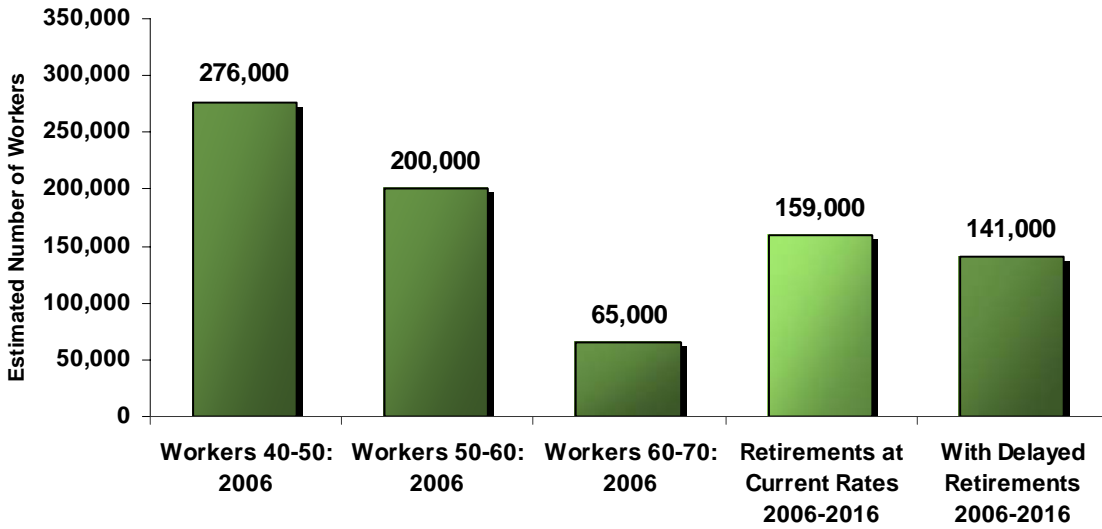
² “Turning boomers into boomerangs,” The Economist print edition, February 16th 2006.

³ Excerpted from “Preparing for Baby Boomer Retirement,” June 2005, James J. L’Allier, Ph.D. & Kenneth Kolosh.

The oldest baby-boomers will turn 61 years of age in 2007 and reach the traditional retirement age of 65 in 2011. Although it is expected that some workers will delay retirement, it is predicted that 2.4 million workers in California will retire between 2006 and 2016, even after accounting for delays. An additional 3.3 million workers are expected to retire between 2016 and 2026 after accounting for delayed retirements, for a total of 5.7 million California workers⁴.

Applying these figures to the greater Sacramento area, approximately 141,000 workers are estimated to retire between 2006 and 2016, with the number increasing to 335,000 between 2006 and 2026, even after accounting for delays.

Figure 2 Sacramento Area Workforce in 2006 with Projected 2016 Retirements⁵



The Public Sector’s Graying Workforce

Although issues related to a retiring workforce will impact all industries, many public sector employees have access to early retirement options before the traditional age of 65, such as the state policy that allows employees to retire at 55 years of age instead of 60. In addition, research at the national level in 2001 revealed that 44 percent of the public sector workforce was over 45 years of age compared with 29 percent in the private sector⁶. As such, the public sector, more so than other industries, is already beginning to experience the impact of retiring workers, a trend that it expected to intensify around 2010 and continue through 2030.

**"It's not a retirement wave, it's a tsunami.
Our peak will occur, by our estimations, in the 2008 to 2010 timeframe."
Linda Springer, Director of the U.S. Office of Personnel Management⁷**

⁴ “California’s Coming Retirement Wave,” Center for Continuing Study of the California Economy, February 2007.
⁵ Estimated by from data provided in “California’s Coming Retirement Wave,” Center for Continuing Study of the California Economy, February 2007 and 2006 CA EDD data for California and the greater Sacramento area.
⁶ “The Aging and Retiring Government Workforce,” CPS Human Resource Services and The Center for Organizational Research, 2003.
⁷ Source: The Council for Excellence in Government.

A Renewed Call for Civic Duty

Furthering the challenges created by the graying of the public sector workforce are additional confounding factors created by:

- The diminished appeal of careers in the public sector among recent graduates⁸,
- The reduction in public sector hiring that occurred in the 1980's and 1990's,
- Competition with the private sector for talent, and
- Recent cut-backs in training and education programs for public sector employees.

A 2002 study by The Council for Excellence in Government⁹ found that 62 percent of individuals under the age of 30 had never been asked to consider a career in government during their high school or college years. The study also found that young people would be most likely to consider public sector employment if asked by their parents, other young people in government, teachers or professors and national leaders. An opportunity exists to communicate the many positive benefits of public sector employment to both students and private sector employees to increase the number of people willing to consider careers in the public sector.

Demand for Public Administration Occupations

The overall demand for public administration occupations in the region is sizeable with approximately 124,580 people employed in public administration occupations (excluding public schools and hospitals). Almost 25 percent or 32,000 of public administration employees are employed in office and administrative support positions. Although current employers in the region only expect to increase their workforce by just over one and a half percent in the next year, those same employers, on average, expect 12 percent of their workforce to retire over the next three years.

Although most employers are aware of the upcoming retirement wave, only 38 percent of employers surveyed had formal succession plans in place to groom younger workers to fill those vacancies. Although most organizations have career ladders in place, there is a real need to connect succession plans and training to those career ladders to make it easier for workers to obtain the knowledge and skills necessary for promotion.

The community colleges have an opportunity within the public sector and more specifically, public administration occupations within the public sector, to provide training and education programs to meet this challenge. A critical need exists for training programs to prepare current public administration workers to move-up the career ladder and fill vacancies left by retiring workers as well as certificate and degree programs to prepare younger workers for careers in public administration-related occupations.

Data compiled for this report was drawn from external sources, including information from California's Employment Development Department and the Bureau of Labor Statistics. Two

⁸ "The Aging and Retiring Government Workforce," CPS Human Resource Services and The Center for Organizational Research, 2003.

⁹ "Young Americans' Call to Public Service," The Council for Excellence in Government, May 2002.

phases of primary research were also conducted, including a quantitative telephone survey completed with 100 public sector employers in the region and qualitative executive interviews completed with 20 human resource and training managers and directors within the public sector.

Findings from both the secondary data sources and the results from the primary research indicate the need to develop public administration courses and programs at the colleges that provide skills training for entry-level applicants as well as those individuals looking to move ahead in the public administration field while currently working.

State of the Region

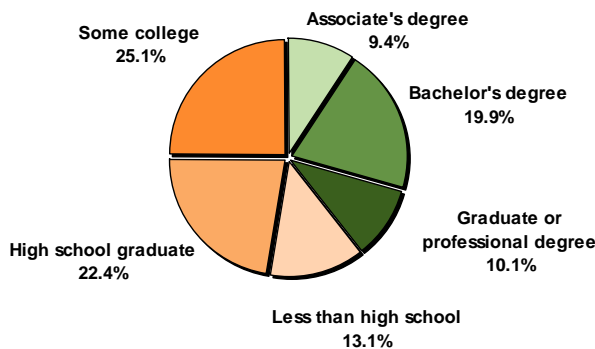
Community colleges play a vital role in the region providing accessible training and education opportunities for young students just out of high school as well as students working full-time or part-time while completing college courses or specialized training programs. Graduation from high school or its equivalency is a minimum requirement for all public administration employment opportunities. Most positions additionally require on-the-job training, work experience or additional education.

With the exception of office clerks, assistants and technicians and accounting and auditing clerks, over 65 percent of public administration employers expected at least some college, including a certificate or associate’s degree for each of the positions evaluated in the survey. Further, approximately 40 percent expected qualified applicants to have at least a bachelor’s degree for those same positions.

According to the 2005 American Community Survey, 87 percent of the 1,280,303 residents 25 years and older in the greater Sacramento region have a high school degree or its equivalent, 64 percent have at least some college and 30 percent have a bachelor’s degree or higher, consistent with the state average (30%).

Many of the human resource and training managers¹⁰ interviewed indicated that the demand for educational attainment in the form of degrees, certificates and advanced training will only increase in the field of public administration as employers look to hire qualified candidates and current employees look to gain the education and training needed to fill vacancies left by retiring workers.

Figure 3 Educational Attainment in the Greater Sacramento Area¹⁰



¹⁰ Derived from the 20 executive interviews with human resource and training managers/directors within the public sector.

Unemployment within the region as a whole (5.3%) is comparable to the state average of 5.2 percent, with Yolo County above the state average at 6.6 percent, El Dorado and Sacramento counties in line with the state (5.2% each) and Placer County below the state at 4.7 percent.

The region is currently home to 2,004,476¹¹ residents, with that number expected to increase 50 percent to 3,011,163 residents by 2035¹².

As the state capitol, the economic activity for the region is largely centered in Sacramento, with the county accounting for an overwhelming 66 percent of employment in the region. Placer County follows with 16 percent of the region's employment and El Dorado and Yolo counties each account for nine percent¹³. This distribution of employment is even further slanted towards Sacramento when examining employment within the public sector.

Sacramento County accounted for 64 percent of the region's public administration employment at the federal level, 99 percent of public employment at the state level and 34 percent of the region's public employment at the local level.

As a region, a much larger portion of state-level public sector employment is found in the greater Sacramento area than any other region in California. The training and education needs of state employers are somewhat different than those at the local level, such as cities or counties. According to the human resource and training directors and managers interviewed, state employers tend to prefer utilizing larger, well-known providers, such as CPS, Sacramento State and UC Davis Extension for their customized external training needs.

Although community colleges have a greater opportunity for customized training opportunities at the local government level, a critical need exists for education programs that will prepare young people for careers in public administration occupations at all levels of government.

Human resource directors are having great difficulty keeping current employees trained and finding qualified applicants to replace current workers. Community colleges are needed to both upgrade the skills of existing public administration employees and produce additional entry-level workers to fill the pipeline with qualified applicants. By developing customized training programs, community colleges can play a vital role in supporting one of the region's largest economic drivers, the public sector.

¹¹ Source: 2005 Census American Community Survey.

¹² Source: Sacramento Area Council of Governments (SACOG).

¹³ Source: CA EDD Labor Market Information, February 2007, not seasonally adjusted.

Industry Overview in the Greater Sacramento region

The public sector, or government industry, is composed of three sectors: local, state and federal agencies. In general terms, government establishments, from all three sectors, set and enforce policy as well as administer, manage and oversee programs designed to serve the public. Public administration is a sub-sector of the public sector, in that it excludes all government owned schools and hospitals.

Current Public Sector Employment

Within the greater Sacramento region approximately 25 percent or 232,000 workers are employed in the public sector. This is significantly higher than the state average of 16.5 percent. Even after excluding public schools and hospitals, public administration still has the largest employment of any industry in the region, with approximately 14.3 percent of workers employed within the industry. Seventy-one percent of public administration employment is at the state level, 24 percent at the local level and five percent is at the federal level. In total, the region is home to 5,736 public administration establishments, employing approximately 124,580 workers¹⁴.

Industry Growth 2000 to 2006

From 2000 to 2006, the public sector, excluding education, at the local level grew more than double the statewide rate (25.4% vs. 13.1%) and the overall growth within the region was slightly lower than California (5.8% vs. 6.3%).

Table 1 Public Sector Employment Growth, Excluding Education: 2000-2006¹⁵

	Annual Average		Employment Change	
	2000	2006	Numerical	Percent
Public Sector Sacramento Region, Excluding Education	130,100	137,700	7,600	5.8%
Total CA: Public Sector, Excluding Education	1,207,800	1,283,300	75,500	6.3%
Federal Government Sacramento Region	15,500	12,600	-2,900	-18.7%
Total CA: Federal Government	272,900	247,600	-25,300	-9.3%
State Government Sacramento Region, Excluding Education	77,600	78,700	1,100	1.4%
Total CA: State Government, Excl. Education	249,100	260,200	11,100	4.5%
Local Government Sacramento Region, Excluding Education	37,000	46,400	9,400	25.4%
Total CA: Local Government, Excl. Education	685,800	775,500	89,700	13.1%

Industry Growth Expectations through 2012

Between 2007 and 2012, public sector employment excluding education is expected to grow by 8.6 percent, adding 12,000 new jobs. Much of this growth is driven at the local level with 6,100 new jobs expected between 2007 and 2012 (13.2% growth), followed by the state level with 5,300 new jobs expected during the same time period (6.6% growth).

¹⁴ Source: CA EDD, 2005 data.

¹⁵ Source: CA EDD, 2006 data.

High Replacement Needs within the Industry

In addition to the creation of new jobs, job replacement needs are high within the public sector. Based on a conservative estimate, approximately 34 percent of state employees¹⁶ within California are expected to retire between 2005 and 2010. At the national level, it is estimated that 58 percent of supervisory workers and 42 percent of non-supervisory workers will be eligible to retire by 2010¹⁷. Within public administration occupations in the greater Sacramento region, job replacement needs are expected to create more job openings, overall, than openings from new job growth.

Other Industries Served by Administration Professionals

Administration professionals, such as office clerks, accountants, auditors, analysts and computers specialists, can be found in just about every industry and employer type in the greater Sacramento regional economy. Although public administration occupations are, by definition, only found within the public sector, the core skills and education necessary for public administration occupations are transferable to similar occupations across a variety of other industries within the private sector.

Compared with the 1960's and 1970's, young people are choosing public sector employment at much lower rates than previous generations. This change is driven by:

- Low awareness of public sector opportunities among new graduates; and
- Negative perceptions of government jobs (e.g. longer hiring process, lower pay, and potential downsizing of the workforce due to budget cuts).

The table below shows the major public administration occupational groups and the share of total employment within the public administration industry.

Table 2 Occupational Employment within the Public Administration Industry¹⁸

SOC Code	Occupational Title	May 2005 Employment All Industries	May 2005 Employment Public Admin.	% Public Admin. Employment
00-0000	Total all occupations	870,280	124,580	14.3%
43-0000	Office and Administrative Support Occupations	174,860	31,840	18.2%
13-0000	Business and Financial Operations Occupations	55,060	22,960	41.7%
33-0000	Protective Service Occupations	22,030	15,150	68.8%
15-0000	Computer and Mathematical Occupations	24,970	8,090	32.4%
11-0000	Management Occupations	42,220	7,080	16.8%
17-0000	Architecture and Engineering Occupations	18,960	5,290	27.9%
21-0000	Community and Social Services Occupations	13,500	5,230	38.7%
19-0000	Life, Physical, and Social Science Occupations	9,740	5,030	51.6%

¹⁶ "Creating a Workforce Plan for California State Employees," California Performance Review.

¹⁷ Issue Brief PPS-05-08: Federal Brain Drain, Partnership for Public Service, November 2005.

¹⁸ Source: CA EDD, 2005 data.

The other major industries that employ administration professionals include:

- Finance and insurance (NAICS 52)
- Professional, technical and scientific services (NAICS 54)
- Management of companies and enterprises (NAICS 55)
- Administrative and support and waste management and remediation services (NAICS 56)
- Educational services (NAICS 61)
- Health care and social assistance (NAICS 62).

The opportunity for strong employment growth, the need to replace a significant number of retiring workers and employers' expressed difficulties finding qualified applicants provide community colleges the justification to commit resources for the creation of public administration programs within the greater Sacramento region.

Workforce Challenges and Opportunities

Education and training is a central element to the success of individuals in many public administration occupations. Given the general nature of many of the degrees earned by public administration employees (such as liberal arts or business), training specific to the field of public administration is critical to employees' success.

Customized training programs were particularly needed by city and county agencies that often lack the resources to conduct training internally. Results from the survey of public administration employers demonstrate opportunities for the colleges to build off of this need for training and education. The specific type of customized training would vary depending on the type of public administration employer, level of government and size of their workforce.

Eighty percent of public administration employers provided tuition assistance and 89% provided paid outside training for their current employees. Seventy percent of public administration employers also indicated at least some interest in working with the community colleges for customized training for current employees. These findings reveal a real opportunity for contract education with colleges in the region.

Table 3 reveals the difficulty regional public administration employers indicated towards general workforce issues. Compared with studies of the public sector in other regions, the survey showed higher levels of difficulty across each of the issues examined.

Nearly half of employers stated at least some difficulty, if not great difficulty, with each of the seven workforce challenges.

Table 3 Workforce Challenges for Regional Public Administration Employers¹⁹

Workforce Challenge	% Some Difficulty	% Great difficulty	Total % Difficulty
Recruiting non-entry level employees with adequate skills and work experience	53%	18%	71%
Replacing retired workers with qualified candidates from outside the organization	49%	20%	69%
Developing strategies to retain valuable employees	47%	13%	60%
Recruiting entry-level employees with appropriate training and education	40%	17%	57%
Replacing retired workers with qualified employees within the organization	47%	10%	57%
Retaining entry-level employees with appropriate training and education	46%	7%	53%
Keeping current workers properly trained on new technologies and software applications	43%	3%	46%

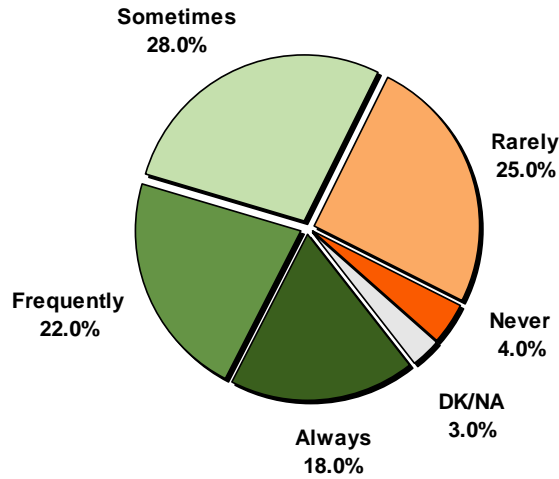
Specifically, results of the survey showed that employers had the most difficulty with “Recruiting non entry-level employees with adequate skills and experience” (71% difficulty) and “Replacing retired workers with qualified candidates from outside the organization” (69% difficulty). Examining the percentage of “Great difficulty” for each workforce issues also places “Recruiting entry-level employees with appropriate training and education” into that top group.

The high level of difficulty recruiting both entry and non-entry level employees is an indicator of un-met demand for public administration occupations. Forty percent of employers surveyed indicated that they “Always” (18%) or “Frequently” (22%) recruit individuals from outside the greater Sacramento region to fill both entry-level and non-entry level positions, revealing a shortage of qualified workers available to fill those positions. In addition, 20 percent of employers typically recruit from outside when a non-entry level position becomes available, 29 percent promote from within and 44 percent indicated an even split between recruiting from outside and promoting from within their organization.

Sixty-eight percent of public administration employers surveyed either “Sometimes,” “Frequently,” or “Always” recruit employees from outside the region.

¹⁹ Derived from the BW Research survey with 100 human resource and training managers/directors within the public administration industry.

Figure 4 Frequency of Recruiting outside the Region²⁰



Employers Express Interest in Community College Programs

Figure 5 reveals employers’ interest in community college programs to assist training and education for public administration occupations. Results of the survey also show that between 62 and 75 percent of employers expressed interest in each of the four potential community college opportunities.

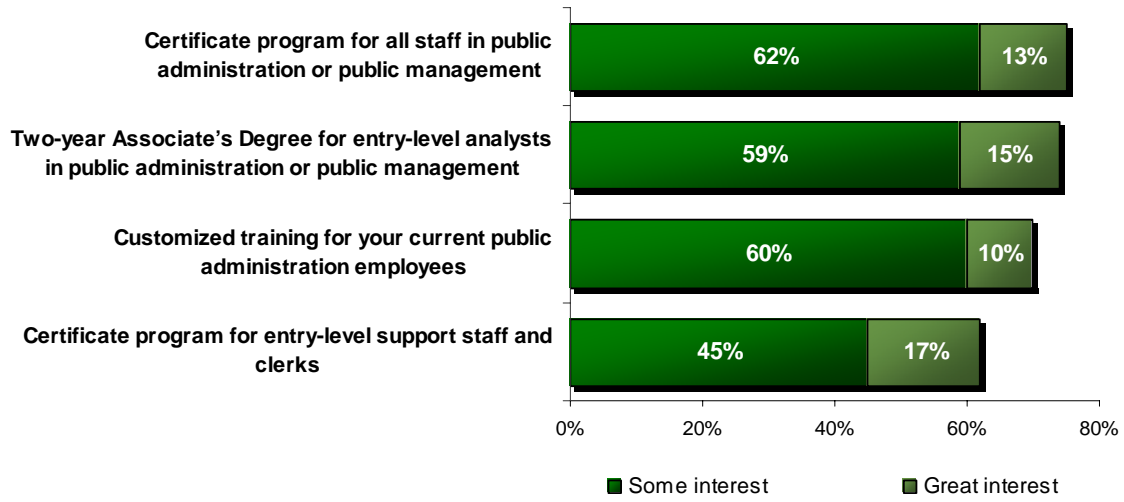
A certificate program for all staff in public administration or public management (75%) and a two-year associate’s degree for entry level analysts (74%) had the greatest percentage of interest (either some interest or great interest), while a certificate program for entry-level support staff and clerks showed the highest level of “Great interest.”.

Although not tested in the quantitative survey, human resource and training managers who participated in the executive interviews indicated that a public administration certificate in human resources, budget and finance or purchasing would be desirable if it was combined with an associate’s degree (either as part of a program or in addition to education already completed by the applicant or employee). They also commented that employers, in general, are becoming more flexible in the type of training they expect from applicants for analyst positions. More are willing to hire someone with an associate’s degree if they have a certificate and/or some relevant job experience in the public sector.

From clerks to analysts, consistent feedback from human resource and training managers also indicated that writing skills are generally weak among public administration employees in the lower to mid-level positions. Writing skills should be interwoven into all public administration-related curricula to help overcome this deficiency.

²⁰ Derived from the BW Research survey with 100 human resource and training managers/directors within the public administration industry.

Figure 5 Employer Interest in Potential Community College Programs²¹



²¹ Derived from the BW Research survey with 100 human resource and training managers/directors within the public administration industry.

Occupational Outlook

At the state level, overall growth in public sector employment will be slightly lower than the average for all industries from 2004 to 2014 (15.7% vs. 16.1%), driven by low growth among federal jobs (3.5%). Growth within the public sector in the greater Sacramento region will also be slightly lower than the average for all non-farm related employment (23.0% vs. 24.4% from 2002 to 2012). However, growth in the public sector within the greater Sacramento region will outpace public sector growth for the State of California as well as total employment growth across industries for the state.

Driven both by industry growth and a high number of expected job replacements from retiring workers, regional data show that demand for public administration occupations will provide substantial opportunities for workers in many occupational categories. Of the eight occupations examined in the study, higher than average growth is expected for human resource analysts and specialists, program analysts and accountants and auditors. In addition, more than half of the employers surveyed indicated difficulty finding qualified accountants and auditors (60%) and budget, business or financial analysts (56%).

Due to the high level of projected retirements within many occupations, the number of job openings will exceed the number of new jobs created by growth for many occupational categories.

The number of replacements expected for office and administration support occupations is close to double the number expected from growth alone.

Within public administration occupations, it is important to consider total job openings, fueled by both growth and replacements, to develop education and training programs to meet employers' need for qualified public administration workers in the region.

While most agencies acknowledged that there was an impending shortage of qualified workers, only 38 percent had formal succession plans in place to deal with the potential future shortages posed by the high level of retirements. Within the retirement literature, it is generally acknowledged that a much higher proportion of workers in management positions will retire as compared to non-management positions, creating the challenge of retaining the organization's knowledge in a systematic way.

Throughout the executive interviews, public administration employers indicated a need for cost-effective, high quality training programs to push along succession plans and improve the productivity of their current workforce.

Although most agencies have career ladders in place, most are not integrated with training and educational planning to maximize employees' success and advancement. Education and training in areas specific to the public administration industry, such as human resources, purchasing and budget and finance would benefit employers looking to fill positions with qualified applicants as well as employees looking to move up the career ladder.

Table 4 displays the largest occupational groups (employment over 5,000) within the public administration industry in the greater Sacramento region. On average, public administration occupations pay higher than the regional average for all occupations. Across occupations, the median pay for public administration occupation in 2006²² was \$24.39 an hour, or \$50,731 a year, as compared with \$16.90 an hour, or \$35,156 a year, across occupations in the region. Although protective service occupations are classified within the public administration industry, the focus of this project was on the other occupational categories within public administration.

Table 4 Occupational Categories for Regional Public Administration Employment²³

SOC Code	Occupational Title	May 2005 Employment Estimates	Median Hourly Wage	Median Annual Wage
00-0000	Total all Occupations	124,580	\$24.39	\$50,731
43-0000	Office and Administrative Support Occupations	31,840	\$18.60	\$38,694
13-0000	Business and Financial Operations Occupations	22,960	\$26.78	\$55,700
33-0000	Protective Service Occupations	15,150	\$24.61	\$51,178
15-0000	Computer and Mathematical Occupations	8,090	\$31.72	\$65,959
11-0000	Management Occupations	7,080	\$42.27	\$87,930
17-0000	Architecture and Engineering Occupations	5,290	\$34.20	\$71,140
21-0000	Community and Social Services Occupations	5,230	\$24.97	\$51,929
19-0000	Life, Physical, and Social Science Occupations	5,030	\$31.39	\$65,279

The table below provides an estimate of the number of new jobs and net replacements needed in each major occupational category within the public administration industry in the greater Sacramento region. Across all public administration occupations, the number of replacements is expected to exceed the total number of new jobs from growth.

Table 5 Estimated Openings for Regional Public Administration Occupations²⁴

SOC Code	Occupational Title	Estimated New Jobs 2005-2012	% of 2005 Jobs	Estimated Replacements 2005-2012	% of 2005 Jobs	Estimated Openings 2005-2012
00-0000	Total all Occupations	23,665	19.0%	25,267	20.3%	48,933
43-0000	Office and Administrative Support	3,784	11.9%	6,729	21.1%	10,513
13-0000	Business and Financial Operations	2,806	12.2%	2,583	11.3%	5,390
33-0000	Protective Service	1,912	12.6%	3,188	21.0%	5,100
15-0000	Computer and Mathematical	3,068	37.9%	1,584	19.6%	4,652
11-0000	Management	1,945	27.5%	1,455	20.5%	3,400
17-0000	Architecture and Engineering	619	11.7%	698	13.2%	1,318
21-0000	Community and Social Services	1,739	33.3%	1,194	22.8%	2,933
19-0000	Life, Physical, and Social Science	630	12.5%	817	16.2%	1,447

The primary research component of this study focused on eight occupations within the public administration industry. To be selected for inclusion, the occupations had to meet at least one

²² CA EDD, 2006 1st Quarter Wages.

²³ CA EDD, May 2005 Employment Estimates.

²⁴ Derived by BW Research using CA EDD data.

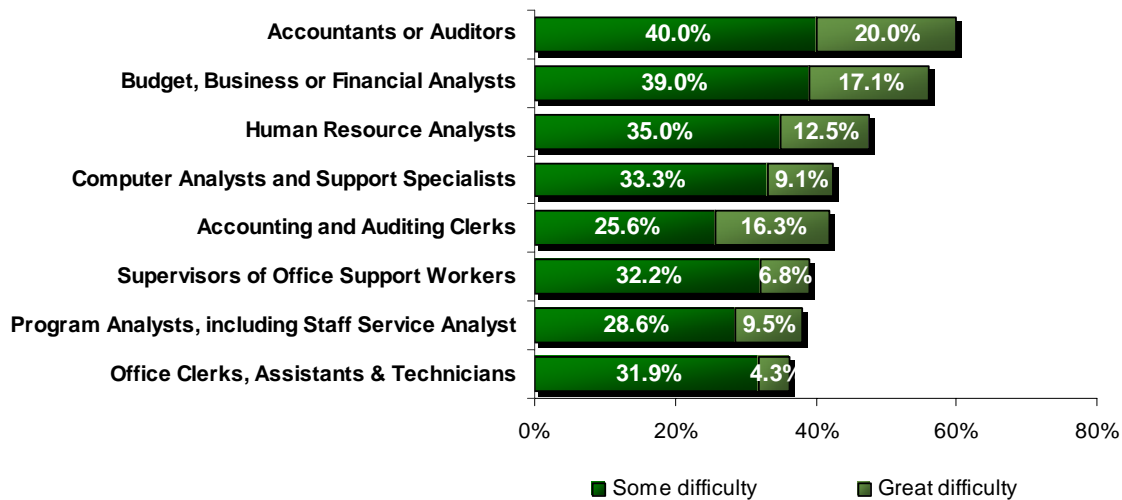
of the following criteria: large employment in the region, above average growth or be an occupation easily served by the education and training programs provided by community colleges.

The eight occupations chosen as the focus of the primary research were:

- Office Clerks, Assistants and Technicians
- Accounting and Auditing Clerks
- Accountants or Auditors
- Supervisors or Managers of Office and Administrative Support Workers
- Human Resource Analysts (including Development, Training, Recruitment and Employment Specialists)²⁵
- Computer Analysts and Support Specialists²⁶
- Budget, Business or Financial Analysts²⁷
- Program Analysts (including Staff Service Analysts)²⁸.

Public administration employers indicated the most difficulty finding qualified accountants and auditors (60%), budget, business or financial analysts (56%), computer analysts and support specialists (48%) and human resource analysts (42%). Please refer to Appendix D for a summary of the occupational outlook for each of the eight occupations.

Figure 6 Difficulty Hiring by Occupation²⁹



²⁵ Derived from data for Employment, Recruitment, and Placement Specialists, Compensation, Benefits, and Job Analysis Specialists and Training and Development Specialists.

²⁶ Derived from data for Computer Systems Analysts and Computer Specialists, All Other.

²⁷ Derived from data for Budget Analysts and Financial Analysts.

²⁸ Derived from data for Management Analysts.

²⁹ Derived from the BW Research survey with 100 human resource and training managers/directors within the public administration industry.

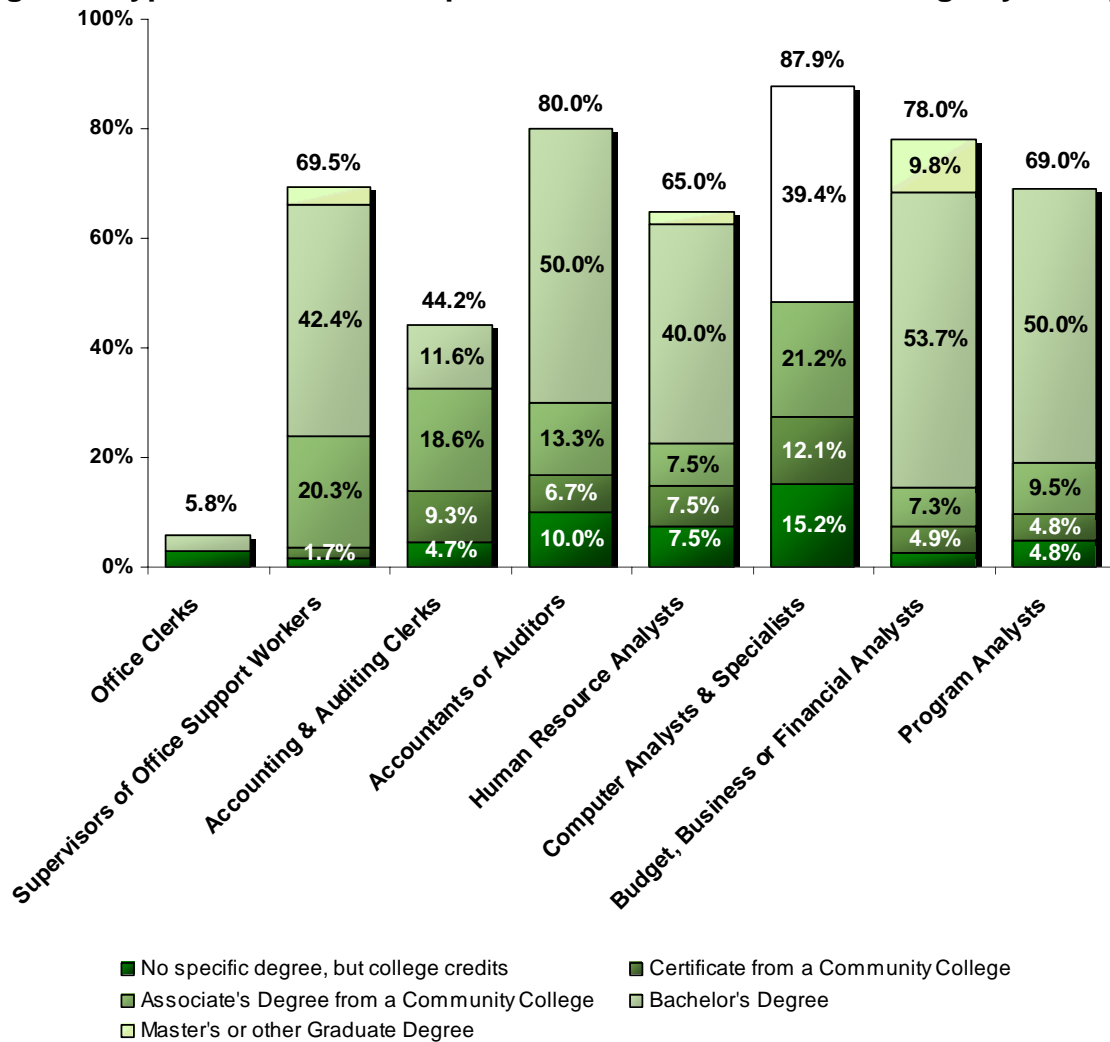
Occupational Skills and Training Requirements

This section of the report provides a brief assessment of the educational requirements and skills that were identified for each of the eight public administration occupations examined in this study.

Feedback from the executive interview portion of the study revealed a general deficiency among recent hires and applicants with regard to a variety of skills, including writing, problem solving, cost-benefit analysis and the ability to connect agency objectives with specific occupational tasks. For current employees, deficiencies were most frequently noted for soft-skills compared to occupation-specific knowledge or qualifications.

The figure below shows the percentage of public administration employers that typically require at least some college for success, for each of the eight occupations examined in the survey.

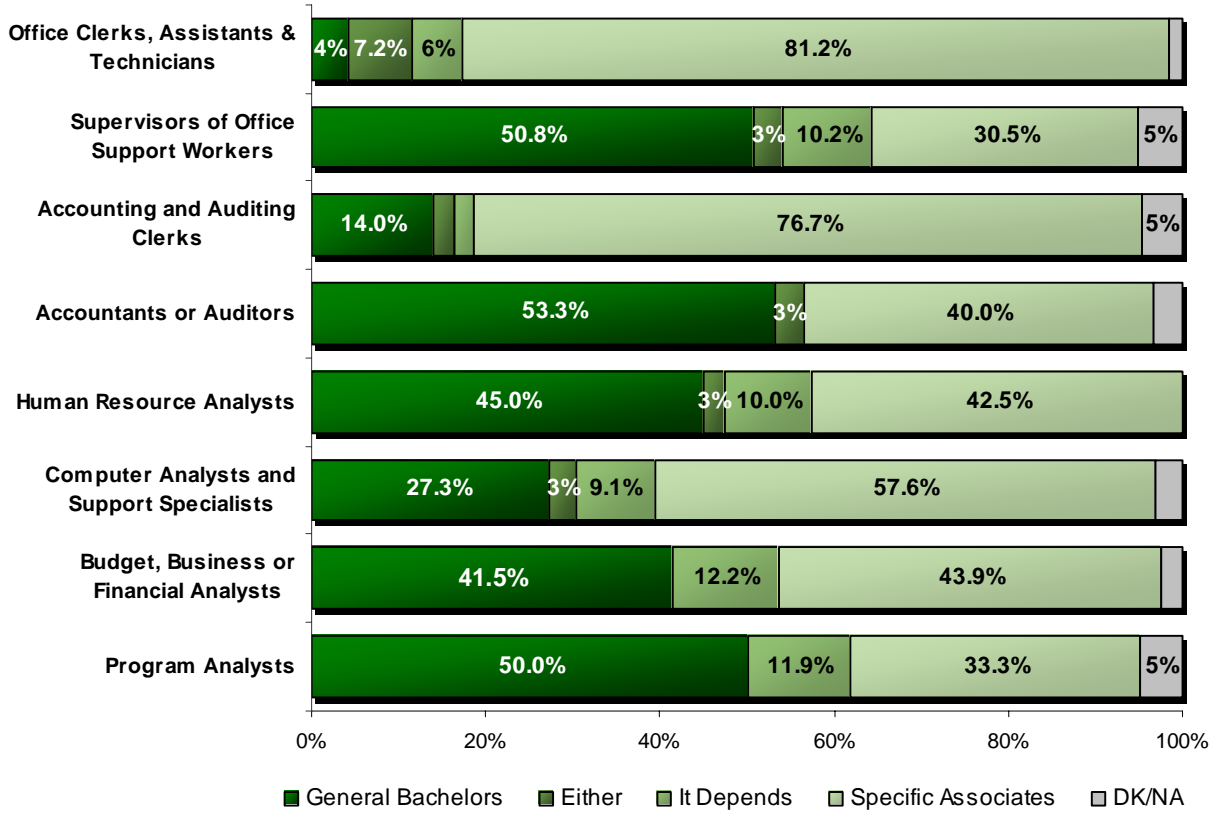
Figure 7 Typical Education Requirements: At Least Some College by Occupation³⁰



³⁰ Derived from the BW Research survey with 100 human resource and training managers/directors within the public administration industry.

The public administration employers surveyed indicated a preference for an associate's degree specific to the position over a general bachelor's degree for office clerks, assistants and technicians (81% vs. 4%), accounting and auditing clerks (77% vs. 14%), computer analysts and support specialists (58% vs. 27%) and budget, business or financial analysts (44% vs. 42%).

Figure 8 Preference for General Bachelors or Specific Associates³¹



³¹ Derived from the BW Research survey with 100 human resource and training managers/directors within the public administration industry.

Career Pathways

Below are some of the common career pathways for many of the public administration occupations examined in the study³².

Entry – Level	Mid – Level	Top – Level
Bookkeeper or Accounting Clerk	Accountant or Full Charge Bookkeeper, or Accounts Receivable Coordinator	Senior Accountant or Accounting Manager
Junior Auditor or Entry-Level Auditor	Auditor or Internal Auditor	Senior Auditor or Internal Controller
Human Resource Assistant or Technician Training & Development Assistant Employment, Recruitment, and Placement Assistant Compensation, Benefits, and Job Analysis Assistant	Human Resource Analyst or Specialist Training & Development Specialist Employment, Recruitment, and Placement Specialist Compensation, Benefits, and Job Analysis Specialist	Senior Human Resource Analyst or Human Resource Manager Senior Training & Development Specialist or Manager Senior Employment, Recruitment, and Placement Specialist or Manager Senior Compensation, Benefits, and Job Analysis Specialist or Manager
Assistant, Data Processing Technician, Information Assistant Entry-Level Computer Analyst or Support Specialist	Computer Analyst or Support Specialist	Senior or Lead Systems Analyst or Project Manager Network Administrator, IT Infrastructure Manager, or IT Supervisor

³² Derived by BW Research.

Industry Validation

This study was built upon the research that was completed in September 2006 in the Strategic Possibility Report of Public Administration in the northern California region. The data for this research process was gathered in three distinct phases, described in more detail below, that utilized secondary and primary research techniques. The purpose of the research was to better understand the workforce and training needs of regional public administration employers.

Labor Market and Occupational Assessment: Using secondary data sources, including California's Employment Development Department (EDD), O*Net online, the Census American Community Survey and the Bureau of Labor Statistics, an industry assessment of regional public administration employers' general occupational profiles was developed.

Quantitative Telephone Survey: One hundred public administration employers in Sacramento, Placer, Yolo and El Dorado counties were interviewed as part of this study. The public administration employer sample was stratified by county and employer size and only included employers specifically from public administration agencies who were likely to employ professionals in the occupations of interest for the study.

Interviews were typically conducted with a human resources manager or director. The purpose of the quantitative surveys was to gather reliable measures of workforce demand for the firm overall, as well as by the eight public administration occupations.

Qualitative Executive Interviews: Twenty executive interviews were completed with human resource and training managers and directors. The interviews were meant to gain a more contextual understanding of the skills and abilities that employers are looking for among public administration professionals. Respondents were also asked to provide feedback on different scenarios that could support the development of public administration professionals.

Response of the Community Colleges and Other Workforce Development

Programs to Industry Needs

Few community colleges in California offer public administration associate or certificate degree training programs. Outside the greater Sacramento region, two community colleges have developed programs, designed to train public policy and para professionals of state, local and federal agencies. Within the Sacramento region, two community colleges have recently responded to the public sector's workforce needs by developing certificate degree programs that will be offered in Spring 2008. Additionally, contract education units across California have developed customized training programs to meet both the specialized and basic workforce training needs of state and local agencies.

Sacramento Region: Public Administration Training Programs

Folsom Lake College – Designed for students interested in careers in state, county or municipal government and community based non profit organization, the 24-unit Public Management Certificate is scheduled to be offered spring 2008. Available through the business department, the curriculum focuses on developing business operations and management competency to enhance or upgrade existing abilities. Core courses include: Introduction to Project Management, Introduction to Business, Personnel and Human Resource Management, Business Communications, Introduction to Public Management, Introduction to Public Financial Administration, Government Relations and Policy Development, and Introduction to Database Management. At this point, Folsom Lake College does not have plans to develop an associate degree in public administration or management.

American River College – Within the next two years, American River College plans to offer a certificate program in public administration. The program is being designed to address the growing demand for entry level public administration occupations.

Sacramento Region: Other Related Programs

Every college in the Sacramento region offers courses, certificates or associate degree programs related to occupations within public administration, but lack specificity to the public administration environment. As shown in Table 7, many programs related to accounting, business operations, office administration, and office technologies are offered by colleges in the Sacramento region. In total, there are 44 associate degree programs and 51 certificate programs. For a complete list of locally available programs, refer to Appendix C.

Table 6 Accounting & Business Related Programs in the Sacramento Region³³

	Accounting	Accounting Clerk	Business	Business, Admin. Assistant	Business, Office Assistant	Business, Transfer	Management
American River College	A.A.+C	C	A.A.+C	A.A.+C	C	A.A.	A.A.+C
Cosumnes River College	A.A.+C	C	A.A.	A.A.	C	A.A.	A.A.
Folsom Lake College	A.A.+C	C	A.A.	A.A.	C	A.A.	A.A.
Sacramento City College	A.A.+C		A.A.			A.A.	A.A.+C
Sierra College	A.A., A.S., + C		A.A., A.S., + C				A.A., A.S., + C
Yuba College	A.S. + C			A.S. + C			A.S. + C

Sacramento Region: Economic and Workforce Initiatives

Given the progressively increasing replacement projections, the Training Source of the Los Rios Community College District, has developed two regional Workforce Solutions Boards aimed at addressing state and local government workforce and training challenges. The primary objective and desired outcome is to assemble a select group of focused, forward thinking local and state government and community college representatives from the greater Sacramento region to:

- Explore and address local and state government workforce needs
- Creatively explore any and all means for the community college system to support the workforce needs of local and state government
- Build long-term sustainable bridges between local and state government and California Community Colleges
- Create relationships and commitment to build programs designed to address specific workforce shortages in the Sacramento region.

Main challenges to be addressed include training, recruitment and retention, succession planning, transfer of knowledge and other issues and solutions as identified by the boards. Compiled of 12 -15 human resource and administrative directors from state and local government departments as well as representatives from regional community colleges, the Workforce Solutions Boards will meet every other consecutive month for the next two years.

Other Program Models and Resources

While state and local government is one of the largest employers throughout California, few public administration programs exist at the community college level. They are: (1) Palomar College with a 22- unit certificate and 22-unit associate degree; and (2) Southwestern College

³³ Source: California Community Colleges Chancellor’s Office.

with 21-unit associate degree. Additionally, several contract education units offer customized, not-for-credit training services.

The Public Administration program at Palomar College is a transfer program to San Diego State University, leading to a bachelor's degree in public policy and administration. Two options are available: an Associate of Arts degree or Certificate of Achievement. Both paths require the completion of seven core courses including: Financial Accounting, Business Writing, Principles of Economics, Elementary Statistics, Introduction to Politics, Introduction to United States/California Governments, and Introduction to Public Administration.

Available through the Political Science department, the Public Administration program at Southwestern College "provides skills for paraprofessionals in public employment." Career paths typically include supporting roles to managers and supervisors at school districts, counties, city, state and federal agencies. In addition to general education requirements, there are six core courses: Principles of Accounting I, Introduction to Computers and Information Process, Principles of Economics I, Principles of Economics II, Elementary Statistics, American Government and Politics.

At the statewide level, a new training module has been released to contract education units to assist government agencies improve customer service outcomes. Designed to assist incumbent workers improve existing skill sets, the training academy is a one-size-fits-all model with specificity to the government sector. In addition to the customer service academy, individual contract education units have partnered with government agencies to customize training services, based on the agencies internal needs. For example, the Training Source at Los Rios Community College District, has developed a series of training programs to improve the analytical and supervisory skills of program analysts for a large state department. These types of customized training programs could provide a solid foundation for developing for-credit programs at the college level.

Implications & Recommendations for Community Colleges

Community colleges should play a larger role in training and educating public administration professionals. As the potential shortage of public administration professionals becomes more pronounced, so does the need for increased participation by the regional colleges.

Challenges for Community Colleges

However, challenges exist that the colleges need to consider in developing their strategic plans for public administration. Generally, there is low awareness among employers regarding the abilities of community colleges to provide customized training programs. As such, employers with a need for customized training programs are not looking to the community colleges to help meet their needs. In addition, many state employers have established relationships with larger, well-known providers, such as CPS, Sacramento State and UC Davis Extension, and utilize them for their external training needs. This presents a challenge for community colleges to compete against the more established providers to provide training to state employers, however, many opportunities exist at the local level, specifically with cities and counties.

Another challenge for community colleges is that employers indicated a preference for an applicant with a general bachelor's degree over a specific associate's degree for half of the occupations examined in the study (four of the eight). Although many human resources directors are relaxing their formal education requirements due to the difficulty finding applicants to fill positions, it may take longer for community college degrees to become competitive for those occupations that traditionally require a bachelor's degree, such as accountants and auditors, budget, business or financial analysts and program analysts.

Opportunities for Community Colleges

With these challenges in mind, the following recommendations were developed:

1. Provide Training for City and County Government

Training current employees was a surprisingly immediate need of cities and counties. Developing training in areas such as writing, project management and budget processes that are fairly standard between cities and counties would provide an opportunity for community colleges to help current workers gain the skills necessary to move up their career ladders and fill positions left by retiring workers. Utilizing a model similar to the training provided by the law firm, Liebert Cassidy Whitmore, the community colleges could create a consortium to provide standardized workshops on each of the topic areas throughout the year in varied locations throughout the region. Public agencies that opt-in to the training would pay a one-time fee each year that would allow any interested employee to attend the workshop sessions and improve their skills. As public agencies get more familiar with community colleges through this standardized training program, many will likely also contract with the college for customized on-site training specific to the individual needs of their organizations.

2. Offer Public Administration Associate's Degrees and Certificates

As employers are forced to look farther to recruit qualified applicants, they will become more willing to consider new opportunities to find qualified applicants within the region. However, colleges should not expect that employers will no longer expect a bachelor's degree for certain occupations. Community colleges can establish their place in the public administration pipeline by developing and/or expanding the following programs.

Employers expressed the greatest interest in a certificate program for all staff in public administration and a two-year associate's degree for entry level analysts in public administration.

The general certificate program for public administration could also include an "Entry into Public Administration" component for those individuals that are considering a move from the private sector or those who have a general bachelor's degree, but no specific knowledge of the public administration industry.

In addition to an associate's degree for entry-level analysts, feedback from the executive interviews yielded interest in a combined associate's degree and certificate program. The associate's degree would be general to the public administration industry and students could concurrently earn a specialized certificate in areas such as public sector human resources, budget and finance or purchasing. A combined degree program would make students more competitive during the hiring process by combining general education with industry-specific knowledge and training.

All entry-level programs should also formalize internship opportunities that provide students exposure to the occupation as well as increase awareness among regional employers of community colleges as a part of the public administration pipeline.

3. Communicate the Value of Public Administration Opportunities to Students

A real opportunity exists for the community colleges to collaborate with middle schools and high schools in the region, as well as with public administration agencies, to increase awareness of the opportunities available within the industry. In addition to increasing awareness of public administration career opportunities, communicating opportunities with students and job seekers will also serve to increase awareness of the role that the colleges can play in effectively moving people from school to a well paying career.

Research studies have shown that young people and new graduates have low awareness about the career opportunities available to them within the public administration industry and are subsequently choosing careers in private industry. Although internships can help introduce students to public administration opportunities, a more comprehensive approach is needed to help increase awareness and meet the industry's needs for qualified workers.

The many benefits of public administration employment should be communicated to students and job seekers, such as the opportunity to contribute to the greater good, serve their community and help people while working in a field with strong job security and good benefits.

To help overcome the perception of lower pay in the public sector, the focus should be on the total compensation package, factoring in health coverage, retirement and pension plans, and life insurance, instead of just the annual salary. The available career promotion opportunities that exist within a career ladder framework should also be communicated to students and job seekers. Career advancement opportunities are a central consideration for younger employees and jobseekers and an established career ladder program is an important benefit that should be communicated to both potential and current employees.

Conclusion

With 12 percent of the public administration workforce expected to retire by the year 2010 and with very few public administration degree or certificate training programs in the Sacramento region, a significant gap exists between the public sector's workforce needs and the community college program offerings.

Through industry-education partnerships, like the State and Local Government Workforce Solutions Boards, community colleges can gain access to the expertise and support necessary to develop customized training and education programs that will strengthen the public sector's workforce. This report should be used as a guide to further explore high demand occupations that can be translated into public administration training programs.

Appendix B provides an outlook for the top seven occupation categories in the public administration industry, including expected job openings, current level of difficulty finding qualified applicants, education requirements, job requirements and earning potential.

APPENDIX A: How to Utilize this Report

About Us - Description of BWPI

The Business and Workforce Performance Improvement (BWPI) initiative is focused on building the capacity of the colleges in the area of economic and workforce development to enhance their ability to deliver education and training services to businesses and workers in high growth industries, new technologies, and other clusters of opportunities.

The Centers of Excellence (COE) within BWPI provide information regarding workforce trends, increasing awareness and visibility about the colleges economic and workforce development programs and services, and building partnerships with business and industry. The difference this will make to the colleges is that it will position them as THE workforce partners of choice to business and industry and ensure that college programs are current and responsive. This will contribute to the overall economic vitality of the communities in which they serve.

How to Use This Environmental Scan Report

The Centers of Excellence within the Business and Workforce Performance Improvement Initiative of the California Community College Economic and Workforce Development Program have undertaken Environmental Scanning to provide targeted and valuable information to community colleges on high growth industries and occupations.

This report is intended to assist the decision-making process of California community college administrators and planners in addressing local and regional workforce needs and emerging job opportunities in the workplace as they relate to college programs. The information contained in this report can be used to guide program offerings, strengthen grant applications, and support other economic and workforce development efforts.

This report is designed to provide current industry data that will:

- Define potential strategic opportunities relative to an industry's emerging trends and workforce needs;
- Influence and inform local college program planning and resource development; and
- Promote a future-oriented and market responsive way of thinking among stakeholders.

This Environmental Scan included a review of the California Regional Economies Project reports and Employment Development Department (EDD) Labor Market Information (LMID) projections that cover the communities in this region, as well as many other sources as referenced.

Important Disclaimer:

All representations included in this report/study have been produced from a secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings. The purpose of the Environmental Scan is to assist the California Community Colleges to respond to emerging market needs for workforce performance improvement. However, neither the BWPI Centers of Excellence, COE host college or California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon this study including components or recommendations.

APPENDIX B: Occupational Outlook for Public Administration Occupations

Demand for Office Clerks, Assistants and Technicians is strong, but growing slowly at the national (8%) and state (10%) levels through 2014 according to O*NET³⁴. In 2005, the public administration industry accounted for 32.6 percent of total employment for office clerks, assistants and technicians within the region. Across industries, 12,980 job openings are expected within the region between 2002 and 2012, driven by 13.8 percent growth and replacements needs at 22.1 percent.

Regionally, 36 percent of employers indicated at least some difficulty finding qualified applicants (the lowest of the eight occupations evaluated) and total employment is expected to increase by about 2.9 percent in the next 12 months. Within the region, the median wage³⁵ for public administration office clerks, assistants and technicians is approximately \$16.31 per hour, or \$33,934 a year.

This is an entry-level position that typically requires a high school diploma or its equivalency (90% of public administration employers). When given the choice, public administration employers would prefer an applicant with an associate's degree specific to the position (81%) over a general bachelor's degree (4%).

The work of office clerks, assistants and technicians can vary greatly depending on the specific office environment and the experience of the worker. Duties can include compiling and filing records of office activities, operating office machines (e.g., fax or copier), data entry, proof-reading and reviewing files, records and other documents to obtain information to respond to requests. The critical general skills for this occupation include the ability to work as part of a team, good communication skills, be detail oriented and adaptable.

Demand for Supervisors or Managers of Office and Administrative Support Workers is strong, but growing relatively slowly nationally (8%) and within California (10%) through 2014 (across industries). In 2005, the public administration industry accounted for 38.8 percent of total employment for supervisors or managers of office and administrative support workers within the region. Across industries, 4,690 job openings are expected within the region between 2002 and 2012, driven by 10.9 percent annual growth and replacements needs at 21.4 percent.

Thirty-nine percent of public administration employers surveyed indicated at least some difficulty finding qualified applicants. Total employment is expected to increase by 3.6 percent in the next 12 months within the public administration industry in the region. Within the greater Sacramento region, the median wage for supervisors or managers of office and administrative support workers within the public administration industry is approximately \$30.38 an hour, or \$63,183 annually.

This is a mid-level position that typically requires a bachelor's degree (46% of public administration employers) or at least some college (70% of employers). When given the choice, public administration employers would prefer an applicant with a general bachelor's degree (51%) over an associate's degree specific to the position (31%).

Similar to office clerks, the work of supervisors or managers can vary greatly depending on the office environment. Duties typically include assigning work assignments and deadlines and

³⁴ O*NET projects growth for each position across all industries.

³⁵ CA EDD, 2006 1st Quarter Wages.

overseeing and checking the work of office and administrative staff. Supervisors are often involved in the hiring and training of new employees and acting as liaisons between support staff and the professional, technical and managerial staff. The critical general skills for this occupation include strong teamwork, problem-solving, ability to coordinate the work of others, leadership, communication skills and any appropriate office-specific knowledge, such as an organization's computer or filing system.

Demand for Accounting and Auditing Clerks is strong, but growing relatively slowly nationally (6%) and within California (8%) across industries. In 2005, the public administration industry accounted for 21.6 percent of total employment for accounting and auditing clerks within the region. Across industries, 4,450 job openings are expected within the region between 2002 and 2012, driven by 13.9 percent growth and replacements needs at 18.8 percent.

Within the region, public administration employers expected to increase employment by 1.4 percent in the next 12 months. Although accounting and auditing clerks ranked fifth overall in terms of total difficulty finding qualified applicants (42% at least some difficulty), it had the third highest percent of "Great difficulty" among employers (16%). The median wage for accounting and auditing clerks in the public administration industry is \$18.37 an hour, or \$38,206 annually, within the greater Sacramento region.

This is an entry-level position that typically requires graduation from high school (49% of public administration employers) or at least some college (44% of employers). When given the choice, public administration employers would prefer an applicant with an associate's degree specific to the position (77%) over a general bachelor's degree (14%).

The work is focused on recording and documenting financial activities and transactions and preparing summary reports for supervisors and managers. Clerks will also monitor that data is complete and accurate and ensure that billing statements are properly handled and recorded. In larger organizations, accounting and auditing clerks often have more specialized tasks, such as accounts receivable or accounts payable. The critical general skills for this occupation include understanding accounting practices and the ability to use software applications.

Demand for Accountants and Auditors is above average and increasing faster than the averages nationally, within California and within the region (across industries). Nationally and in California, the number of accountants is expected to increase between 22 and 23 percent between 2004 and 2014. In 2005, the public administration industry accounted for 19.6 percent of total employment for accountants and auditors in the region. Across industries, 2,860 job openings are expected within the region between 2002 and 2012, driven by 26.6 percent growth and replacements needs at 18.9 percent.

Total employment is expected to increase by 7.9 percent in the next 12 months among public administration employers – the highest growth percentage among the occupations examined within the survey. Sixty percent of public administration employers indicated at least some difficulty finding qualified applicants - the greatest difficulty of the public administration occupations examined. Within the greater Sacramento region, the median wage for accountants and auditors in the public administration industry is \$28.77 an hour, or \$59,846 a year.

This is an entry to mid-level position that typically requires at least a bachelor's degree (50% of public administration employers) or some college (80% of employers). When given the option,

public administration employers would prefer an applicant with a general bachelor's degree (53%) over an associate's degree specific to the position (40%).

For accountants and auditors in the public sector, the work is focused on maintaining and examining the records of government agencies and auditing private businesses and individuals whose activities are subject to government regulations or taxation. More senior accountants and auditors will also be responsible for managing, supervising and training other accountants and auditors. Understanding of accounting and auditing practices and compliance requirements are the critical skill sets for accountants and auditors.

Demand for Human Resource Analysts (including Development, Training, Recruitment and Employment Specialists) is currently relatively low, but is growing faster than average nationally (24%), within California (26%) and regionally (28%) across industries. In 2005, the public administration industry accounted for 21.2 percent of total employment for human resource analysts and specialists within the region. Across industries, 1,150 job openings are expected within the region between 2002 and 2012, driven by 28.4 percent growth and replacements needs at 15.2 percent.

Regionally, 48 percent of public administration employers indicated at least some difficulty finding qualified applicants (third highest occupation) and total employment is expected to increase by 3.9 percent in the next 12 months. In the greater Sacramento region, the median wage for human resource analysts and specialists in the public administration industry is approximately \$29.71 an hour, or \$61,795 per year.

This is an entry to mid-level position that typically requires at least some college (65% of employers) or a bachelor's degree (43%). When given the choice, public administration employers indicated a slight preference for an applicant with a general bachelor's degree (45%) over an associate's degree specific to the position (43%).

The work of human resource analysts and specialists often varies depending on the particular individual's area of specialization. Duties can include maintaining and analyzing data on applicants and employees, screening, interviewing and testing applicants, checking references and extending job offers, performing job classification, compensation or benefits studies, conducting research studies on issues related to employee satisfaction or turnover and planning, organizing and implementing a wide range of training and development activities for employees.

Human resource analysts and specialists must be very familiar with the organization and its human resources policies and must also keep informed about equal employment opportunity (EEO) and affirmative action guidelines and laws, such as the Americans with Disabilities Act. The critical general skills for this occupation include strong analytical, interpersonal, communication and time management skills and knowledge of personnel and human resources practices and laws.

Demand for Computer Analysts and Support Specialists is above average and growing faster than average at the national (28%) and state (30%) levels. In 2005, the public administration industry accounted for 66.7 percent of total employment for computer analysts and specialists within the region. Across industries, 2,430 job openings are expected within the region between 2002 and 2012, driven by 16.0 percent growth and replacements needs at 11.4 percent.

Regionally, 42 percent of employers indicated at least some difficulty finding qualified applicants. Total employment is expected to increase by 2.8 percent in the next 12 months among public administration employers within the region. The median wage for computer analysts and support specialists in the public administration industry is approximately \$31.60 an hour, or \$65,710 a year, in the greater Sacramento region.

This is an entry to mid-level position that typically requires at least some college (88% of employers – the highest percentage from the survey) or a bachelor's degree (39%). When given the option, public administration employers would prefer an applicant with an associate's degree specific to the position (57%) over a general bachelor's degree (27%).

The work is focused on solving computer problems and applying computer technology to meet the individual needs of an organization. Computers analysts and support specialists may plan and develop new computer systems or devise ways to apply existing systems' resources to additional operations. The tasks performed by computer analysts and support specialists often evolve rapidly, reflecting new areas of specialization or changes in technology, as well as the preferences and practices of employers. The critical general skills for this occupation include broad knowledge and experience related to computer systems and technologies, strong problem-solving and analytical skills and good interpersonal skills.

Demand for Budget, Business or Financial Analysts is currently relatively low, but expected to grow in line with the average for all occupations nationally (16%) and slightly faster than average within California (18%) through 2014. In 2005, the public administration industry accounted for 37.8 percent of total employment for budget, business or financial analysts within the region. Across industries, 490 job openings are expected within the region between 2002 and 2012, driven by 18.9 percent growth and replacements needs at 15.4 percent.

Regionally, 56 percent of employers indicated at least some difficulty finding qualified applicants (the second highest level) and 17 percent indicated great difficulty finding qualified applicants. Total employment is expected to increase by 6.4 percent in the next 12 months within the public administration industry in the region, which was the second highest growth percentage among the occupations examined. The median wage for public administration budget, business or financial analysts is approximately \$29.96 an hour, or \$62,305 a year, within the region.

This is an entry to mid-level position that typically requires a bachelor's degree (63% - the highest percentage of the occupations examined within the survey) or at least some college (78% of employers). When given the choice, public administration employers indicated a slight preference for an applicant with an associate's degree specific to the position (44%) over a general bachelor's degree (42%).

The work is focused on developing, analyzing and ensuring that budgets are executed appropriately. Budget, business or financial analysts show how resources are being allocated within an organization and can utilize cost benefit analyses to see how things might change under different scenarios. Budget, business or financial analysts can often move into more senior management positions because of their close understanding of an agency's finances. In terms of general skills, budget, business or financial must be able to use multiple sophisticated software applications, understand accounting practices and be able to use these tools to solve complex problems.

Demand for Program Analysts (including Staff Service Analysts) is currently relatively low, but increasing faster than the average across industries nationally (20%), within California (21%) and within the region (31%). In 2005, the public administration industry accounted for 29.6 percent of total employment for program analysts within the region. Across industries, 920 job openings are expected within the region between 2002 and 2012, driven by 31.4 percent growth and replacements needs at 13.7 percent.

Thirty-eight percent of public administration employers indicated at least some difficulty finding qualified applicants and expected to increase employment by 2.7 percent over the next 12 months. Within the greater Sacramento region, the median wage for public administration program analysts is \$28.94 an hour, or \$60,201 a year.

This is an entry to mid-level position that typically requires at least a bachelor's degree (50% of public administration employers) or some college (69% of employers). When given the option, public administration employers would prefer an applicant with a general bachelor's degree (50%) over an associate's degree specific to the position (33%).

The work is focused on analyzing and proposing ways to improve an organization's structure, efficiency or profits to assist management in operating more efficiently and effectively. Within public administration, program analysts tend to specialize by the type of agency and their work can vary from project to project. The critical general skills for this occupation include analytical skills, strong oral and written communication skills, good judgment and decision making, time management and strong interpersonal skills.

Source: Derived from the BW Research surveys & executive Interviews of human resource and training managers/directors within the public administration industry; CA EDD data.

APPENDIX C: Accounting and Business Related Training Programs in the Sacramento Region

	American River College	Cosumnes River College	Folsom Lake College	Sacramento City College	Sierra College	Yuba College
Accounting	A.A.+C	A.A.+C	A.A.+C	A.A.+C	A.A., A.S., + C	A.S. + C
Accounting Advanced		C	C			
Accounting Clerk	C	C	C			
Accounting Computer Appl.		C	C			
Accounting Taxation	C	C				
Administrative Professional					A.A., A.S., + C	
Administrative Technical Support					A.A., A.S., + C	
Book Keeping, Junior Level				C		
Book Keeping, Senior Level				C		
Business	A.A.+C	A.A.	A.A.	A.A.	A.A., A.S., + C	
Business Administration					A.A. + A.S.	A.S.
Business, Admin. Assistant	A.A.+C	A.A.	A.A.			A.S. + C
Business, Book Keeping & Office Management				A.A.+C		
Business, Clerical (Level A)				C		C
Business, Computer Applications						A.S. + C
Business, Computerized Office Technologies (Level B)				C		
Business, Customer Service				C		
Business, Emerging Technologies						C
Business, GIS Applications		C				
Business, Information Technologies						A.S. + C
Business, Office Administration	A.A.+C			A.A.+C		
Business, Office Assistant	C	C	C			

	American River College	Cosumnes River College	Folsom Lake College	Sacramento City College	Sierra College	Yuba College
Business, Office Careers - Fast Track	C					
Business, Office Simulation w/ Internship (Level D)				C		
Business, Office Technician		C	C			
Business, Office Technology	C					
Business, Operations & Management (Level C)				C		
Business, Transfer	A.A.	A.A.	A.A.	A.A.		
Business, Virtual Office Professional	C					
Finance		A.A.	A.A.			
Leadership in Action*	C					
Management	A.A.+C	A.A.	A.A.	A.A.+C	A.A., A.S., + C	A.S. + C
Modern Management	A.A.+C					
Personnel Management						A.S. + C

A.A. = Associate of Arts Degree
 A.S. = Associate of Science Degree
 C = Certificate

Source: California Community Colleges Chancellor's Office – 2007.