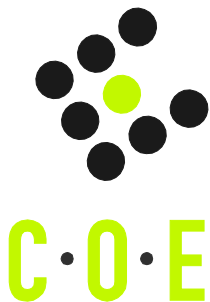


PRINTING AND PUBLISHING IN CALIFORNIA



2010



This report was prepared by the Northern California Center of Excellence and the Office of Economic Development at Cerritos College. Special thanks for their assistance go to Dennis Howey of Fullerton College, Gerald Baretto of the Visual Media Alliance and Frank Iannuzzi of the Southern California Printing Association."

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Economic and Workforce Development Program

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Introduction

California's printing and publishing sector generated \$35 billion in gross annual revenues in 2009.¹ However, the demand for goods and services in this sector has dropped in all regions throughout California due to changing consumer demographics, atomization of basic business processes, increased dependence on the internet, as well as the national recession. Over the next five years, the print and publishing sector will begin to stabilize, with projected decline of only 2 percent.

The purpose of this study is to assess and map the workforce and economic trends of the printing and publishing sector for the 10 regions in California. This information will be used by the California Community College's Centers for Applied Competitive Technologies (CACT) to determine how to best serve the industry. The CACTs offer technology education, manufacturing training, and consulting services that contribute to continuous workforce and business development, and technology deployment. More information about the CACTs can be found in Appendix B.

This study provides data comparisons for the following regions:

Region²	Counties
Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, Solano, Sonoma
Central Valley	Alpine, Amador, Calaveras, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, San Joaquin, Stanislaus, Tulare, Tuolumne
Far North	Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama, Trinity
Greater Sacramento	El Dorado, Nevada, Placer, Sacramento, Sutter, Yolo, Yuba
Inland Empire	Inland Empire, Riverside, San Bernardino
Los Angeles	Los Angeles
Orange	Orange
San Diego & Imperial	Imperial, San Diego
Silicon Valley	Monterey, San Benito, San Mateo, Santa Clara, Santa Cruz
South Central	San Luis Obispo, Santa Barbara, Ventura

¹ InfoUSA Data, January 2009.

² Regions are defined based on the California Community College Economic and Workforce Development delineations.

Industry Overview

Industry Composition

For the purposes of this report, the printing industry includes establishments engaged in printing text and images on paper, metal, glass, apparels, and other materials. The publishing industry includes firms that produce and disseminate literature or information through books, newspapers, and periodicals. Together the printing and publishing sector is composed of the following three segments:

- Printing – firms that are engaged in lithographic printing, gravure printing, flexographic printing, screen printing, quick printing, digital printing, manifold business forms printing, books printing, and blankbook, looseleaf binders and devices manufacturing.
- Support Activities for Printing – firms that are engaged in tradebinding and related work, and prepress services.
- Publishing – firms that publish newspapers, periodicals, books, directory and mailing lists, greeting cards, and other materials.

Appendix C provides the NAICS codes and industry descriptions for each major industry group in the printing and publishing sector. As shown in Table 1, printing is the largest industry group in terms of number of firms with about 3,800 establishments and 53,600 jobs, followed by publishing with more than 2,700 businesses and approximately 54,800 jobs.

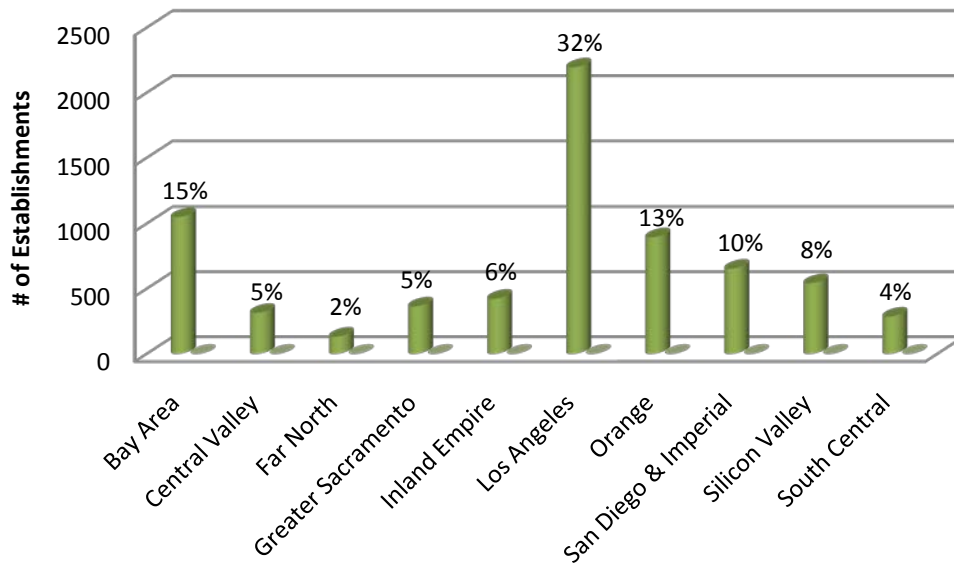
Table 1: Printing and Publishing Establishments and Jobs by Major Industry Group in California³

Industry Group	2009 Jobs	2009 Jobs % of Total	2008 Establishments	2008 Est. % of Total
Printing	53,619	47%	3,809	56%
Support Activities for Printing	4,845	4%	318	5%
Publishing (Except Internet)	54,785	48%	2,734	40%
Total	113,249	100%	6,861	100%

In 2008, there were about 6,860 printing and publishing firms located in California, with the majority of them located in Los Angeles County (2,195 firms), followed by the Bay Area (1,030), Orange County (890 firms), and the San Diego & Imperial Region (685 firms), as shown in Exhibit 1.

³ EMSI Complete Employment – 4th Quarter 2009.

Exhibit 1: Printing and Publishing Establishments by Region⁴



Map 1 displays the locations of printing and publishing firms in California by county. As shown, there are 42 counties that have fewer than 150 firms, 10 counties that have between 150 and 550 firms, and only 6 counties with more than 550 firms.

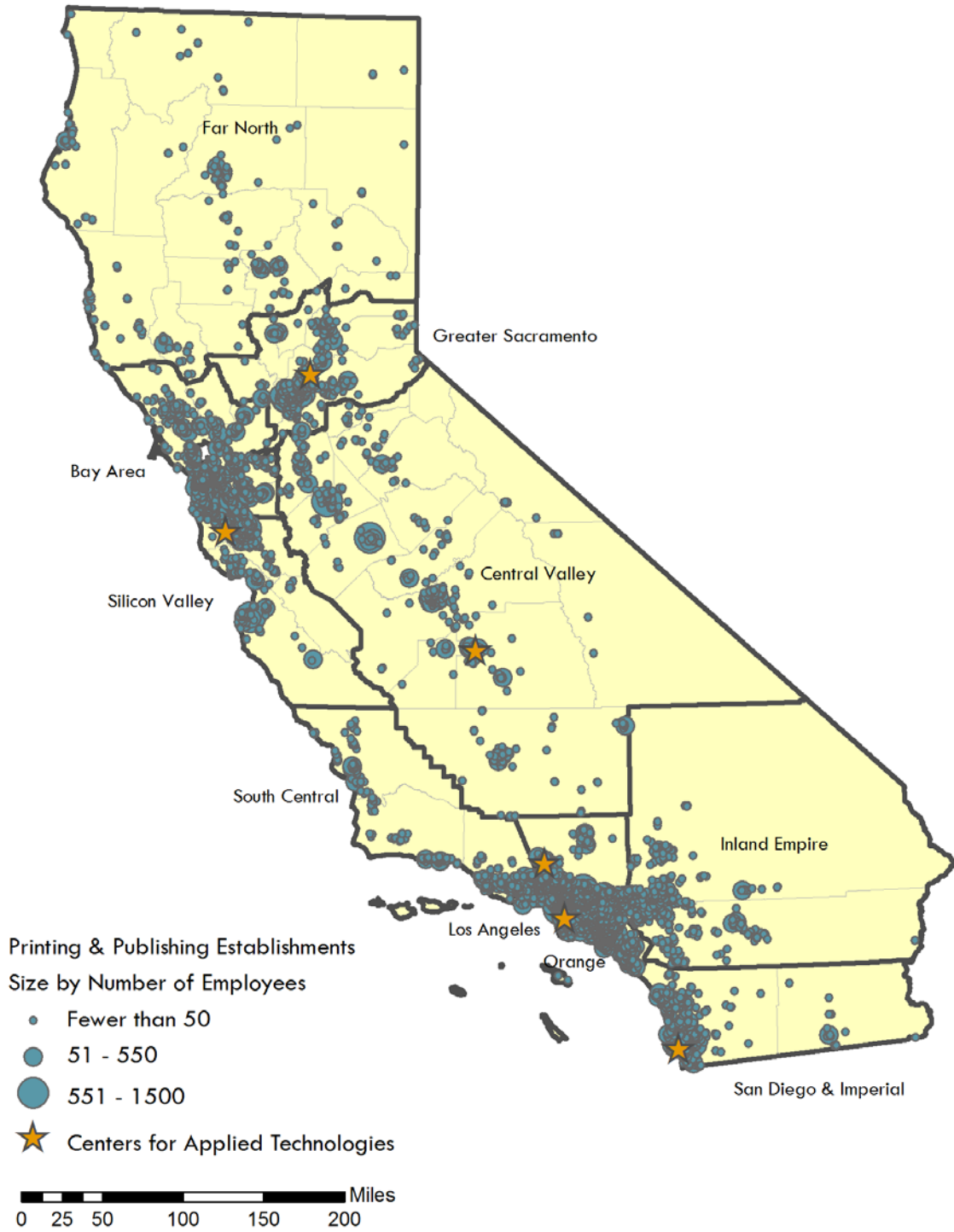
Map 2 displays the density of printing and publishing firms in proximity to the Centers for Applied Technologies. As shown, four of the six CACTs are strategically located in regions that have a high concentration of printing employment. The Central Valley and Greater Sacramento Regions have a lower concentration of firms located near their CACTs, which may make it more challenging to serve this sector in those regions.

⁴ EMSI Complete Employment – 4th Quarter 2009.

Map 1: Printing and Publishing Establishments in California by County



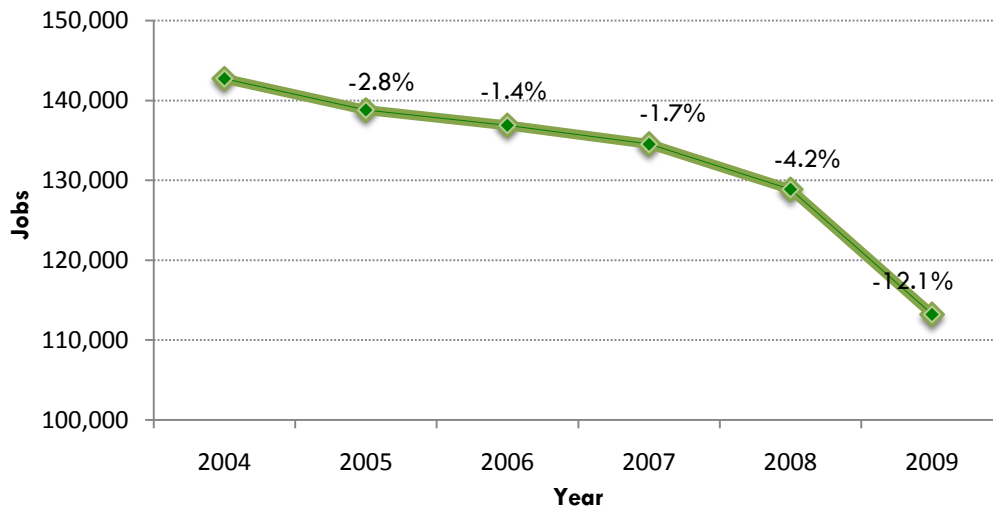
Map 2: Printing and Publishing Establishments in California by Region



Employment Trends

Between 2004 and 2009, the printing and publishing sector lost a total of 29,500 jobs with the greatest dip occurring in 2009. Compared to the overall economy in California, employment in the printing and publishing sector has declined significantly. California employment grew by two percent during the last five years, while the printing and publishing sector posted a decline of 21 percent.

Exhibit 2: Printing and Publishing Employment in California, 2004 – 2009⁵



As shown in Table 2, employment in the printing and publishing sector declined across all 10 regions in California. The largest drop occurred in Los Angeles County, followed by the Bay Area, San Diego & Imperial, and Silicon Valley Regions.

Table 2: Printing and Publishing Sector Employment by Region, 2004 - 2009⁵

Region	2004 Jobs	2009 Jobs	04-09 Job Change	% Change	2009 Jobs % of Total
Bay Area	21,761	16,959	(4,802)	-22.1%	15.0%
Central Valley	8,822	6,568	(2,254)	-25.5%	5.8%
Far North	2,459	2,190	(269)	-10.9%	1.9%
Greater Sacramento	7,259	5,712	(1,547)	-21.3%	5.0%
Inland Empire	8,699	6,675	(2,024)	-23.3%	5.9%
Los Angeles	45,114	36,294	(8,820)	-19.6%	32.0%
Orange	17,707	15,225	(2,482)	-14.0%	13.4%
San Diego & Imperial	13,534	10,206	(3,328)	-24.6%	9.0%
Silicon Valley	11,371	8,436	(2,935)	-25.8%	7.4%
South Central	5,998	4,981	(1,017)	-17.0%	4.4%
California	142,724	113,249	(29,478)	-20.7%	100.0%

⁵ EMSI Complete Employment - 4th Quarter 2009.

Revenue & Wages

The printing and publishing sector generated almost \$35 billion in sales in 2009. Los Angeles County generated 29 percent of the total revenue, followed by the Bay Area and Orange County with 16 and 12 percent respectively. Silicon Valley provided the highest earnings per worker (EPW) ⁶ in 2009, while the Far North Region reported the lowest EPW in that year.

Exhibit 3: Printing and Publishing Revenue and Earnings Per Worker (EPW) by Region^{7,8}

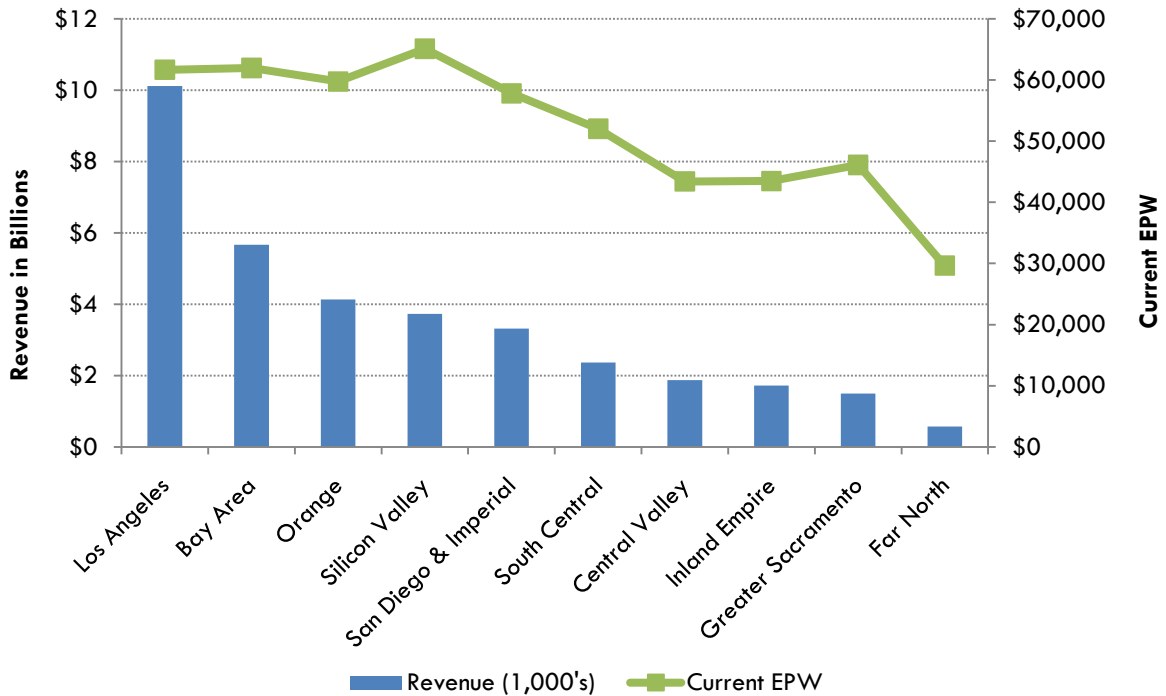


Table 3: Printing and Publishing Revenue and Earnings Per Worker (EPW) by Region^{7,8}

Region	Revenue (thousands)	Revenue % of Total	Current EPW
Bay Area	\$5,664,179	16.2%	\$61,980
Central Valley	\$1,871,777	5.4%	\$43,419
Far North	\$566,385	1.6%	\$29,647
Greater Sacramento	\$1,496,226	4.3%	\$46,121
Inland Empire	\$1,715,249	4.9%	\$43,493
Los Angeles	\$10,116,433	28.9%	\$61,691
Orange	\$4,129,869	11.8%	\$59,765
San Diego & Imperial	\$3,317,017	9.5%	\$57,833
Silicon Valley	\$3,728,605	10.7%	\$65,117
South Central	\$2,365,752	6.8%	\$52,044
Total	\$34,971,492	100%	\$52,111

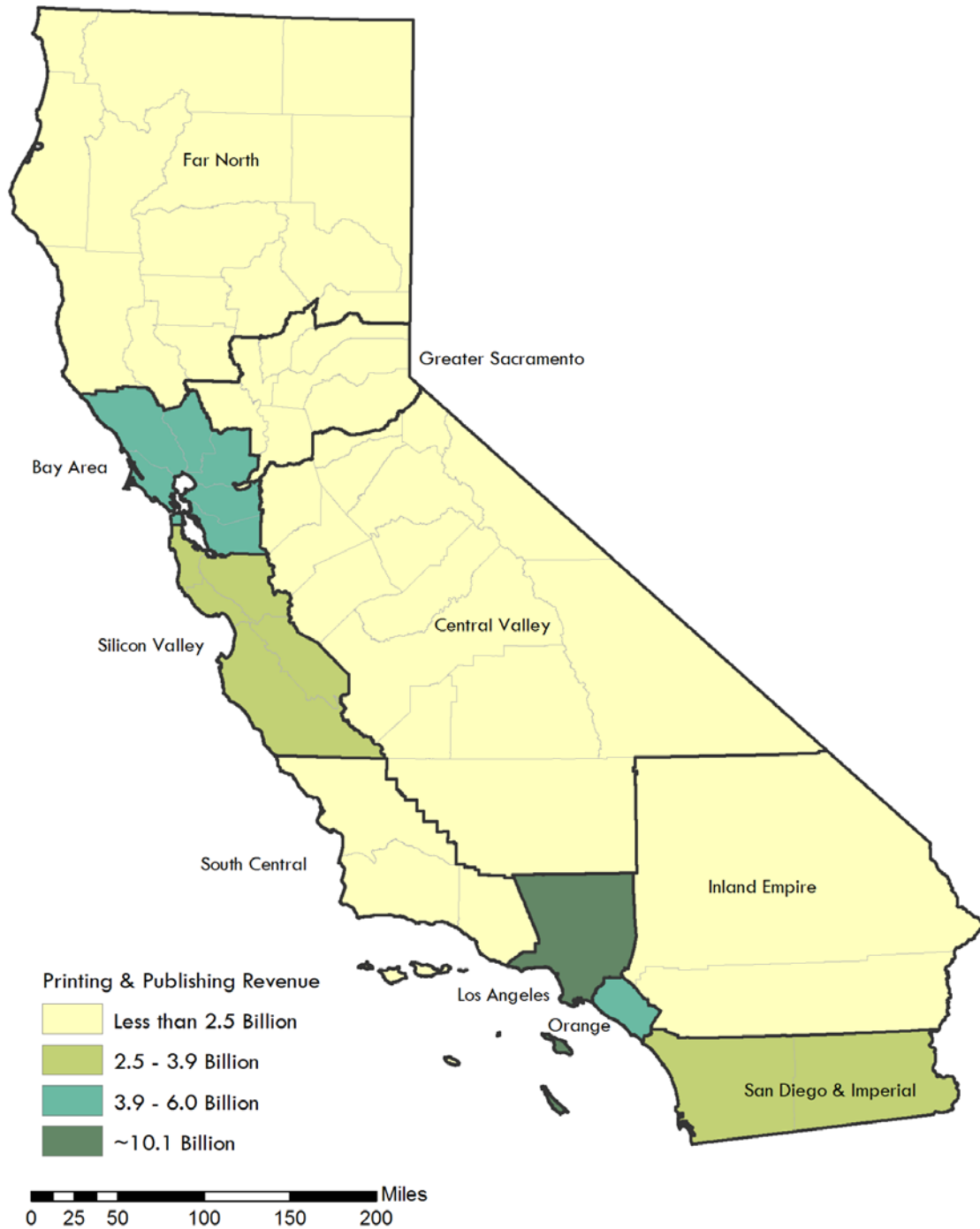
⁶ The earnings per worker includes wages, salaries, profits, benefits, and all other compensation.

⁷ EMSI Complete Employment - 4th Quarter 2009.

⁸ InfoUSA Data, January 2009.

Map 3 displays the printing and publishing sector's revenue by region. This visual representation contrasts revenue among Southern, Central and Northern California. As shown, coastal regions & high population areas generated the highest level of sales in 2009.

Map 3: Printing and Publishing Revenue in California by Region



Growth Projections

The printing and publishing sector is expected to decline over the next five years, losing more than 2,200 jobs. However, the projected decline is less severe compared to the 29,500 jobs lost in the previous five years. In fact, half of the regions are expected to add jobs over the next five years. The Inland Empire and Far North Regions will experience the largest job gain with the addition of about 400 and 270 jobs respectively. Conversely, the highest employment decline is expected to occur in the Silicon Valley and Bay Area Regions, with the loss of 1,580 jobs and 990 jobs respectively. It's also important to note that there will be a demand for replacement jobs due to attrition and retirements. Unfortunately, data on replacement demand is not available at the industry level.

Exhibit 4: Printing and Publishing Sector Projected Employment in California, 2009-2014⁹

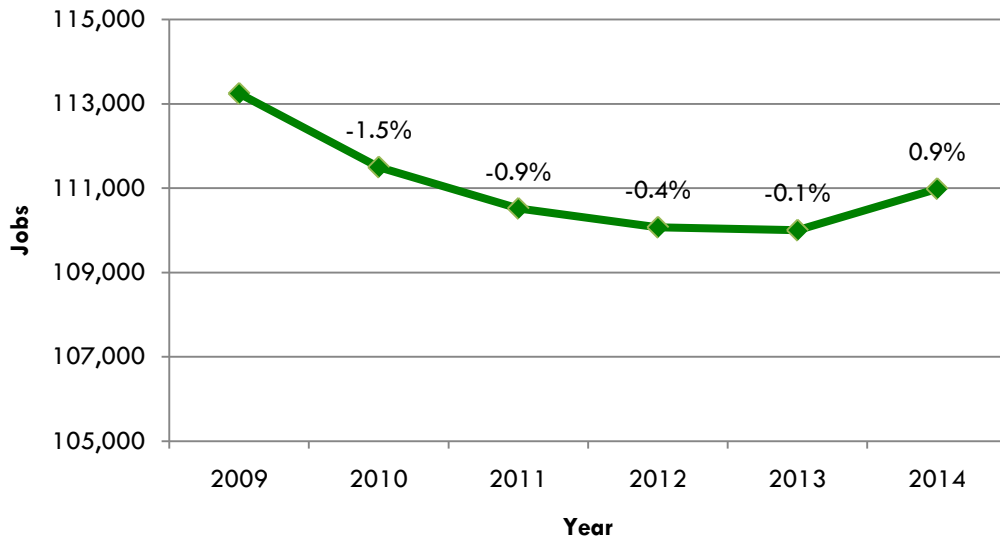


Table 4: Printing and Publishing Sector Projected Employment by Region, 2009 - 2014⁹

Region	2009 Jobs	2014 Jobs	Change	% Change
Bay Area	16,959	15,966	-993	-5.9%
Central Valley	6,568	6,532	-36	-0.5%
Far North	2,190	2,457	267	12.2%
Greater Sacramento	5,712	5,875	163	2.9%
Inland Empire	6,675	7,074	399	6.0%
Los Angeles	36,294	35,809	-485	-1.3%
Orange	15,225	15,454	229	1.5%
San Diego & Imperial	10,206	9,881	-325	-3.2%
Silicon Valley	8,436	6,858	-1,578	-18.7%
South Central	4,981	5,079	98	2.0%
California	113,249	110,985	-2,261	-2.0%

⁹ EMSI Complete Employment - 4th Quarter 2009.

Occupational Analysis

Within this industry sector, there are growing occupational areas despite the overall decline in employment. Table 5 displays the top 10 fastest-growing printing and publishing occupations in California. The manager occupation is expected to have the most job openings in the next five years, followed by advertising agents, and door-to-door sales workers. The education level for five of the 10 occupations is a bachelor's degree, three require moderate-term on-the-job training, one requires short-term on-the-job training, and one requires work experience. Appendix D provides occupational profiles for the top ten occupations, including tasks, skills, and educational requirements.

Table 5: Top 10 Fastest Growing Printing and Publishing Occupations in California^{10&11}

SOC Code	Description	2009 Jobs	2014 Jobs	Change	% Change	Current Hourly Earnings ¹²	Education Level
11-9199	Managers, all other	5,370	5,788	418	8%	\$23.65	Work experience in a related field
41-3011	Advertising sales agents	4,317	4,687	370	9%	\$22.20	Moderate-term on-the-job training
41-9091	Door-to-door sales workers, news and street vendors, and related workers	3,000	3,273	273	9%	\$8.01	Short-term on-the-job training
27-3043	Writers and authors	1,932	2,144	212	11%	\$12.52	Bachelor's degree
41-3099	Sales representatives, services, all other	2,263	2,374	111	5%	\$23.41	Moderate-term on-the-job training
43-4051	Customer service representatives	2,653	2,724	71	3%	\$16.27	Moderate-term on-the-job training
11-1011	Chief executives	1,290	1,359	69	5%	\$37.14	Degree plus work experience
13-1199	Business operation specialists, all other	791	843	52	7%	\$30.57	Bachelor's degree
27-3041	Editors	6,509	6,531	22	0%	\$19.17	Bachelor's degree
19-3021	Market research analysts	549	558	9	2%	\$30.76	Bachelor's degree

Between 2009 and 2014, several occupations specific to California's printing and publishing sector are expected to decline including prepress technicians and workers (486 jobs lost), bindery workers (275 jobs lost), graphic designers (113 jobs lost), and printing machine operators (69 jobs lost), among other occupations.

¹⁰ EMSI Complete Employment - 4th Quarter 2009.

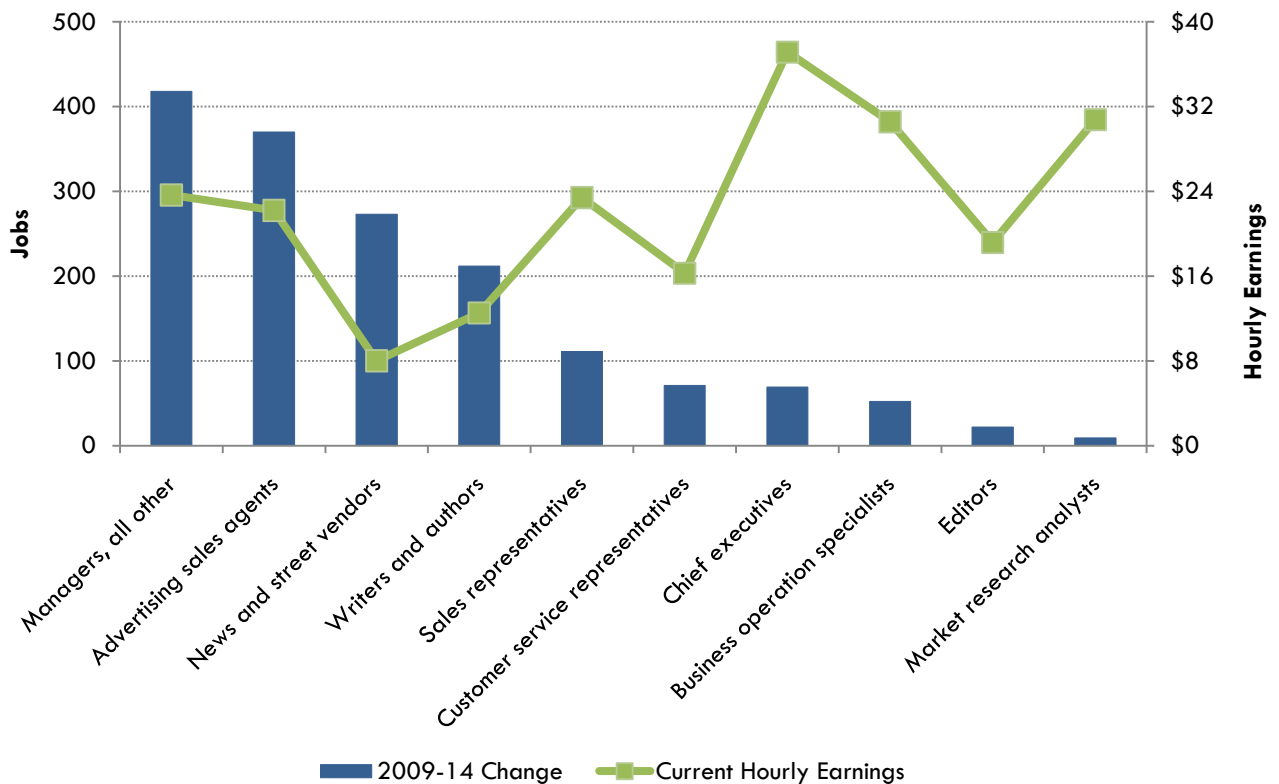
¹¹ Occupation estimates represent employment in the food manufacturing sector, not employment demand across all industries/sector.

¹² Hourly earnings is the median wages of a worker, excluding benefits.

Exhibit 5 displays the projected job openings over the next five years and current hourly earnings for the top 10 fastest growth printing and publishing occupations in California. This exhibit illustrates the following:

- Managers, all other have the most job openings over the next five years and offer above average earnings at \$24 per hour/\$49,920 annually.¹³
- Advertising sales agents have the second highest expected job openings with average earnings at \$22 per hour/\$45,760 annually.
- Business operation specialists have only a few job openings, but offer above average earnings at \$31 per hour/\$64,480 annually.
- Chief executives are the highest paid position with hourly earnings at \$37 per hour/\$76,960 annually. However, there are only a few job openings for this occupation.

Exhibit 5: Job Openings & Current Hourly Earnings for the Top 10 Fastest Growing Printing and Publishing Occupations in California¹⁴



¹³ Average wages in California across all occupations is \$22.71 per hour.

¹⁴ EMSI Complete Employment - 4th Quarter 2009.

Summary

Printing and publishing is an important manufacturing sector in California's economy. However, the sector experienced a significant decline in the last five years, cutting nearly 30,000 jobs or about one-fifth of its total 2004 workforce. There are several factors that help explain the sector's overall decline.

- First, the internet remains a strong competitor of print & publishing sector. Many consumers have and will continue to abandon traditional print materials for online magazines, newspapers, blogs and chatrooms, most of which are free to access. The recent surge of reading devices also poses a threat to the printing and publishing sector as consumers can now download and read books electronically.
- Second, information technology has modernized the business environment, automating basic processes that previously required paper forms. Most organizations have transitioned how they process internal paperwork, setting up software systems that fast track business processes and establish authorized users. Most businesses have also transitioned to an online environment in which customers may apply for services, correspond with customer service representatives, and access account information. These systems have reduced the demand for traditional printing services, particularly within the manifolds business forms printing industry.
- Third, consumer demographics are changing. The traditional and baby boomer generations prefer to read information through printed materials such as newspapers, while younger generations are more inclined to read information through electronic devices such as cell phones and laptops. A study conducted by think-tank Pew Research Center in 2009 revealed that Baby Boomers (born between 1946 and 1964) and the Silent/Traditional Generation (born before 1946) continue to read newspapers at higher rates than do those in the younger generations.¹⁵ With a younger generation that is technology-oriented, there is a possibility that print readership will continue to decline in the future.
- Lastly, as with any other industry in California, the printing and publishing sector was significantly impacted by the economic recession. With the unemployment rate in the double digits, many households found ways to reduce their discretionary spending by dropping subscriptions to magazines and newspapers. As such, the economic conditions have also influenced the decline of the print and publishing sector.

Yet, the printing and publishing sector is poised to stabilize. Overall job loss is expected to significantly slow over the next five years, even adding jobs in some regions. This indicates that the sector is beginning to reach its optimum operating level, providing print materials that match consumer demand.

¹⁵ Pew Research Center, "Newspapers Face a Challenging Calculus: Online Growth, but Print Losses are Bigger."

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Appendix A: About the Centers of Excellence

The Centers of Excellence (COE), in partnership with business and industry, deliver regional workforce research customized for community college and workforce system decision making and resource development. The Northern California COE is one of five regional Centers of Excellence supported by the Chancellor's Office of the California Community Colleges and is tasked with conducting environmental scanning, partnership development and technical assistance activities.

The COE's research team represents expertise in labor market analysis, labor-management partnership projects, project management, and primary research. COE staff are experienced researchers with a focus on research design, partnership development, educational and training program mapping, and identifying skill sets for emerging occupations as well as key skill sets and geospatial analysis.

The COE maintains strategic alliances with research organizations whose relationships and technical expertise enhance COE's research efforts. These alliances enable COE to access information from over 80 public databases using EMSI economic modeling software, GIS technology via the use of a customized geo-mapping software that ties industry codes (NAICS) to a private business database of over 1 million business records. The COE maintains robust partnerships with industry associations that assist in validating research findings, ensuring that the most recent industry and labor market conditions are captured.

COE studies are used to inform policy discussions, industry-wide legislative efforts, and regional workforce development strategies, as well as guide program and resource development efforts by the California Community Colleges. These reports can be accessed at www.coecc.net.

Appendix B: About the Centers for Applied Competitive Technologies

The Centers for Applied Competitive Technologies (CACT) specialize in providing workforce training and technical consultation to help businesses solve operational, personnel, and technical problems in the manufacturing environment. The CACTs offer technology education, manufacturing training, and consulting services that contribute to continuous workforce development, technology deployment and business development. Services include:

- Customized workforce training in areas such as just-in-time production, distribution cycles, and six sigma deployment.
- Consulting services in areas such as organization assessment, quality system audits, process capability, and strategic planning.
- Technical services that provide an unbiased professional evaluation of your advanced technology processes.

The CACTS are funded primarily by the California Community College Economic and Workforce Development Program. These grant funds enable Centers to offer cost-effective workforce training and consultative services for California's advanced technology businesses. The program goal is to provide companies the technical expertise they need to compete successfully in changing markets and the global economy. The CACTs are conveniently located at community colleges across the state. In addition affiliate sites at other colleges are being established. To learn more about these Centers contact one of those listed below or visit www.makingitincalifornia.com.

CACT @ College of the Canyons

26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355
(661) 362-3111

CACT @ De Anza College

Foothill-De Anza Community College District
Professional & Workforce Development
12345 El Monte Road
Los Altos Hills, CA 94022
(650) 949-7795

CACT @ El Camino College

13430 Hawthorne Blvd.
Hawthorne, CA 90250
(310) 973-3170

CACT @ San Diego City College

1414 Park Blvd., Room T-216
San Diego, CA 92101-8747
(619) 388-3730

CACT @ College of the Sequoias

915 S. Mooney Blvd.
Visalia, CA 93277
(559) 737-4838

CACT @ Sierra College

Roseville Gateway Center
5000 Rocklin Rd.
Rocklin, CA 95677
(916) 781-6288

Appendix C: Printing and Publishing Sector, Major Industry Groups

Major Industry Group 1: Printing

NAICS 323110 – Commercial Lithographic Printing

This U.S. industry comprises establishments primarily engaged in lithographic (i.e., offset) printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in lithographic printing on purchased stock materials, such as stationery, letterhead, invitations, labels, and similar items, on a job order basis.

NAICS 323111 – Commercial Gravure Printing

This U.S. industry comprises establishments primarily engaged in gravure printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in gravure printing on purchased stock materials, such as stationery, letterhead, invitations, labels, and similar items, on a job order basis.

NAICS 323112 – Commercial Flexographic Printing

This U.S. industry comprises establishments primarily engaged in flexographic printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in flexographic printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis.

NAICS 323113 – Commercial Screen Printing

This U.S. industry comprises establishments primarily engaged in screen printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in screen printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis. Establishments primarily engaged in printing on apparel and textile products, such as T-shirts, caps, jackets, towels, and napkins, are included in this industry.

NAICS 323114 – Quick Printing

This U.S. industry comprises establishments primarily engaged in traditional printing activities, such as short-run offset printing or prepress services, in combination with providing document photocopying service. Prepress services include receiving documents in electronic format and directly duplicating from the electronic file and formatting, colorizing, and otherwise modifying the original document to improve presentation. These establishments, known as quick printers, generally provide short-run printing and copying with fast turnaround times.

NAICS 323115 – Digital Printing

This U.S. industry comprises establishments primarily engaged in printing graphical materials using digital printing equipment. Establishments known as digital printers typically provide sophisticated prepress services including using scanners to input images and computers to manipulate and format the graphic images prior to printing.

NAICS 323116 – Manifolds Business Forms Printing

This U.S. industry comprises establishments primarily engaged in printing special forms, including checkbooks, for use in the operation of a business. The forms may be in single and

multiple sets, including carbonized, interleaved with carbon, or otherwise processed for multiple reproduction.

NAICS 323117 – Books Printing

This U.S. industry comprises establishments primarily engaged in printing or printing and binding books and pamphlets without publishing.

NAICS 323118 – Blankbook, Looseleaf Binders, and Devices Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing blankbooks, looseleaf devices, and binders. Establishments in this industry may print or print and bind.

NAICS 323119 – Other Commercial Printing

This U.S. industry comprises establishments primarily engaged in commercial printing (except lithographic, gravure, screen, or flexographic printing) without publishing (except books, grey goods, and manifold business forms). Printing processes included in this industry are letterpress printing and engraving printing. This industry includes establishments engaged in commercial printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis.

Major Industry Group 2: Support Activities for Printing

NAICS 323121 – Tradebinding and Related Work

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) tradebinding; (2) sample mounting; and (3) postpress services (e.g., book or paper bronzing, die-cutting, edging, embossing, folding, gilding, gluing, indexing).

NAICS 323122 – Prepress Services

This U.S. industry comprises (1) establishments primarily engaged in prepress services, such as imagesetting or typesetting, for printers and (2) establishments primarily engaged in preparing film or plates for printing purposes.

Major Industry Group 3: Publishing (except Internet)

NAICS 511110 – Newspapers Publishers

This industry comprises establishments known as newspaper publishers. Establishments in this industry carry out operations necessary for producing and distributing newspapers, including gathering news; writing news columns, feature stories, and editorials; and selling and preparing advertisements. These establishments may publish newspapers in print or electronic form.

NAICS 511120 – Periodicals Publishers

This industry comprises establishments known as newspaper publishers. Establishments in this industry carry out operations necessary for producing and distributing newspapers, including gathering news; writing news columns, feature stories, and editorials; and selling and preparing advertisements. These establishments may publish newspapers in print or electronic form.

NAICS 511130 – Book Publishers

This industry comprises establishments known as newspaper publishers. Establishments in this industry carry out operations necessary for producing and distributing newspapers, including gathering news; writing news columns, feature stories, and editorials; and selling and preparing advertisements. These establishments may publish newspapers in print or electronic form.

NAICS 511140 – Directory and Mailing List Publishers

This industry comprises establishments primarily engaged in publishing directories, mailing lists, and collections or compilations of fact. The products are typically protected in their selection, arrangement and/or presentation. Examples are lists of mailing addresses, telephone directories, directories of businesses, collections or compilations of proprietary drugs or legal case results, compilations of public records, etc. These establishments may publish directories and mailing lists in print or electronic form.

NAICS 511191 – Greeting Card Publishers

This U.S. industry comprises establishments primarily engaged in publishing greeting cards.

NAICS 511199 – Greeting Card Publishers

This U.S. industry comprises establishments generally known as publishers (except newspaper, magazine, book, directory, database, music, and greeting card publishers). These establishments may publish works in print or electronic form.

Source: U.S. Census Bureau, North American Industry Classification System (NAICS), <http://www.census.gov/eos/www/naics/index.html>.

Appendix D: Occupation Profiles

The following ten occupations are projected to increase employment by 2014. Each occupation profile includes a description of the main tasks performed and top skill requirements.

Advertising Sales Agents – SOC 41-3011

Advertising sales agents sell or solicit advertising, including graphic art, advertising space in publications, custom made signs, or TV and radio advertising time. They may obtain leases for outdoor advertising sites or persuade retailer to use sales promotion display items. The top skills of advertising sales agents include:

- Ability to communicate information and ideas in speaking so others will understand.
- Ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
- Ability to convince others to buy merchandise/goods or to otherwise change their minds or actions.
- Ability to use computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.

Chief Executives – SOC 11-1011

Chief executives determine and formulate policies and provide the overall direction of companies or private and public sector organizations within the guidelines set up by a board of directors or similar governing body. They also plan, direct, or coordinate operational activities at the highest level of management with the help of subordinate executives and staff managers. The top skills of chief executives include:

- Ability to determine how money will be spent to get the work done, and account for these expenditures.
- Ability to monitor and assess performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- The ability to identify complex problems and reviewing related information to develop and evaluate options and implement solutions.
- The ability to establish long-range objectives and specifying the strategies and actions to achieve them.

Customer Service Representatives – SOC 43-4051

Customer service representatives interact with customers to provide information in response to inquiries about products and services and to handle and resolve complaints. Their top skills include:

- Ability to use computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
- Ability to listen to and understand information and ideas presented through spoken words and sentences.
- Ability to observe, receive, and otherwise obtain information from all relevant sources.
- Ability to compile, code, categorize, calculate, tabulate, audit, or verify information or data.

Door-to-door Sales Workers, and News and Street Vendors – SOC 41-9091

Door-to-door sales workers, and news and street vendors Sell goods or services door-to-door or on the street. Their top skills include:

- Ability to talk to others to convey information effectively.
- Ability to communicate information and ideas in speaking so others will understand.
- Ability to listen to and understand information and ideas presented through spoken words and sentences.
- Ability to convince others to buy merchandise/goods or to otherwise change their minds or actions.

Editors – SOC 37-3041

Editors perform variety of editorial duties, such as laying out, indexing, and revising content of written materials, in preparation for final publication. The top skills of editors include:

- Ability to understand written sentences and paragraphs in work related documents.
- The ability to read and understand information and ideas presented in writing.
- The ability to communicate information and ideas in writing so others will understand.
- The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

Market Research Analysts – SOC 19-3021

Market research analysts research market conditions in local, regional, or national areas to determine potential sales of a product or service. They may gather information on competitors, prices, sales, and methods of marketing and distribution. They also use survey results to create a marketing campaign based on regional preferences and buying habits. The top skills of market research analysts include:

- Ability to communicate effectively in writing as appropriate for the needs of the audience.
- Ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
- Ability to use computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
- Ability to identify the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Sales Representatives – SOC 41-3099

Sales representatives sell goods for wholesalers or manufacturers to businesses or groups of individuals. Work requires substantial knowledge of items sold. Their top skills include:

- Ability to convince others to buy merchandise/goods or to otherwise change their minds or actions.
- Ability to talk to others to convey information effectively.
- Ability to communicate information and ideas in speaking so others will understand..
- Ability to develop constructive and cooperative working relationships with others, and maintain them over time.

Writers and Authors – SOC 27-3022

Writers and authors originate and prepare written material, such as scripts, stories, advertisements, and other material. Their top skills include:

- Ability to communicate effectively in writing as appropriate for the needs of the audience.
- Ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
- Ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
- Ability to read and understand information and ideas presented in writing.

Source: O*Net; U.S. Bureau of Labor Statistics

Note: Profile for Managers, all other – SOC 11-9199 was not included because it represent a group of more specific occupations, rather than a single occupation.

Appendix E: Locating Printing & Publishing Related Degree & Certificate Programs

The California Community Colleges offer a range of instructional programs that support the printing & publishing sector. To locate the programs use the Taxonomy of Programs (TOP) list below with the searchable data base found on the California Community College Chancellor's Office website. The URL is: https://misweb.cccco.edu/webproginv/prod/topodelist_n.cfm. Using these codes you can find which colleges have programs. For example if one puts in TOP code 0945.00 (Printing and Lithography) nine colleges offering related programs will be identified.

While not every program found will be oriented to printing and publishing manufacturing, the following TOP codes are those most closely associated with it:

- 0509.00 Marketing and Distribution
- 0509.60 Display
- 0614.50 Desktop Publishing
- 0924.00 Engineering Technology
- 0936.00 Printing and Lithography
- 0945.00 Industrial Systems Technology and Maintenance
- 0956.00 Manufacturing and Industrial Technology
- 0956.30 Machine Tool Technology
- 0956.80 Industrial Quality Control

Source: California Community Colleges Chancellor's Office, Inventory of Approved Programs, June 2010

Appendix F: Industry Associations in California

The following organizations may be of assistance in learning more about the printing industry.

(1) Printing Industry Association, Southern California

Printing Industries Association, Inc. of Southern California
P.O. Box 910936
Los Angeles, CA 90091-0936
Telephone: (323) 728-9500
Fax: (323) 724-2327
<http://piasc.org>
info@piasc.org

Mailing Address
Printing Industries Association Inc.
of Southern California

(2) Printing Industry Association, San Diego

Printing Industries Association of San Diego, Inc.
3914 Murphy Canyon Road, Suite A157
San Diego, CA 92123
Telephone: (858) 571-6555
Fax: (858) 571-7935
www.piasd.org
info@piasd.org

(3) Visual Media Alliance (formerly PIA Northern California)

Visual Media Alliance
665 Third Street, Suite 500
San Francisco, CA 94107-1926
(800) 659-3363
(415) 489-7601
(800) 924-1911 - fax
www.visualmediaalliance.org
info@vma.bz