

UPDATE

THE
ECONOMIC
BENEFITS
of HOUSING
IN CALIFORNIA

JUNE 2006



Prepared for the
California Building Industry Association

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The Economic Benefits of Housing in California
June 2006

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Executive Summary

New housing construction is one of the most visible and widely dispersed industries in California. Taking into account the full range of economic impacts, new housing construction contributes nearly \$68 billion per year to the California economy and creates close to 487,000 jobs statewide, based on 2005 new housing unit construction numbers. A little over one half of the economic output (about \$37 billion) is

directly the result of new housing construction. The balance (approximately \$31 billion) is generated by those sectors which supply goods and services to the residential construction industry as well as the consumption activities of the employees of the construction industry and its supplier sectors. Every dollar spent on new housing construction in California generates another \$0.80 in total economic activity, while each job created through residential construction supports an additional 1.2 jobs.

New housing construction:

- Contributes nearly \$68 billion to the California economy
- Creates close to 487,000 jobs per year
- Constitutes approximately 3 percent of the state's output

New housing construction as a stand alone industry ranks in the top five in terms of economic output and accounts for nearly 3 percent of California's total output. While new housing construction is clearly a leading economic force in the state, its potential economic contributions are much greater. According to the California Department of Housing and Community Development, the expected population growth and household formation in California demands housing unit production levels around 220,000 per annum. New housing construction has lagged behind the estimated demand since the late 1990s. An annual production level closer to the statewide need would significantly increase the economic benefits of new housing construction in California.

In all of the state's major economic regions, new housing construction is a sizable and stable economic contributor with total output benefits measuring in the billions and job creation in the tens of thousands for 10 of California's 26 major regions. The Riverside-San Bernardino, Los Angeles-Long Beach-Santa Ana, and Sacramento-Arden Arcade-Roseville economic regions have seen the greatest economic benefits from new housing construction, based on 2005 new housing unit construction data.

The entire housing industry:

- Generates close to \$273 billion of output
- Supports about 960,000 jobs
- Accounts for approximately 11 percent of all economic activity in California

The larger picture of the housing industry's influence in California includes not only the construction of new housing units, but also a wide range of related activities such as remodeling, repair, brokerage, property management, and financing. Accounting for all facets of the housing industry shows that it

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generates close to \$273 billion of output and supports about 960,000 jobs throughout the state. Approximately 11 percent of California's total economic output is encompassed within the entire housing industry, ranking it first among the state's leading industries in terms of output. The housing industry places ahead of two of the state's most notable sectors, Wholesale & Retail Trade and Professional, Scientific, & Technical Services.

The economic benefits of the entire housing industry are highest in the more mature urban areas where the accumulation of housing assets over many years along with ongoing construction has resulted in a large inventory with high value. In six of California's 26 major economic regions, the housing industry measures in the tens of billions of dollars of output and at least tens of thousands of total jobs. The highest levels of output fall within the Los Angeles-Long Beach-Santa Ana, San Francisco-Oakland-Fremont, and San Diego-Carlsbad-San Marcos regions.

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Introduction

The housing industry is one of California's most visible and far-reaching industries. On the most basic level, the state's housing stock provides shelter for its current and future residents and offers a variety of real estate investment options, while construction of new housing units supports jobs and expands the housing stock. The general public typically recognizes these basic benefits, but the full economic impacts of new housing construction and the housing industry at large are not readily apparent. The complete influence of housing in the California economy includes not only the construction of new single-family and multifamily units, but also a wide range of related activities such as remodeling, repair, brokerage, property management, and financing.

In order to fully understand and keep track of the economic benefits of California's housing industry, the California Building Industry Association (CBIA) commissioned the Sacramento Regional Research Institute (SRRRI) to generate a second update to the 2003 report also titled *The Economic Benefits of Housing in California*.

This study is designed to provide an economic perspective of the housing industry on California's economy and its separate economic regions. The report presents two views of the importance of housing in terms of economic activity and job creation:

1. The full range of economic impacts of new housing construction, including the support industries and consumption expenditures, which are generated through the ripple effect.
2. The greater importance of the entire housing industry, broadly defined, to include residential real estate and financing, maintenance and repair, additions and alterations, construction, home ownership expenditures, property management, and all other aspects of the entire stock of owner- and renter-occupied housing.

This report employs similar methodology as the 2004 update and analyzes the most recent residential construction data for 2004 and 2005 by means of the newest database and structural matrices for the econometric model utilized to calculate economic impacts.

The report is presented in two main sections. The first section examines the economic contributions of California's housing industry including new housing construction and the broader housing industry. This section also touches on the untapped potential of residential construction based on projected demand. The second section analyzes the regional economic contributions of new housing construction and the entire housing industry within the state's 26 major economic regions. In addition to the two main sections, three appendices are provided—Appendix A presents detailed sector impacts of new housing construction, Appendix B shows sub-sector detail for California's leading industries, and Appendix C lists the counties included within each of the state's major economic regions.

Research Methodology

SRRI calculated the full range of economic impacts in this report using an econometric input-output model called IMPLAN, developed at the University of Minnesota specifically for use in regional analysis and currently distributed and supported by the Minnesota Implan Group. This model is widely used in California for economic and fiscal analysis to quantify the full range of economic impacts. Input-output models, including IMPLAN, evaluate the effects of industries on each other based on the premise that industries use the outputs of other industries as inputs.

Most typical measures of economic activity examine only the total output or employment of an industry, but the use of an input-output model provides a much more comprehensive view of the inter-related economic impacts. Specifically, new housing construction directly creates output and employment throughout California's economy; however, the economic benefits do not end with these general construction activities. The ripple effect generates further benefits through the purchase of goods and services in addition to employee consumption activities.

The full range of economic impacts produced by new housing construction includes direct, indirect, and induced benefits.

- *Direct Benefits* consist of economic activity related exclusively to new housing construction. This includes all expenditures made by homebuilders and all employees who work directly for those companies in the state. These are often the most visible and recognizable activities of new housing construction.
- *Indirect Benefits* define the creation of additional economic activity that results from linked businesses, suppliers of goods and services, and provision of operating inputs. Examples of indirect activity include wholesale trade where builders purchase lumber, roofing, electrical, and plumbing materials; motor freight services that deliver materials to the wholesaler and construction sites; and engineering and architectural services which participate in the design and planning of housing units and subdivisions.
- *Induced Benefits* measure the consumption expenditures of direct and indirect sector employees. Examples of induced benefits include employees' expenditures on items such as retail purchases, housing, medical services, banking, and insurance.

These benefits also illustrate the multiplier effect that quantifies the incremental indirect and induced impact of each additional direct job or dollar of output related to new housing construction within the state.

In this analysis, the total direct, indirect, and induced benefits are presented in two ways:

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- *Employment* demonstrates the number of jobs generated and is calculated in a full-time equivalent employment value on an annual basis.
- *Output* accounts for total revenues including all sources of income or the value of production generated by an industry for a given time period. This is the best overall measure of business and economic activity because it is the measure most firms use to determine current activity levels.

For this update, SRRI used IMPLAN's 2003 model data and structural matrices, the latest coefficients available to describe economic activities and interrelationships among sectors in the economy. The previous update utilized 2001 model parameters to calibrate the model and analyze the economic impacts. While the methodology in the two updates is similar, the impact analyses are based on two different snapshots of the economy, containing different levels of economic activity and sector relationships.

In order to create an accounting of the entire housing industry, SRRI allocated employment and output data for specific sub-sectors into broad categories based on detailed economic activities encompassed in each sub-sector as well as reviews of construction, brokerage, and labor market data at the statewide level. One particular area of interest in this analysis was the Real Estate sector, which captures both residential and non-residential activity. In order to disaggregate this sector and allocate the residential portion to the housing industry, SRRI reviewed detailed employment data, major real estate brokerage activities, and residential and commercial valuation measures. This review showed that, on average, between 65 and 70 percent of the Real Estate sector is focused on residential property transactions, management, and leasing while the remaining 30 to 35 percent is related to commercial property. Using the most conservative of these assumptions, at the statewide level, SRRI allocated 65 percent of the Real Estate sector's employment and output to the entire housing industry and the remaining 35 percent to the non-residential category. Employment and output data for all sub-sectors was pulled from the IMPLAN model, which utilizes economic data from sources such as the United States Bureau of Economic Analysis, Bureau of Labor Statistics, and Census Bureau to provide a comprehensive data set for the national, statewide, and local economies.

By taking into account the multiplier effect, direct, indirect, and induced benefits, and other housing-related activities, this study provides a measurement of the full range of economic impacts and offers insight into how the housing sector, beginning with new housing construction, produces a wide range of economic benefits to the California economy.

Economic Contributions of California’s Housing Industry

The housing industry, one of California’s largest and important industries, is comprised of activities related to new home construction, remodeling, repair, brokerage, property management, and financing. A detailed look at the impacts of new housing construction and a discussion on the untapped potential of residential construction will be provided within this section, followed by an examination of the broader housing industry’s economic contributions to California.

New Housing Construction

According to the United States Census Bureau residential building permit data, as shown in Figure 1, authorization was provided for a little over 200,000 new privately-owned housing units throughout California in both 2004 and 2005. Approximately 75 percent of the permits were granted for single-family units, while the remaining 25 percent covered multifamily housing. Construction costs for these new housing units were valued at over \$36 billion in 2004 and \$37 billion in 2005. This equates to an average construction valuation per unit of nearly \$174,000 in 2004 and a 2005 value of close to \$184,000 per unit.

FIGURE 1
RESIDENTIAL BUILDING
PERMITS IN CALIFORNIA
(VALUATION IN THOUSANDS)

<i>Indicator</i>	<i>2004</i>	<i>2005</i>
Permits	207,390	202,221
Valuation	\$36,059,181	\$37,158,906

Sacramento Regional Research Institute, April 2006
Data Source: United States Census Bureau

The benefits of new housing construction to the state’s economy do not end with those activities directly related to building housing units. New housing construction produces a ripple effect in California’s economy as a result of the linkages that occur between construction activities, suppliers of goods and services, and consumer spending.

As shown in Figure 2, overall, based on 2005 values, the economic benefits of new housing construction equate to almost \$68 billion in total industry output and nearly 487,000 jobs per year in the state through direct, indirect, and induced activity. These total economic impacts are a result of the following three effects: 1) new housing construction directly provides about \$37 billion of output and 220,000 jobs, 2) housing construction indirectly supports over \$15 billion in industry output and 129,000 employees through its demand on suppliers of goods and services, and 3) consumption activities of those employed directly and indirectly through new home construction generates an induced impact of approximately \$15 billion of output and 138,000 jobs.

FIGURE 2
TOTAL ECONOMIC IMPACTS OF NEW
HOUSING CONSTRUCTION IN CALIFORNIA
(OUTPUT IN THOUSANDS)

<i>Year/Impact</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
2005 Employment	219,884	129,360	137,510	486,754
2005 Output	\$37,158,906	\$15,115,100	\$15,475,289	\$67,749,296
2004 Employment	213,459	125,520	133,472	472,450
2004 Output	\$36,059,182	\$14,666,312	\$15,020,857	\$65,746,351

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 Coefficients based on United States Census Bureau information

Note: Differences due to rounding.

The multiplier effect of new housing construction shows that, on average, for each additional dollar of construction valuation, the state will see another \$0.80 in industry output and for every employee created directly as a result of constructing new housing units, California will gain another 1.2 jobs through indirect and induced activity. In 2004, the same economic multiplier effect was in play, but the economic impacts were slightly smaller due to the lower level of construction valuation, demonstrating a total impact of close to \$66 billion of economic output and 472,000 jobs.

With a total output impact of nearly \$68 billion in 2005, economic activities associated with the construction of new privately-owned housing units constitutes nearly 3 percent of the state's total economic output and ranks among the top five sectors in the state in terms of output.

Figure 3 shows that in addition to housing-related sectors, California's Wholesale Trade; Architectural & Engineering Services; and Real Estate sectors benefit the most from the total output impacts created through new housing construction (based on the 2005 economic impact values). The largest indirect output gains are generated in the Wholesale Trade; Architectural & Engineering Services; and Wood Kitchen Cabinet & Countertop Manufacturing sectors as a result of their role as linked and service-providing sectors. In addition, the Wholesale Trade; Food Services & Drinking Places; and Offices of Physicians, Dentists, & Other Health Practitioners sectors see the greatest induced impacts due to the direct and indirect employees' spending supporting these sectors. Appendix A provides additional details on the output impacts of new housing construction on the full range of sectors within California's economy.

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FIGURE 3
DETAILED OUTPUT IMPACTS OF NEW
HOUSING CONSTRUCTION IN CALIFORNIA
(IN THOUSANDS)

<i>Sector</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
New residential 1-unit structures, nonfarm	\$31,834,804	\$0	\$0	\$31,834,804
New multifamily housing structures, nonfarm	\$5,324,102	\$0	\$0	\$5,324,102
Wholesale trade	\$0	\$1,709,700	\$858,927	\$2,568,627
Owner-occupied dwellings	\$0	\$0	\$1,754,483	\$1,754,483
Architectural and engineering services	\$0	\$1,143,395	\$45,323	\$1,188,718
Real estate	\$0	\$444,025	\$681,384	\$1,125,408
Food services and drinking places	\$0	\$91,087	\$803,907	\$894,994
Motor vehicle and parts dealers	\$0	\$457,822	\$331,678	\$789,500
Offices of physicians, dentists, and other health practitioners	\$0	\$0	\$758,332	\$758,332
Food and beverage stores	\$0	\$424,414	\$299,639	\$724,052
Monetary authorities and depository credit intermediation	\$0	\$337,669	\$377,689	\$715,358
Truck transportation	\$0	\$533,274	\$111,698	\$644,972
Hospitals	\$0	\$0	\$643,780	\$643,780
Legal services	\$0	\$328,892	\$243,160	\$572,052
Wood kitchen cabinet and countertop manufacturing	\$0	\$561,787	\$7,234	\$569,021
Insurance carriers	\$0	\$138,311	\$382,455	\$520,766
Petroleum refineries	\$0	\$266,199	\$252,499	\$518,698
Telecommunications	\$0	\$242,948	\$258,987	\$501,935
General merchandise stores	\$0	\$275,772	\$199,336	\$475,108
Management of companies and enterprises	\$0	\$252,897	\$167,879	\$420,777
Securities, commodity contracts and investments	\$0	\$170,766	\$205,696	\$376,463
Nondepository credit intermediation and related activities	\$0	\$189,819	\$172,469	\$362,288
Building material and garden supply stores	\$0	\$209,240	\$151,077	\$360,317
Sawmills	\$0	\$343,005	\$6,859	\$349,864
Automotive repair and maintenance, except car wash	\$0	\$91,727	\$257,041	\$348,767
Plastics plumbing fixtures and all other plastics	\$0	\$311,987	\$27,211	\$339,197
Clothing and clothing accessories stores	\$0	\$189,893	\$133,575	\$323,468
Health and personal care stores	\$0	\$182,313	\$125,327	\$307,640
Accounting and bookkeeping services	\$0	\$207,583	\$81,746	\$289,329
Nonstore retailers	\$0	\$156,622	\$113,351	\$269,974
Other state and local government enterprises	\$0	\$83,264	\$174,471	\$257,736
Employment services	\$0	\$192,550	\$60,898	\$253,448
Management consulting services	\$0	\$176,024	\$72,289	\$248,313
Miscellaneous store retailers	\$0	\$144,410	\$99,928	\$244,338
Services to buildings and dwellings	\$0	\$145,556	\$80,708	\$226,264
Other ambulatory health care services	\$0	\$408	\$224,736	\$225,144
Power generation and supply	\$0	\$87,467	\$134,834	\$222,301
Pharmaceutical and medicine manufacturing	\$0	\$182	\$216,406	\$216,588
Furniture and home furnishings stores	\$0	\$138,222	\$76,819	\$215,041
Gasoline stations	\$0	\$132,840	\$81,308	\$214,148
Other millwork, including flooring	\$0	\$202,949	\$3,132	\$206,081
Engineered wood member and truss manufacturing	\$0	\$188,925	\$1,972	\$190,897
Nursing and residential care facilities	\$0	\$0	\$180,507	\$180,507
Natural gas distribution	\$0	\$52,869	\$116,254	\$169,123
Electronics and appliance stores	\$0	\$102,031	\$64,646	\$166,678
Advertising and related services	\$0	\$91,599	\$69,780	\$161,380
Office administrative services	\$0	\$121,592	\$38,308	\$159,901
Maintenance and repair of nonresidential buildings	\$0	\$91,594	\$64,954	\$156,548
Other amusement, gambling, and recreation industries	\$0	\$4,484	\$144,461	\$148,944
Wood windows and door manufacturing	\$0	\$143,113	\$3,470	\$146,584

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 Coefficients based on United States Census Bureau information

Notes: Figure only includes the 50 sectors with the largest total impacts based on the 2005 impact values.

Owner-occupied dwellings sector accounts for home ownership expenditures such as closing costs, property taxes, and other related permits and taxes.

Differences due to rounding.

As Figure 4 demonstrates, the Food Services & Drinking Places; Wholesale Trade; and Architectural & Engineering Services are the non-housing-related sectors that capture the largest employment gains in the state resulting from new housing construction (using the 2005 economic impact values). The Wholesale Trade; Architectural & Engineering Services; and Employment Services sectors experience the largest indirect gains because of their linkages to new housing construction activities. Additionally, similar to the output impacts, the Food Services & Drinking Places; Wholesale Trade; and Offices of Physicians, Dentists, & Other Health Practitioners sectors see the greatest induced benefits, demonstrating the demand for goods and services from these sectors that are generated by spending activity from the direct and indirect employees. Additional sector-level details for new housing construction's employment impacts are provided in Appendix A.

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FIGURE 4
DETAILED EMPLOYMENT IMPACTS OF NEW
HOUSING CONSTRUCTION IN CALIFORNIA

<i>Sector</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
New residential 1-unit structures, nonfarm	174,976.3	0.0	0.0	174,976.3
New multifamily housing structures, nonfarm	44,908.1	0.0	0.0	44,908.1
Food services and drinking places	0.0	1,841.7	16,254.1	18,095.7
Wholesale trade	0.0	11,816.9	5,936.6	17,753.5
Architectural and engineering services	0.0	10,882.3	431.4	11,313.6
General merchandise stores	0.0	5,603.5	4,050.4	9,653.9
Employment services	0.0	7,147.0	2,260.4	9,407.4
Food and beverage stores	0.0	5,418.8	3,825.7	9,244.5
Offices of physicians, dentists, and other health practitioners	0.0	0.0	7,898.3	7,898.3
Motor vehicle and parts dealers	0.0	4,461.0	3,231.9	7,692.9
Truck transportation	0.0	4,952.3	1,037.3	5,989.6
Hospitals	0.0	0.0	5,784.7	5,784.7
Miscellaneous store retailers	0.0	3,415.9	2,363.7	5,779.5
Real estate	0.0	2,220.8	3,407.9	5,628.7
Nonstore retailers	0.0	3,169.7	2,294.0	5,463.7
Clothing and clothing accessories stores	0.0	2,990.8	2,103.8	5,094.7
Building material and garden supply stores	0.0	2,756.1	1,990.0	4,746.1
Wood kitchen cabinet and countertop manufacturing	0.0	4,449.0	57.3	4,506.2
Legal services	0.0	2,459.9	1,818.7	4,278.5
Automotive repair and maintenance, except car wash	0.0	1,120.5	3,139.9	4,260.4
Services to buildings and dwellings	0.0	2,644.7	1,466.4	4,111.2
Health and personal care stores	0.0	2,422.7	1,665.4	4,088.1
Nursing and residential care facilities	0.0	0.0	3,868.5	3,868.5
Social assistance, except child day care services	0.0	0.5	3,854.5	3,855.0
Private households	0.0	0.0	3,813.4	3,813.4
Accounting and bookkeeping services	0.0	2,597.0	1,022.7	3,619.8
Securities, commodity contracts and investments	0.0	1,410.3	1,698.8	3,109.0
Religious organizations	0.0	0.0	3,019.3	3,019.3
Sporting goods, hobby, book and music stores	0.0	1,672.7	1,194.5	2,867.2
Furniture and home furnishings stores	0.0	1,770.5	984.0	2,754.4
Monetary authorities and depository credit intermediation	0.0	1,297.0	1,450.7	2,747.7
Insurance carriers	0.0	694.9	1,921.6	2,616.6
Management of companies and enterprises	0.0	1,551.9	1,030.2	2,582.0
Gasoline stations	0.0	1,331.9	815.2	2,147.2
Management consulting services	0.0	1,494.9	613.9	2,108.8
Plastics plumbing fixtures and all other plastics	0.0	1,836.6	160.2	1,996.8
Child day care services	0.0	0.0	1,919.7	1,919.7
Other amusement, gambling, and recreation industries	0.0	57.7	1,858.9	1,916.6
Couriers and messengers	0.0	1,412.4	462.8	1,875.2
Colleges- universities- and junior colleges	0.0	71.8	1,737.4	1,809.3
Electronics and appliance stores	0.0	1,070.3	678.1	1,748.4
Investigation and security services	0.0	1,243.0	487.7	1,730.7
Nondepository credit intermediation and related activities	0.0	882.3	801.7	1,684.0
Other ambulatory health care services	0.0	2.9	1,620.7	1,623.6
Hotels and motels- including casino hotels	0.0	486.5	1,131.1	1,617.6
Civic, social, professional and similar organizations	0.0	677.9	900.4	1,578.3
Business support services	0.0	976.1	593.8	1,569.9
Elementary and secondary schools	0.0	0.0	1,531.7	1,531.7
Personal care services	0.0	0.0	1,440.2	1,440.2
Sawmills	0.0	1,388.4	27.8	1,416.1

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 Coefficients based on United States Census Bureau information

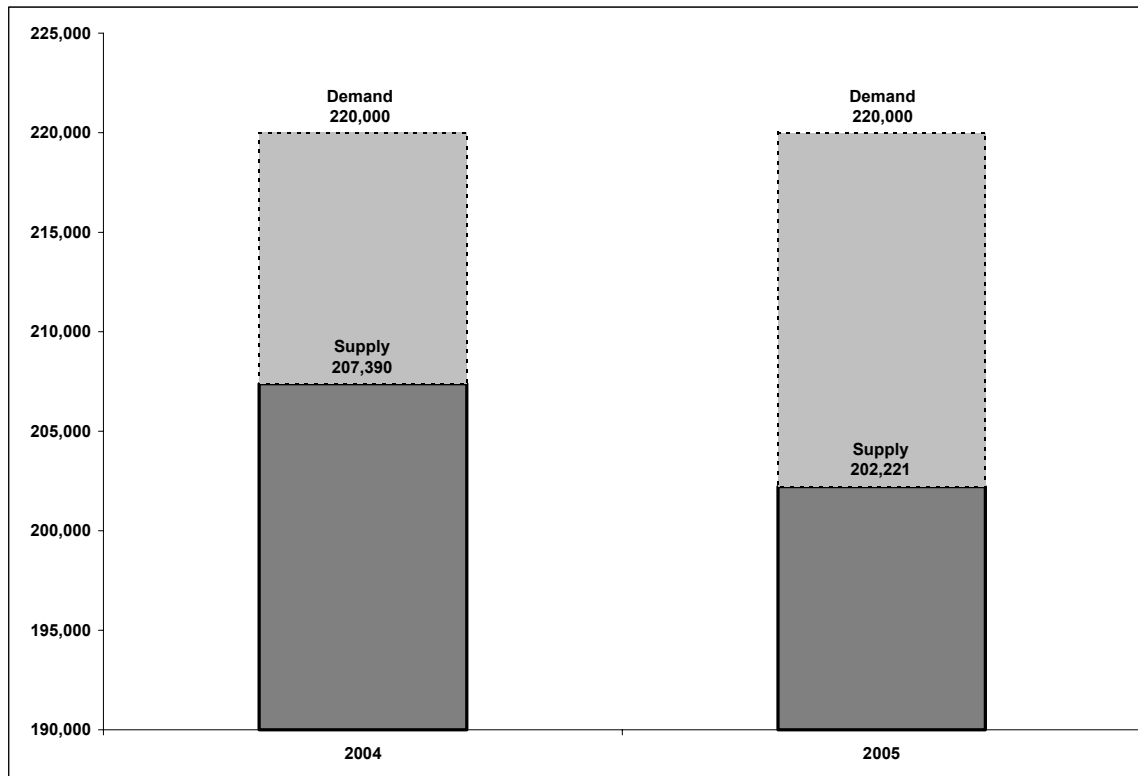
Notes: Figure only includes the 50 sectors with the largest total impacts based on the 2005 impact values.

Differences due to rounding.

New Housing Construction's Untapped Potential

Despite relatively high residential permit levels in 2004 and 2005, the supply of housing did not reach the projected demand. Based on California Department of Housing and Community Development analysis¹, California's housing stock would have to expand by 220,000 units every year between 1997 and 2020 to meet the needs of the expected population growth and household formation in the state. The Department's assessment shows that new home construction has been lagging behind the projected demand since the late 1990s. As shown in Figure 5, supply fell short of demand by close to 13,000 units in 2004 and nearly 18,000 units in 2005.

FIGURE 5
HOUSING SUPPLY AND DEMAND



Sacramento Regional Research Institute, April 2006

Data Sources: United States Census Bureau and California Department of Housing and Community Development

An annual production level closer to the projected demand would significantly increase the economic benefits of new housing construction in California. If the residential permit level in 2005 met the 220,000 housing need, the state would see an incremental increase in the total output impact of over \$6 billion and an additional employment impact of nearly 43,000 jobs. This reflects the difference in economic impact created by the actual 2005 construction of 202,000 units and projected demand. Similarly, if housing construction in 2004 approached 220,000 units rather than the 207,000 units actually

¹ *Raising the Roof—California Housing Development Projections and Constraints 1997-2020*

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permitted, California would see an additional economic benefit of nearly \$4 billion of output and 29,000 jobs including direct, indirect, and induced impacts.

Entire Housing Industry

The housing industry's influence in California includes a wide range of activities such as remodeling, repair, brokerage, property management, and financing, in addition to the construction of new housing units. As described within the Research Methodology section of this report, 65 percent of the Real Estate sector's employment and output is allocated to the housing industry grouping to account for residential real estate activities.

Figure 6 shows that, overall, the housing industry generates over \$273 billion in output and supports over 960,000 jobs throughout the state. A comparison of the economic contributions of the housing industry with other leading sectors in the state demonstrates the importance of housing in California's economy. With 11 percent of total state output, housing is California's leading industry, followed by Wholesale & Retail Trade (\$238 billion output) and Professional, Scientific, & Technical Services (\$197 billion output). Additional sector-level details for California's leading industry groupings are provided in Appendix B.

FIGURE 6
COMPARISON OF CALIFORNIA'S LEADING INDUSTRIES
(OUTPUT IN THOUSANDS)

<i>Industry</i>	<i>Output</i>	<i>Employment</i>	<i>% of Total Output</i>
Housing*	\$273,473,161	960,019	11.0%
Wholesale and Retail Trade	\$238,445,326	2,684,981	9.6%
Professional, Scientific, and Technical Services	\$197,146,915	1,700,710	8.0%
Finance and Insurance	\$165,378,377	874,261	6.7%
Information	\$161,401,264	511,484	6.5%
State and Local Government	\$143,032,922	2,154,869	5.8%
Computer and Electronic Product Manufacturing	\$131,639,746	304,802	5.3%
Health Care and Social Assistance	\$126,955,820	1,589,233	5.1%
Non-Residential Activities*	\$125,089,896	951,302	5.1%
Agriculture and Food Processing	\$111,829,140	732,645	4.5%
Management and Support	\$109,285,859	1,466,024	4.4%
Leisure and Hospitality	\$103,748,095	1,837,880	4.2%
Other Services	\$80,896,783	1,468,136	3.3%
Transportation and Warehousing	\$68,284,283	625,520	2.8%
Transportation Equipment Manufacturing	\$45,660,026	126,972	1.8%
Medical Manufacturing	\$43,184,696	103,838	1.7%
Utilities	\$41,833,078	51,891	1.7%
Federal Government	\$29,537,370	431,119	1.2%
California Total	\$2,475,392,387	19,917,460	-

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 coefficients

* Housing industry includes an allocation of 65 percent of the Real Estate sector; Non-Residential Construction includes 35 percent of the Real Estate sector.

Regional Economic Contributions of the Housing Industry

California's immense and diverse economy contains several distinct economic regions, each characterized by unique economic trends and development patterns. These regions are generally identified as Metropolitan Statistical Areas (MSAs), which have the advantage of capturing the economic and social integration based around large population centers. Defined as an area that has at least one urbanized population area of 50,000 or more (plus the adjacent territory that has a high degree of integration with this core as measured by commuting ties), an MSA reflects a regional economic picture. California's 26 MSAs encompass most of its 58 counties and a majority of its economic activity. Appendix C provides a list of all of the state's MSAs and the counties captured within them. The remaining non-MSA counties lack at least one urbanized population area of 50,000 or more to qualify as a major economic region.

This section will cover the impacts of new housing construction within California's 26 MSAs in addition to each economic region's entire housing industry output and employment.

New Housing Construction

Residential permit data from the United States Census Bureau shows that nearly all of the state's housing construction valuation and authorized new privately-owned housing units fell within its major economic regions, based on 2005 values. As shown in Figure 7, in both 2004 and 2005, the largest number of residential permits and highest construction valuations were in the Riverside-San Bernardino, Los Angeles-Long Beach-Santa Ana, and Sacramento-Arden Arcade-Roseville MSAs, reflecting growth in two of the most dynamic regions and the largest region in the state. Combined, these three regions comprised almost 50 percent of the total construction valuation and about 60 percent of the residential permits granted statewide in 2005.

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FIGURE 7
RESIDENTIAL BUILDING PERMITS IN
CALIFORNIA'S MAJOR ECONOMIC REGIONS
(VALUATION IN THOUSANDS)

Region	Permits		Valuation	
	2004	2005	2004	2005
Bakersfield	6,794	7,630	\$914,891	\$1,011,889
Chico	1,989	1,458	\$217,024	\$179,826
El Centro	1778	1,276	\$229,682	\$146,399
Fresno	7,157	5,348	\$1,096,191	\$881,213
Hanford-Corcoran	867	823	\$89,404	\$97,051
Los Angeles-Long Beach-Santa Ana	35,785	32,264	\$5,623,926	\$5,578,581
Madera	1,676	1,659	\$239,376	\$231,521
Merced	2,598	3,165	\$428,482	\$525,405
Modesto	4,521	3,871	\$733,475	\$677,132
Napa	917	545	\$216,647	\$107,542
Oxnard-Thousand Oaks-Ventura	2,617	4,418	\$655,269	\$1,009,171
Redding	1,038	1,438	\$161,431	\$216,628
Riverside-San Bernardino-Ontario	51,463	51,295	\$8,686,634	\$9,329,508
Sacramento-Arden Arcade-Roseville	21,999	18,645	\$4,356,067	\$3,663,598
Salinas	1,198	1,061	\$350,512	\$297,345
San Diego-Carlsbad-San Marcos	15,587	14,215	\$2,967,544	\$2,669,169
San Francisco-Oakland-Fremont	15,239	14,945	\$3,195,228	\$3,442,546
San Jose-Sunnyvale-Santa Clara	5,492	5,713	\$1,010,795	\$1,107,954
San Luis Obispo-Paso Robles	2,450	1,742	\$399,805	\$294,254
Santa Barbara-Santa Maria	1,499	776	\$271,592	\$183,428
Santa Cruz-Watsonville	801	418	\$175,642	\$90,235
Santa Rosa-Petaluma	1,929	2,109	\$359,240	\$412,867
Stockton	6,724	5,864	\$1,294,420	\$1,325,478
Vallejo-Fairfield	2,961	2,139	\$486,622	\$433,042
Visalia-Porterville	2,492	3,224	\$341,908	\$496,799
Yuba City	3,046	2,591	\$464,473	\$422,907

Sacramento Regional Research Institute, April 2006
 Data Source: United States Census Bureau

Like at the statewide level, the regional benefits of new housing construction extend well beyond the economic activities directly related to building new single-family and multifamily housing units. Throughout each region, the multiplier effect generates additional output and jobs within linked suppliers of goods and services and sectors that support employees' consumption activities. As a result, housing construction provides considerable economic benefits to virtually every region in the state, even those regions which do not have significant levels of economic activities in manufacturing, financial services, or other high value sectors.

Figures 8 and 9 demonstrate that the largest economic impacts occur within the regions with the highest levels of residential permits and construction valuation—Riverside-San Bernardino, Los Angeles-Long Beach-Santa Ana, and Sacramento-Arden Arcade-Roseville. Based on 2005 values and including direct, indirect and induced impacts, the Riverside-San Bernardino MSA sees economic benefits of close to \$16 billion of output and 122,000 jobs per year; the Los Angeles-Long Beach-Santa Ana region experiences impacts of nearly \$10 billion of industry output and 74,000 employees; and the Sacramento-Arden Arcade-Roseville MSA realizes about \$6 billion of output and 45,000 jobs. New housing construction is also important even in the state's smaller economic

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regions like Hanford-Corcoran and Santa Cruz-Watsonville, where residential building activities generate a total of \$130 million and \$139 million of output as well as 1,040 and 1,030 jobs per year, respectively, based on 2005 values. On average, California's MSAs see multiplier effects similar to the statewide values where a gain of \$0.80 of output and 1.2 jobs is generated in indirect and induced activities for every dollar of construction valuation and each job directly related to new housing construction.

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FIGURE 8
TOTAL OUTPUT IMPACTS OF NEW HOUSING
CONSTRUCTION IN CALIFORNIA'S MAJOR ECONOMIC REGIONS
(IN THOUSANDS)

<i>Region</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
2005				
Bakersfield	\$1,011,889	\$295,753	\$244,510	\$1,552,152
Chico	\$179,826	\$60,526	\$52,531	\$292,883
El Centro	\$146,399	\$36,625	\$23,417	\$206,441
Fresno	\$881,213	\$295,878	\$272,827	\$1,449,919
Hanford-Corcoran	\$97,051	\$18,847	\$14,587	\$130,484
Los Angeles-Long Beach-Santa Ana	\$5,578,581	\$2,101,726	\$2,319,391	\$9,999,697
Madera	\$231,521	\$45,502	\$39,131	\$316,154
Merced	\$525,405	\$109,195	\$98,122	\$732,722
Modesto	\$677,132	\$205,098	\$180,488	\$1,062,718
Napa	\$107,542	\$23,047	\$25,458	\$156,047
Oxnard-Thousand Oaks-Ventura	\$1,009,171	\$320,174	\$281,014	\$1,610,359
Redding	\$216,628	\$70,481	\$67,229	\$354,339
Riverside-San Bernardino-Ontario	\$9,329,508	\$3,427,516	\$2,950,798	\$15,707,822
Sacramento-Arden Arcade-Roseville	\$3,663,598	\$1,307,542	\$1,124,447	\$6,095,587
Salinas	\$297,345	\$81,228	\$74,092	\$452,665
San Diego-Carlsbad-San Marcos	\$2,669,169	\$881,423	\$928,537	\$4,479,130
San Francisco-Oakland-Fremont	\$3,442,546	\$1,059,536	\$1,263,742	\$5,765,824
San Jose-Sunnyvale-Santa Clara	\$1,107,954	\$295,513	\$261,635	\$1,665,102
San Luis Obispo-Paso Robles	\$294,254	\$83,644	\$80,123	\$458,021
Santa Barbara-Santa Maria	\$183,428	\$54,597	\$53,042	\$291,067
Santa Cruz-Watsonville	\$90,235	\$25,582	\$23,368	\$139,185
Santa Rosa-Petaluma	\$412,867	\$126,385	\$135,747	\$674,999
Stockton	\$1,325,478	\$419,311	\$386,163	\$2,130,952
Vallejo-Fairfield	\$433,042	\$114,778	\$106,474	\$654,294
Visalia-Porterville	\$496,799	\$143,796	\$102,203	\$742,798
Yuba City	\$422,907	\$114,572	\$93,388	\$630,867
2004				
Bakersfield	\$914,891	\$267,806	\$219,830	\$1,402,527
Chico	\$217,024	\$72,114	\$65,659	\$354,797
El Centro	\$229,682	\$57,231	\$37,666	\$324,579
Fresno	\$1,096,191	\$367,328	\$340,868	\$1,804,387
Hanford-Corcoran	\$89,404	\$17,270	\$13,703	\$120,377
Los Angeles-Long Beach-Santa Ana	\$5,623,926	\$2,121,574	\$2,332,093	\$10,077,593
Madera	\$216,647	\$46,427	\$52,281	\$315,355
Merced	\$428,482	\$89,143	\$79,187	\$596,813
Modesto	\$733,475	\$222,201	\$195,402	\$1,151,078
Napa	\$216,647	\$46,427	\$52,281	\$315,355
Oxnard-Thousand Oaks-Ventura	\$655,269	\$209,814	\$178,772	\$1,043,855
Redding	\$161,431	\$52,659	\$49,679	\$263,769
Riverside-San Bernardino-Ontario	\$8,686,634	\$3,181,032	\$2,772,902	\$14,640,568
Sacramento-Arden Arcade-Roseville	\$4,356,067	\$1,555,023	\$1,336,271	\$7,247,360
Salinas	\$350,512	\$95,955	\$86,863	\$533,330
San Diego-Carlsbad-San Marcos	\$2,967,544	\$984,057	\$1,021,586	\$4,973,186
San Francisco-Oakland-Fremont	\$3,195,228	\$984,496	\$1,169,141	\$5,348,865
San Jose-Sunnyvale-Santa Clara	\$1,010,795	\$272,013	\$234,511	\$1,517,319
San Luis Obispo-Paso Robles	\$399,805	\$113,993	\$107,618	\$621,415
Santa Barbara-Santa Maria	\$271,592	\$79,977	\$82,033	\$433,602
Santa Cruz-Watsonville	\$175,642	\$49,977	\$44,983	\$270,603
Santa Rosa-Petaluma	\$359,240	\$110,485	\$116,059	\$585,783
Stockton	\$1,294,420	\$408,217	\$379,369	\$2,082,005
Vallejo-Fairfield	\$486,622	\$128,495	\$121,993	\$737,109
Visalia-Porterville	\$341,908	\$98,940	\$70,378	\$511,226
Yuba City	\$464,473	\$125,890	\$102,464	\$692,828

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 Coefficients based on United States Census Bureau information

Note: Differences due to rounding.

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FIGURE 9
TOTAL EMPLOYMENT IMPACTS OF NEW HOUSING
CONSTRUCTION IN CALIFORNIA'S MAJOR ECONOMIC REGIONS

<i>Region</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
2005				
Bakersfield	6,183	3,162	2,670	12,016
Chico	1,137	667	617	2,421
El Centro	929	451	292	1,671
Fresno	5,541	3,216	3,035	11,792
Hanford-Corcoran	613	253	171	1,037
Los Angeles-Long Beach-Santa Ana	35,206	18,158	20,424	73,788
Madera	1,430	559	444	2,432
Merced	3,305	1,331	1,154	5,790
Modesto	4,219	2,281	2,000	8,500
Napa	593	256	252	1,101
Oxnard-Thousand Oaks-Ventura	6,545	3,152	2,860	12,556
Redding	1,315	770	774	2,859
Riverside-San Bernardino-Ontario	57,152	34,040	30,432	121,624
Sacramento-Arden Arcade-Roseville	21,257	12,340	11,180	44,776
Salinas	1,666	906	783	3,354
San Diego-Carlsbad-San Marcos	16,853	8,416	9,007	34,276
San Francisco-Oakland-Fremont	19,631	8,727	10,350	38,708
San Jose-Sunnyvale-Santa Clara	6,647	2,419	2,211	11,277
San Luis Obispo-Paso Robles	1,783	951	910	3,644
Santa Barbara-Santa Maria	1,072	566	536	2,174
Santa Cruz-Watsonville	505	267	253	1,025
Santa Rosa-Petaluma	2,491	1,267	1,370	5,127
Stockton	7,441	4,418	4,172	16,030
Vallejo-Fairfield	2,508	1,228	1,104	4,839
Visalia-Porterville	3,144	1,677	1,194	6,015
Yuba City	2,489	1,241	1,047	4,778
2004				
Bakersfield	5,546	2,863	2,401	10,809
Chico	1,445	796	772	3,013
El Centro	1,507	704	470	2,682
Fresno	6,940	3,994	3,791	14,725
Hanford-Corcoran	580	231	161	972
Los Angeles-Long Beach-Santa Ana	35,348	18,328	20,536	74,212
Madera	1,496	576	464	2,536
Merced	2,660	1,088	931	4,679
Modesto	4,566	2,472	2,165	9,203
Napa	1,223	516	518	2,257
Oxnard-Thousand Oaks-Ventura	4,119	2,063	1,820	8,001
Redding	968	576	572	2,115
Riverside-San Bernardino-Ontario	53,997	31,611	28,597	114,205
Sacramento-Arden Arcade-Roseville	25,253	14,676	13,286	53,215
Salinas	1,949	1,070	918	3,936
San Diego-Carlsbad-San Marcos	18,447	9,397	9,909	37,753
San Francisco-Oakland-Fremont	18,135	8,109	9,575	35,819
San Jose-Sunnyvale-Santa Clara	5,916	2,226	1,982	10,124
San Luis Obispo-Paso Robles	2,384	1,295	1,223	4,901
Santa Barbara-Santa Maria	1,689	826	829	3,345
Santa Cruz-Watsonville	968	522	486	1,976
Santa Rosa-Petaluma	2,115	1,108	1,171	4,394
Stockton	7,335	4,302	4,099	15,736
Vallejo-Fairfield	2,896	1,373	1,265	5,534
Visalia-Porterville	2,166	1,153	822	4,141
Yuba City	2,730	1,364	1,149	5,243

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 Coefficients based on United States Census Bureau information

Note: Differences due to rounding.

In all of the state's major economic regions, new housing construction is a sizable and stable economic contributor with total output benefits measuring in the billions and job creation in the tens of thousands for 10 of California's 26 major regions.

In general, the industry sectors in each of California's major economic regions experience a similar distribution of benefits of new home construction as the statewide average due to inter-industry linkages. In addition to housing-related sectors, the Wholesale Trade; Architectural & Engineering Services; and Real Estate sectors benefit the most from the total output impacts created through new housing construction while the Food Services & Drinking Places; Wholesale Trade; and Architectural & Engineering Services capture the largest employment gains.

Entire Housing Industry

The housing industry is a major contributor to California MSAs' economies—the industry measures in the tens of billions of dollars of output and at least tens of thousands of total jobs in six of 26 California MSAs. Figure 10 displays the housing industry's output and employment within these regional economies. Similar to the statewide totals, these figures represent activities of the broader definition of the housing industry which also includes residential real estate sales, financing, brokerage, repairs, and the maintenance and operation of existing housing units, in addition to new home construction. The totals within Figure 10, however, do not include the residential activities from the Real Estate sector, due to complexity in estimating the composition of this sector at a regional level. Naturally, should these activities be included, each region's housing industry output and employment figures would be higher. This also explains why California's total housing output within this section of the study is approximately 55 percent less than the state's housing total in Figure 6. As such, housing industry output could potentially be about 55 percent higher for each MSA represented in Figure 10 if the residential activities from the Real Estate sector were included.

As can be expected, the economic benefits of the housing industry are highest in California's largest and most mature metropolitan areas of Los Angeles-Long Beach-Santa Ana and San Francisco-Oakland-Fremont with respective outputs of about \$59 and \$28 billion (a combined total of about 49 percent of the state's output). Other areas with relatively large housing industry output totals include San Diego-Carlsbad-San Marcos; Riverside-San Bernardino-Ontario; Sacramento-Arden-Arcade-Roseville; and San Jose-Sunnyvale-Santa Clara, all contributing between \$11 and \$16 billion in output.

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FIGURE 10
REGIONAL ECONOMIC OUTPUT AND EMPLOYMENT
OF THE HOUSING INDUSTRY
(OUTPUT IN THOUSANDS)

<i>Region</i>	<i>Output</i>	<i>Employment</i>
California Total	\$176,383,230	474,427
Bakersfield	\$2,613,368	7,871
Chico	\$765,058	2,197
El Centro	\$394,186	839
Fresno	\$3,369,046	10,533
Hanford-Corcoran	\$332,738	690
Los Angeles-Long Beach-Santa Ana	\$59,248,135	140,921
Madera	\$494,697	1,768
Merced	\$735,405	2,114
Modesto	\$2,002,373	6,685
Napa	\$861,160	2,667
Oxnard-Thousand Oaks-Ventura	\$3,726,515	9,313
Redding	\$864,342	3,053
Riverside-San Bernardino-Ontario	\$15,666,425	54,037
Sacramento-Arden-Arcade-Roseville	\$11,337,065	38,417
Salinas	\$1,834,860	4,403
San Diego-Carlsbad-San Marcos	\$16,446,488	47,754
San Francisco-Oakland-Fremont	\$27,930,243	66,694
San Jose-Sunnyvale-Santa Clara	\$10,620,668	23,667
San Luis Obispo-Paso Robles	\$1,339,139	4,497
Santa Barbara-Santa Maria	\$1,941,162	5,082
Santa Cruz-Watsonville	\$1,376,835	3,546
Santa Rosa-Petaluma	\$2,813,891	8,504
Stockton	\$2,667,364	8,429
Vallejo-Fairfield	\$1,973,108	5,930
Visalia-Porterville	\$1,269,591	3,715
Yuba City	\$554,191	1,597

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 coefficients

Note: The Real Estate sector is not included in this data.

The regions specified are metropolitan statistical areas (MSAs). The total of these regions does not equal the state total as rural areas are not included within the MSA descriptions.

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Appendix A—Impacts of New Housing Construction in California 2005

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
	California Total	\$37,158,906	\$15,115,100	\$15,475,289	\$67,749,296	219,884	129,360	137,510	486,753
33	New residential 1-unit structures- nonfarm	\$31,834,804	-	-	\$31,834,804	174,976	-	-	174,976
34	New multifamily housing structures- nonfarm	\$5,324,102	-	-	\$5,324,102	44,908	-	-	44,908
390	Wholesale trade	-	\$1,709,700	\$858,927	\$2,568,627	-	11,817	5,937	17,754
509	Owner-occupied dwellings	-	-	\$1,754,483	\$1,754,483	-	-	-	-
439	Architectural and engineering services	-	\$1,143,395	\$45,323	\$1,188,718	-	10,882	431	11,314
431	Real estate	-	\$444,025	\$681,384	\$1,125,408	-	2,221	3,408	5,629
481	Food services and drinking places	-	\$91,087	\$803,907	\$894,994	-	1,842	16,254	18,096
401	Motor vehicle and parts dealers	-	\$457,822	\$331,678	\$789,500	-	4,461	3,232	7,693
465	Offices of physicians- dentists- and other health practitioners	-	-	\$758,332	\$758,332	-	-	7,898	7,898
405	Food and beverage stores	-	\$424,414	\$299,639	\$724,052	-	5,419	3,826	9,245
430	Monetary authorities and depository credit intermediation	-	\$337,669	\$377,689	\$715,358	-	1,297	1,451	2,748
394	Truck transportation	-	\$533,274	\$111,698	\$644,972	-	4,952	1,037	5,990
467	Hospitals	-	-	\$643,780	\$643,780	-	-	5,785	5,785
437	Legal services	-	\$328,892	\$243,160	\$572,052	-	2,460	1,819	4,279
362	Wood kitchen cabinet and countertop manufacturing	-	\$561,787	\$7,234	\$569,021	-	4,449	57	4,506
427	Insurance carriers	-	\$138,311	\$382,455	\$520,766	-	695	1,922	2,617
142	Petroleum refineries	-	\$266,199	\$252,499	\$518,698	-	72	69	141
422	Telecommunications	-	\$242,948	\$258,987	\$501,935	-	641	684	1,325
410	General merchandise stores	-	\$275,772	\$199,336	\$475,108	-	5,604	4,050	9,654
451	Management of companies and enterprises	-	\$252,897	\$167,879	\$420,777	-	1,552	1,030	2,582
426	Securities- commodity contracts- investments	-	\$170,766	\$205,696	\$376,463	-	1,410	1,699	3,109
425	Nondepository credit intermediation and related activities	-	\$189,819	\$172,469	\$362,288	-	882	802	1,684
404	Building material and garden supply stores	-	\$209,240	\$151,077	\$360,317	-	2,756	1,990	4,746
112	Sawmills	-	\$343,005	\$6,859	\$349,864	-	1,388	28	1,416
483	Automotive repair and maintenance- except car washes	-	\$91,727	\$257,041	\$348,767	-	1,121	3,140	4,260
177	Plastics plumbing fixtures and all other plastics	-	\$311,987	\$27,211	\$339,197	-	1,837	160	1,997
408	Clothing and clothing accessories stores	-	\$189,893	\$133,575	\$323,468	-	2,991	2,104	5,095
406	Health and personal care stores	-	\$182,313	\$125,327	\$307,640	-	2,423	1,665	4,088
438	Accounting and bookkeeping services	-	\$207,583	\$81,746	\$289,329	-	2,597	1,023	3,620
412	Nonstore retailers	-	\$156,622	\$113,351	\$269,974	-	3,170	2,294	5,464
499	Other State and local government enterprises	-	\$83,264	\$174,471	\$257,736	-	375	786	1,161

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	<i>Sector Name</i>	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>
454	Employment services	-	\$192,550	\$60,898	\$253,448	-	7,147	2,260	9,407
444	Management consulting services	-	\$176,024	\$72,289	\$248,313	-	1,495	614	2,109
411	Miscellaneous store retailers	-	\$144,410	\$99,928	\$244,338	-	3,416	2,364	5,780
458	Services to buildings and dwellings	-	\$145,556	\$80,708	\$226,264	-	2,645	1,466	4,111
466	Other ambulatory health care services	-	\$408	\$224,736	\$225,144	-	3	1,621	1,624
30	Power generation and supply	-	\$87,467	\$134,834	\$222,301	-	100	154	253
160	Pharmaceutical and medicine manufacturing	-	\$182	\$216,406	\$216,588	-	-	296	296
402	Furniture and home furnishings stores	-	\$138,222	\$76,819	\$215,041	-	1,771	984	2,755
407	Gasoline stations	-	\$132,840	\$81,308	\$214,148	-	1,332	815	2,147
119	Other millwork- including flooring	-	\$202,949	\$3,132	\$206,081	-	1,316	20	1,336
116	Engineered wood member and truss manufacturing	-	\$188,925	\$1,972	\$190,897	-	1,237	13	1,250
468	Nursing and residential care facilities	-	-	\$180,507	\$180,507	-	-	3,869	3,869
31	Natural gas distribution	-	\$52,869	\$116,254	\$169,123	-	61	133	194
403	Electronics and appliance stores	-	\$102,031	\$64,646	\$166,678	-	1,070	678	1,748
447	Advertising and related services	-	\$91,599	\$69,780	\$161,380	-	758	578	1,336
452	Office administrative services	-	\$121,592	\$38,308	\$159,901	-	675	213	888
43	Maintenance and repair of nonresidential buildings	-	\$91,594	\$64,954	\$156,548	-	820	582	1,402
478	Other amusement- gambling- and recreation industries	-	\$4,484	\$144,461	\$148,944	-	58	1,859	1,917
117	Wood windows and door manufacturing	-	\$143,113	\$3,470	\$146,584	-	844	21	865
421	Cable networks and program distribution	-	\$21,763	\$123,312	\$145,076	-	19	108	127
450	All other miscellaneous professional and technical services	-	\$96,183	\$47,336	\$143,520	-	196	96	292
173	Plastics pipe- fittings- and profile shapes	-	\$133,627	\$6,260	\$139,887	-	507	24	531
485	Commercial machinery repair and maintenance	-	\$115,724	\$21,120	\$136,844	-	1,010	184	1,195
428	Insurance agencies- brokerages- and related	-	\$35,727	\$100,417	\$136,144	-	254	713	966
429	Funds- trusts- and other financial vehicles	-	\$1,038	\$133,269	\$134,307	-	3	392	395
399	Couriers and messengers	-	\$95,707	\$31,360	\$127,066	-	1,412	463	1,875
470	Social assistance- except child day care services	-	\$16	\$125,575	\$125,591	-	1	3,855	3,855
479	Hotels and motels- including casino hotels	-	\$36,887	\$85,761	\$122,647	-	487	1,131	1,618
350	Motor vehicle parts manufacturing	-	\$79,903	\$40,669	\$120,571	-	283	144	426
493	Civic- social- professional and similar organizations	-	\$51,602	\$68,535	\$120,137	-	678	900	1,578
14	Logging	-	\$115,448	\$2,314	\$117,762	-	508	10	519
455	Business support services	-	\$71,171	\$43,296	\$114,467	-	976	594	1,570
409	Sporting goods- hobby- book and music stores	-	\$66,269	\$47,324	\$113,594	-	1,673	1,195	2,867
398	Postal service	-	\$59,548	\$49,780	\$109,329	-	652	545	1,198
311	Semiconductors and related device manufacturing	-	\$71,826	\$37,035	\$108,861	-	109	56	166
462	Colleges- universities- and junior colleges	-	\$4,181	\$101,161	\$105,342	-	72	1,737	1,809
391	Air transportation	-	\$40,827	\$60,836	\$101,664	-	186	276	462

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	<i>Sector Name</i> Sector Name	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	Total	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	Total
498	State and local government electric utilities	-	\$39,945	\$60,483	\$100,427	-	77	117	194
460	Waste management and remediation services	-	\$62,697	\$30,964	\$93,661	-	390	193	582
418	Motion picture and video industries	-	\$19,616	\$73,433	\$93,049	-	81	304	385
484	Electronic equipment repair and maintenance	-	\$72,832	\$19,914	\$92,747	-	553	151	704
392	Rail transportation	-	\$77,355	\$14,564	\$91,919	-	273	51	324
432	Automotive equipment rental and leasing	-	\$30,659	\$61,167	\$91,825	-	179	357	536
491	Religious organizations	-	-	\$90,694	\$90,694	-	-	3,019	3,019
490	Other personal services	-	\$4,441	\$82,987	\$87,428	-	36	680	716
178	Foam product manufacturing	-	\$67,845	\$17,192	\$85,037	-	295	75	370
143	Asphalt paving mixture and block manufacturing	-	\$82,606	\$647	\$83,253	-	148	1	149
273	Other commercial and service industry machinery manufacturing	-	\$82,185	\$650	\$82,836	-	331	3	333
19	Oil and gas extraction	-	\$37,673	\$41,541	\$79,214	-	75	83	158
440	Specialized design services	-	\$62,599	\$14,489	\$77,088	-	516	119	635
397	Scenic and sightseeing transportation and support activities for transportation	-	\$54,758	\$21,868	\$76,626	-	572	228	800
469	Child day care services	-	-	\$76,206	\$76,206	-	-	1,920	1,920
445	Environmental and other technical consulting services	-	\$63,317	\$11,139	\$74,456	-	420	74	494
192	Ready-mix concrete manufacturing	-	\$73,215	\$525	\$73,740	-	290	2	292
420	Radio and television broadcasting	-	\$38,021	\$34,226	\$72,247	-	174	157	331
107	Cut and sew apparel manufacturing	-	\$562	\$70,592	\$71,154	-	4	513	518
486	Household goods repair and maintenance	-	\$32,625	\$34,765	\$67,390	-	192	204	396
457	Investigation and security services	-	\$47,775	\$18,747	\$66,522	-	1,243	488	1,731
463	Other educational services	-	\$1,500	\$64,905	\$66,405	-	27	1,173	1,200
435	General and consumer goods rental except video tapes and discs	-	\$29,906	\$36,468	\$66,374	-	301	367	668
459	Other support services	-	\$38,472	\$26,962	\$65,434	-	340	238	578
487	Personal care services	-	-	\$64,892	\$64,892	-	-	1,440	1,440
369	Custom architectural woodwork and millwork	-	\$62,543	\$103	\$62,646	-	488	1	489
400	Warehousing and storage	-	\$37,408	\$25,155	\$62,562	-	427	287	714
436	Lessors of nonfinancial intangible assets	-	\$30,192	\$31,536	\$61,728	-	9	9	18
162	Adhesive manufacturing	-	\$57,393	\$4,322	\$61,715	-	128	10	138
443	Other computer related services- including facilities management	-	\$44,028	\$16,102	\$60,131	-	243	89	331
446	Scientific research and development services	-	\$30,762	\$27,591	\$58,353	-	254	228	482
344	Automobile and light truck manufacturing	-	\$1,100	\$54,929	\$56,029	-	1	56	57
114	Reconstituted wood product manufacturing	-	\$55,381	\$492	\$55,872	-	180	2	182
302	Electronic computer manufacturing	-	\$10,143	\$45,308	\$55,451	-	13	59	72
248	Metal valve manufacturing	-	\$53,964	\$1,094	\$55,058	-	220	5	225
73	Bread and bakery product- except frozen- manufacturing	-	\$2,351	\$52,395	\$54,746	-	19	422	441
393	Water transportation	-	\$30,260	\$24,193	\$54,453	-	56	45	100

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
461	Elementary and secondary schools	-	-	\$54,335	\$54,335	-	-	1,532	1,532
464	Home health care services	-	-	\$54,175	\$54,175	-	-	974	974
62	Fluid milk manufacturing	-	\$968	\$49,310	\$50,277	-	2	82	84
11	Cattle ranching and farming	-	\$1,421	\$47,233	\$48,654	-	13	445	458
236	Sheet metal work manufacturing	-	\$46,792	\$825	\$47,616	-	295	5	301
434	Machinery and equipment rental and leasing	-	\$41,986	\$5,560	\$47,546	-	374	50	424
494	Private households	-	-	\$47,279	\$47,279	-	-	3,813	3,813
113	Wood preservation	-	\$45,736	\$507	\$46,244	-	198	2	200
413	Newspaper publishers	-	\$22,882	\$21,835	\$44,716	-	190	181	372
308	Other communications equipment manufacturing	-	\$43,227	\$910	\$44,138	-	141	3	144
489	Drycleaning and laundry services	-	\$5,261	\$37,240	\$42,500	-	112	793	906
139	Commercial printing	-	\$21,601	\$20,573	\$42,174	-	264	252	516
115	Veneer and plywood manufacturing	-	\$39,849	\$639	\$40,488	-	255	4	259
492	Grantmaking and giving and social advocacy organizations	-	-	\$40,093	\$40,093	-	-	463	463
166	Toilet preparation manufacturing	-	\$376	\$39,549	\$39,925	-	1	91	92
442	Computer systems design services	-	\$26,362	\$13,003	\$39,365	-	294	145	440
10	All other crop farming	-	\$32,918	\$6,095	\$39,013	-	206	38	244
241	Hardware manufacturing	-	\$37,307	\$1,310	\$38,617	-	181	6	187
243	Machine shops	-	\$32,416	\$5,857	\$38,273	-	287	52	339
64	Cheese manufacturing	-	\$1,449	\$36,219	\$37,668	-	2	56	58
424	Data processing services	-	\$24,563	\$13,100	\$37,664	-	111	59	170
312	All other electronic component manufacturing	-	\$28,176	\$9,462	\$37,638	-	130	44	173
472	Spectator sports	-	\$9,134	\$26,462	\$35,596	-	205	593	798
456	Travel arrangement and reservation services	-	\$9,540	\$25,624	\$35,163	-	82	221	304
68	Meat processed from carcasses	-	\$741	\$34,295	\$35,036	-	2	96	99
476	Fitness and recreational sports centers	-	\$5,187	\$29,336	\$34,523	-	131	742	874
449	Veterinary services	-	\$456	\$34,004	\$34,460	-	7	548	556
144	Asphalt shingle and coating materials manufacturing	-	\$31,958	\$2,203	\$34,162	-	64	4	69
190	Glass and glass products- except glass containers	-	\$26,099	\$7,213	\$33,312	-	133	37	170
441	Custom computer programming services	-	\$23,056	\$9,239	\$32,295	-	230	92	322
395	Transit and ground passenger transportation	-	\$6,334	\$23,694	\$30,029	-	125	469	594
118	Cut stock- resawing lumber- and planing	-	\$29,000	\$743	\$29,742	-	211	5	217
414	Periodical publishers	-	\$11,909	\$16,946	\$28,855	-	50	71	122
315	Automatic environmental control manufacturing	-	\$27,586	\$1,231	\$28,817	-	120	5	126
123	Miscellaneous wood product manufacturing	-	\$25,762	\$2,359	\$28,121	-	222	20	243
474	Promoters of performing arts and sports and agents	-	\$7,183	\$20,602	\$27,785	-	100	287	387
163	Soap and other detergent manufacturing	-	\$3,895	\$23,662	\$27,557	-	5	32	37

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
70	Poultry processing	-	\$611	\$25,964	\$26,575	-	3	136	139
42	Maintenance and repair of farm and nonfarm residential structures	-	\$2,017	\$24,174	\$26,191	-	10	125	136
335	Switchgear and switchboard apparatus manufacturing	-	\$25,971	\$211	\$26,182	-	98	1	99
172	Plastics packaging materials- film and sheet	-	\$15,997	\$9,710	\$25,707	-	60	37	97
433	Video tape and disc rental	-	\$206	\$25,190	\$25,396	-	3	321	323
309	Audio and video equipment manufacturing	-	\$789	\$24,299	\$25,088	-	2	51	53
67	Animal- except poultry- slaughtering	-	\$686	\$24,042	\$24,728	-	2	68	70
473	Independent artists- writers- and performers	-	\$10,248	\$14,232	\$24,480	-	88	122	210
423	Information services	-	\$14,612	\$9,546	\$24,158	-	42	27	69
45	Other maintenance and repair construction	-	\$8,628	\$14,398	\$23,026	-	96	160	256
482	Car washes	-	\$2,412	\$19,476	\$21,888	-	51	410	460
497	State and local government passenger transit	-	\$4,586	\$17,156	\$21,742	-	108	404	512
419	Sound recording industries	-	\$1,538	\$19,947	\$21,485	-	4	45	49
364	Nonupholstered wood household furniture manufacturing	-	\$1,615	\$19,214	\$20,829	-	14	161	175
6	Greenhouse and nursery production	-	\$7,495	\$13,187	\$20,682	-	78	137	215
32	Water- sewage and other systems	-	\$5,895	\$14,464	\$20,360	-	26	64	90
376	Surgical appliance and supplies manufacturing	-	\$296	\$19,878	\$20,174	-	1	77	79
480	Other accommodations	-	\$605	\$19,525	\$20,130	-	7	219	226
145	Petroleum lubricating oil and grease manufacturing	-	\$16,315	\$3,782	\$20,096	-	24	6	29
85	Soft drink and ice manufacturing	-	\$349	\$19,676	\$20,025	-	1	37	38
471	Performing arts companies	-	\$1,767	\$17,882	\$19,649	-	51	516	567
79	Other snack food manufacturing	-	\$188	\$19,332	\$19,521	-	-	39	39
3	Vegetable and melon farming	-	\$332	\$19,116	\$19,448	-	2	131	133
164	Polish and other sanitation good manufacturing	-	\$4,400	\$14,991	\$19,391	-	8	27	35
488	Death care services	-	-	\$18,736	\$18,736	-	-	257	257
339	Fiber optic cable manufacturing	-	\$17,413	\$1,301	\$18,714	-	41	3	44
375	Surgical and medical instrument manufacturing	-	\$60	\$18,399	\$18,459	-	-	71	71
363	Upholstered household furniture manufacturing	-	\$15	\$18,416	\$18,431	-	0	145	145
84	All other food manufacturing	-	\$173	\$18,213	\$18,386	-	1	70	71
235	Metal window and door manufacturing	-	\$17,870	\$370	\$18,240	-	123	3	126
448	Photographic services	-	\$1,928	\$14,798	\$16,725	-	27	207	234
242	Spring and wire product manufacturing	-	\$14,698	\$1,694	\$16,392	-	94	11	105
259	Construction machinery manufacturing	-	\$15,678	\$123	\$15,800	-	37	-	37
396	Pipeline transportation	-	\$6,311	\$9,465	\$15,776	-	8	12	21
171	Other miscellaneous chemical product manufacturing	-	\$10,120	\$5,090	\$15,210	-	27	13	40
247	Electroplating- anodizing- and coloring metal	-	\$13,681	\$1,350	\$15,031	-	107	11	117
416	Database- directory- and other publishers	-	\$6,982	\$7,984	\$14,966	-	21	25	46

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
5	Fruit farming	-	\$310	\$13,147	\$13,457	-	4	158	162
475	Museums- historical sites- zoos- and parks	-	-	\$13,189	\$13,189	-	-	148	148
252	Fabricated pipe and pipe fitting manufacturing	-	\$13,002	\$179	\$13,181	-	84	1	85
18	Agriculture and forestry support activities	-	\$7,086	\$5,932	\$13,018	-	320	268	589
66	Ice cream and frozen dessert manufacturing	-	\$691	\$12,190	\$12,881	-	2	27	28
322	Software reproducing	-	\$7,602	\$5,077	\$12,678	-	20	14	34
81	Flavoring syrup and concentrate manufacturing	-	\$717	\$11,903	\$12,620	-	-	6	6
175	Plastics bottle manufacturing	-	\$3,409	\$8,695	\$12,104	-	13	32	45
303	Computer storage device manufacturing	-	\$5,101	\$6,876	\$11,977	-	9	12	21
244	Turned product and screw- nut- and bolt manufacturing	-	\$10,070	\$1,843	\$11,913	-	64	12	76
378	Ophthalmic goods manufacturing	-	\$837	\$11,066	\$11,903	-	4	57	61
169	Custom compounding of purchased resins	-	\$10,291	\$1,561	\$11,852	-	34	5	39
58	Confectionery manufacturing from purchased chocolate	-	\$54	\$11,448	\$11,502	-	-	39	39
74	Cookie and cracker manufacturing	-	\$147	\$11,153	\$11,301	-	1	35	36
120	Wood container and pallet manufacturing	-	\$7,706	\$3,362	\$11,067	-	75	33	107
126	Paperboard container manufacturing	-	\$7,847	\$3,205	\$11,052	-	28	12	40
86	Breweries	-	\$155	\$10,371	\$10,526	-	-	12	12
372	Mattress manufacturing	-	\$3	\$10,484	\$10,487	-	-	45	45
229	Hand and edge tool manufacturing	-	\$8,912	\$1,501	\$10,413	-	49	8	58
61	Fruit and vegetable canning and drying	-	\$226	\$9,921	\$10,146	-	1	26	26
233	Fabricated structural metal manufacturing	-	\$9,940	\$172	\$10,113	-	52	1	53
147	Petrochemical manufacturing	-	\$5,158	\$4,870	\$10,028	-	2	2	4
87	Wineries	-	\$158	\$9,131	\$9,289	-	-	26	26
150	Other basic inorganic chemical manufacturing	-	\$5,268	\$3,766	\$9,034	-	13	9	22
334	Motor and generator manufacturing	-	\$8,221	\$716	\$8,937	-	39	3	43
83	Spice and extract manufacturing	-	\$97	\$8,727	\$8,823	-	-	20	20
71	Seafood product preparation and packaging	-	\$497	\$8,020	\$8,517	-	2	35	37
174	Laminated plastics plate- sheet- and shapes	-	\$6,783	\$1,450	\$8,233	-	32	7	38
415	Book publishers	-	\$558	\$7,311	\$7,869	-	2	27	29
12	Poultry and egg production	-	\$166	\$7,570	\$7,735	-	-	19	19
65	Dry- condensed- and evaporated dairy products	-	\$248	\$7,410	\$7,657	-	-	10	10
176	Resilient floor covering manufacturing	-	\$7,226	\$349	\$7,576	-	25	1	26
496	Other Federal Government enterprises	-	\$3,023	\$4,341	\$7,364	-	27	39	66
207	Steel wire drawing	-	\$6,896	\$412	\$7,308	-	23	1	24
25	Sand- gravel- clay- and refractory mining	-	\$7,244	\$58	\$7,302	-	43	0	43
75	Mixes and dough made from purchased flour	-	\$75	\$7,190	\$7,265	-	-	17	17
80	Coffee and tea manufacturing	-	\$214	\$6,989	\$7,204	-	-	15	15

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
161	Paint and coating manufacturing	-	\$6,769	\$176	\$6,945	-	15	-	15
417	Software publishers	-	\$653	\$6,232	\$6,885	-	2	20	22
57	Confectionery manufacturing from cacao beans	-	\$56	\$6,781	\$6,837	-	-	14	14
59	Nonchocolate confectionery manufacturing	-	\$102	\$6,542	\$6,643	-	-	25	25
148	Industrial gas manufacturing	-	\$2,167	\$4,382	\$6,550	-	3	6	9
379	Dental laboratories	-	\$4	\$6,518	\$6,522	-	-	99	99
340	Other communication and energy wire manufacturing	-	\$5,822	\$128	\$5,950	-	21	1	22
158	Fertilizer- mixing only- manufacturing	-	\$5,600	\$288	\$5,888	-	17	1	18
56	Sugar manufacturing	-	\$146	\$5,717	\$5,863	-	-	11	11
195	Other concrete product manufacturing	-	\$5,312	\$114	\$5,426	-	35	1	36
319	Analytical laboratory instrument manufacturing	-	\$3,214	\$2,190	\$5,404	-	10	7	16
203	Iron and steel mills	-	\$5,037	\$327	\$5,365	-	11	1	12
60	Frozen food manufacturing	-	\$115	\$5,228	\$5,343	-	-	20	20
246	Metal coating and nonprecious engraving	-	\$4,822	\$492	\$5,313	-	37	4	41
13	Animal production- except cattle and poultry and e	-	\$175	\$5,125	\$5,301	-	5	135	140
151	Other basic organic chemical manufacturing	-	\$2,967	\$2,256	\$5,223	-	4	3	6
373	Blind and shade manufacturing	-	-	\$5,206	\$5,206	-	-	36	36
240	Metal can- box- and other container manufacturing	-	\$3,034	\$2,157	\$5,191	-	7	5	12
78	Roasted nuts and peanut butter manufacturing	-	\$54	\$5,081	\$5,135	-	-	13	13
24	Stone mining and quarrying	-	\$5,055	\$41	\$5,096	-	31	0	31
157	Phosphatic fertilizer manufacturing	-	\$4,817	\$260	\$5,077	-	7	-	7
82	Mayonnaise- dressing- and sauce manufacturing	-	\$173	\$4,874	\$5,047	-	1	13	14
156	Nitrogenous fertilizer manufacturing	-	\$4,216	\$721	\$4,937	-	5	1	6
170	Photographic film and chemical manufacturing	-	\$1,667	\$2,804	\$4,471	-	5	8	13
306	Telephone apparatus manufacturing	-	\$1,238	\$3,208	\$4,446	-	2	5	7
477	Bowling centers	-	-	\$4,431	\$4,431	-	-	85	85
371	Showcases- partitions- shelving- and lockers	-	\$3,407	\$957	\$4,364	-	27	7	34
77	Tortilla manufacturing	-	\$24	\$4,325	\$4,349	-	-	31	31
305	Other computer peripheral equipment manufacturing	-	\$1,386	\$2,926	\$4,312	-	4	9	13
97	Textile and fabric finishing mills	-	\$734	\$3,362	\$4,096	-	4	17	20
337	Storage battery manufacturing	-	\$1,721	\$2,326	\$4,047	-	7	10	17
55	Breakfast cereal manufacturing	-	\$22	\$3,867	\$3,889	-	-	4	4
76	Dry pasta manufacturing	-	\$26	\$3,862	\$3,889	-	-	13	13
321	Watch- clock- and other measuring and controlling	-	\$458	\$3,366	\$3,824	-	2	16	18
389	Buttons- pins- and all other miscellaneous manufacturing	-	\$3,245	\$476	\$3,721	-	26	4	30
377	Dental equipment and supplies manufacturing	-	\$2	\$3,711	\$3,713	-	-	20	20
272	Photographic and photocopying equipment manufacturing	-	\$1,022	\$2,653	\$3,675	-	3	7	9

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	<i>Sector Name</i> Sector Name	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	Total	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	Total
46	Dog and cat food manufacturing	-	\$4	\$3,579	\$3,583	-	-	4	4
111	Other leather product manufacturing	-	\$480	\$3,092	\$3,571	-	5	32	37
237	Ornamental and architectural metal work manufacturing	-	\$3,388	\$101	\$3,489	-	21	1	22
336	Relay and industrial control manufacturing	-	\$2,880	\$550	\$3,430	-	13	2	15
323	Audio and video media reproduction	-	\$1,341	\$2,038	\$3,379	-	7	10	16
136	Manifold business forms printing	-	\$2,372	\$949	\$3,321	-	16	6	22
189	Glass container manufacturing	-	\$258	\$3,049	\$3,307	-	1	10	11
4	Tree nut farming	-	\$56	\$3,133	\$3,189	-	1	26	26
384	Sign manufacturing	-	\$1,764	\$1,378	\$3,142	-	18	14	31
307	Broadcast and wireless communications equipment	-	\$1,214	\$1,927	\$3,141	-	4	6	10
152	Plastics material and resin manufacturing	-	\$1,974	\$996	\$2,970	-	2	1	4
245	Metal heat treating	-	\$2,683	\$255	\$2,938	-	16	2	18
167	Printing ink manufacturing	-	\$1,689	\$1,213	\$2,903	-	5	3	8
304	Computer terminal manufacturing	-	\$1,168	\$1,706	\$2,874	-	4	6	9
230	Saw blade and handsaw manufacturing	-	\$2,706	\$95	\$2,801	-	15	1	16
106	Other apparel knitting mills	-	\$22	\$2,750	\$2,772	-	-	22	22
108	Accessories and other apparel manufacturing	-	\$61	\$2,686	\$2,748	-	1	23	24
310	Electron tube manufacturing	-	\$359	\$2,363	\$2,721	-	1	7	8
165	Surface active agent manufacturing	-	\$1,023	\$1,684	\$2,707	-	1	2	4
338	Primary battery manufacturing	-	\$80	\$2,546	\$2,626	-	-	6	6
72	Frozen cakes and other pastries manufacturing	-	\$16	\$2,584	\$2,600	-	-	18	18
453	Facilities support services	-	\$1,719	\$877	\$2,596	-	19	10	28
110	Footwear manufacturing	-	-	\$2,561	\$2,561	-	-	24	24
341	Wiring device manufacturing	-	\$2,418	\$119	\$2,537	-	12	1	13
258	Lawn and garden equipment manufacturing	-	\$708	\$1,827	\$2,535	-	2	5	7
48	Flour milling	-	\$60	\$2,471	\$2,531	-	-	4	4
271	Optical instrument and lens manufacturing	-	\$1,669	\$776	\$2,445	-	6	3	9
313	Electromedical apparatus manufacturing	-	\$21	\$2,393	\$2,414	-	-	7	7
316	Industrial process variable instruments	-	\$1,368	\$989	\$2,357	-	7	5	11
286	Other engine equipment manufacturing	-	\$1,180	\$1,163	\$2,343	-	2	2	5
324	Magnetic and optical recording media manufacturing	-	\$1,079	\$1,162	\$2,241	-	3	4	7
206	Rolled steel shape manufacturing	-	\$2,042	\$134	\$2,176	-	5	-	5
295	Power-driven handtool manufacturing	-	\$1,318	\$816	\$2,134	-	4	3	7
333	Electric power and specialty transformer manufacturing	-	\$1,553	\$579	\$2,131	-	7	2	9
217	Copper wire- except mechanical- drawing	-	\$1,985	\$65	\$2,049	-	4	-	4
285	Turbine and turbine generator set units manufacturing	-	\$1,258	\$772	\$2,030	-	1	1	2
69	Rendering and meat byproduct processing	-	\$441	\$1,482	\$1,924	-	1	3	4

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	Total	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	Total
88	Distilleries	-	\$56	\$1,850	\$1,906	-	-	2	2
349	Travel trailer and camper manufacturing	-	\$1	\$1,872	\$1,873	-	-	11	11
365	Metal household furniture manufacturing	-	\$81	\$1,787	\$1,868	-	1	16	17
351	Aircraft manufacturing	-	\$433	\$1,394	\$1,827	-	1	3	4
380	Jewelry and silverware manufacturing	-	\$23	\$1,777	\$1,800	-	-	11	11
291	Elevator and moving stairway manufacturing	-	\$1,691	\$45	\$1,736	-	8	-	8
202	Miscellaneous nonmetallic mineral products	-	\$1,698	\$24	\$1,723	-	7	-	7
257	Farm machinery and equipment manufacturing	-	\$1,225	\$492	\$1,717	-	4	2	6
314	Search- detection- and navigation instruments	-	\$308	\$1,346	\$1,654	-	1	5	6
205	Iron- steel pipe and tube from purchased steel	-	\$1,548	\$103	\$1,651	-	5	-	5
149	Synthetic dye and pigment manufacturing	-	\$1,109	\$522	\$1,631	-	2	1	4
263	Plastics and rubber industry machinery	-	\$1,425	\$165	\$1,590	-	8	1	9
122	Prefabricated wood building manufacturing	-	\$1,503	\$16	\$1,519	-	10	-	10
141	Prepress services	-	\$977	\$529	\$1,506	-	8	4	12
283	Cutting tool and machine tool accessory manufacturing	-	\$1,161	\$329	\$1,490	-	10	3	13
296	Welding and soldering equipment manufacturing	-	\$1,143	\$310	\$1,453	-	5	1	7
299	Fluid power cylinder and actuator manufacturing	-	\$1,429	\$22	\$1,451	-	7	-	7
181	Other rubber product manufacturing	-	\$1,250	\$182	\$1,432	-	8	1	9
54	Fats and oils refining and blending	-	\$62	\$1,368	\$1,430	-	-	1	1
159	Pesticide and other agricultural chemical manufacturing	-	\$530	\$823	\$1,353	-	1	1	1
318	Electricity and signal testing instruments	-	\$954	\$391	\$1,345	-	3	1	5
359	Motorcycle- bicycle- and parts manufacturing	-	\$372	\$943	\$1,314	-	1	2	3
346	Motor vehicle body manufacturing	-	\$457	\$806	\$1,262	-	2	3	5
348	Motor home manufacturing	-	-	\$1,261	\$1,261	-	-	4	4
267	Food product machinery manufacturing	-	\$749	\$512	\$1,261	-	4	3	7
274	Automatic vending- commercial laundry and dryclean	-	\$731	\$475	\$1,207	-	4	2	6
99	Carpet and rug mills	-	\$816	\$309	\$1,125	-	3	1	4
343	Miscellaneous electrical equipment manufacturing	-	\$593	\$480	\$1,073	-	3	2	5
368	Wood office furniture manufacturing	-	\$854	\$219	\$1,072	-	5	1	6
47	Other animal food manufacturing	-	\$53	\$1,012	\$1,065	-	-	2	2
358	Boat building	-	\$7	\$1,046	\$1,053	-	-	6	6
254	Enameled iron and metal sanitary ware manufacturing	-	\$993	\$32	\$1,025	-	6	-	6
232	Prefabricated metal buildings and components	-	\$988	\$21	\$1,009	-	6	-	6
28	Support activities for oil and gas operations	-	\$469	\$517	\$986	-	3	4	7
317	Totalizing fluid meters and counting devices	-	\$724	\$257	\$981	-	2	1	3
2	Grain farming	-	\$50	\$906	\$956	-	1	18	19
15	Forest nurseries- forest products- and timber tracts	-	\$924	\$24	\$948	-	3	-	3

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	<i>Sector Name</i>	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>
300	Fluid power pump and motor manufacturing	-	\$911	\$29	\$940	-	4	-	4
282	Special tool- die- jig- and fixture manufacturing	-	\$715	\$215	\$930	-	6	2	8
100	Curtain and linen mills	-	\$26	\$875	\$902	-	-	6	6
153	Synthetic rubber manufacturing	-	\$619	\$278	\$898	-	1	1	2
269	All other industrial machinery manufacturing	-	\$204	\$687	\$891	-	1	3	4
137	Books printing	-	\$222	\$659	\$881	-	2	5	6
345	Heavy duty truck manufacturing	-	-	\$853	\$853	-	-	2	2
329	Household cooking appliance manufacturing	-	\$61	\$777	\$838	-	-	2	2
26	Other nonmetallic mineral mining	-	\$469	\$353	\$822	-	3	2	4
95	Nonwoven fabric mills	-	\$631	\$175	\$805	-	2	1	3
109	Leather and hide tanning and finishing	-	\$314	\$491	\$805	-	1	2	4
270	Office machinery manufacturing	-	\$438	\$361	\$799	-	1	1	2
49	Rice milling	-	\$9	\$761	\$770	-	-	1	1
255	Miscellaneous fabricated metal product manufacturing	-	\$705	\$60	\$765	-	4	-	4
367	Other household and institutional furniture	-	\$216	\$547	\$763	-	2	5	7
227	All other forging and stamping	-	\$537	\$225	\$763	-	3	1	5
17	Hunting and trapping	-	-	\$754	\$754	-	-	10	10
287	Speed changers and mechanical power transmission equipment	-	\$597	\$138	\$735	-	3	1	4
352	Aircraft engine and engine parts manufacturing	-	\$343	\$382	\$725	-	1	1	2
101	Textile bag and canvas mills	-	\$614	\$102	\$716	-	6	1	7
129	Coated and laminated paper and packaging materials	-	\$514	\$202	\$716	-	2	1	2
96	Knit fabric mills	-	\$68	\$613	\$681	-	-	4	4
387	Broom- brush- and mop manufacturing	-	\$579	\$63	\$642	-	4	-	4
301	Scales- balances- and miscellaneous general purpose machinery	-	\$595	\$38	\$633	-	3	-	3
249	Ball and roller bearing manufacturing	-	\$403	\$223	\$626	-	2	1	3
297	Packaging machinery manufacturing	-	\$227	\$374	\$601	-	1	2	3
63	Creamery butter manufacturing	-	\$11	\$576	\$588	-	-	1	1
103	Other miscellaneous textile product mills	-	\$332	\$248	\$579	-	3	2	5
194	Concrete pipe manufacturing	-	\$557	\$15	\$571	-	3	-	3
268	Semiconductor machinery manufacturing	-	\$347	\$217	\$564	-	1	1	1
9	Sugarcane and sugar beet farming	-	\$23	\$537	\$560	-	1	17	18
51	Wet corn milling	-	\$171	\$382	\$553	-	-	-	-
93	Broadwoven fabric mills	-	\$84	\$455	\$539	-	1	3	4
261	Oil and gas field machinery and equipment	-	\$427	\$106	\$533	-	2	1	2
199	Cut stone and stone product manufacturing	-	\$526	\$6	\$532	-	5	-	5
213	Other aluminum rolling and drawing	-	\$410	\$88	\$498	-	1	-	1
320	Irradiation apparatus manufacturing	-	\$30	\$463	\$493	-	-	1	1

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
234	Plate work manufacturing	-	\$454	\$39	\$493	-	2	-	2
228	Cutlery and flatware- except precious- manufacturing	-	\$149	\$340	\$488	-	1	2	3
53	Other oilseed processing	-	\$54	\$416	\$470	-	-	-	-
198	Abrasive product manufacturing	-	\$409	\$58	\$468	-	2	-	2
219	Nonferrous metal- except copper and aluminum- shaping	-	\$429	\$27	\$456	-	2	-	2
353	Other aircraft parts and equipment	-	\$192	\$254	\$446	-	1	1	2
105	Other hosiery and sock mills	-	-	\$432	\$432	-	-	4	4
180	Rubber and plastics hose and belting manufacturing	-	\$389	\$34	\$423	-	2	-	2
366	Institutional furniture manufacturing	-	\$358	\$63	\$421	-	2	-	2
222	Aluminum foundries	-	\$331	\$88	\$419	-	2	1	3
201	Mineral wool manufacturing	-	\$325	\$78	\$403	-	1	-	1
262	Sawmill and woodworking machinery	-	\$133	\$264	\$397	-	1	2	3
23	Gold- silver- and other metal ore mining	-	\$249	\$139	\$388	-	1	1	2
16	Fishing	-	\$20	\$361	\$382	-	1	10	10
52	Soybean processing	-	\$26	\$339	\$365	-	-	-	-
279	Industrial mold manufacturing	-	\$321	\$37	\$358	-	3	-	3
280	Metal cutting machine tool manufacturing	-	\$189	\$140	\$329	-	1	1	2
146	All other petroleum and coal products manufacturing	-	\$191	\$129	\$320	-	-	-	-
128	Surface-coated paperboard manufacturing	-	\$99	\$219	\$318	-	-	1	1
130	Coated and uncoated paper bag manufacturing	-	\$185	\$129	\$314	-	1	1	1
226	Custom roll forming	-	\$295	\$11	\$306	-	1	-	1
193	Concrete block and brick manufacturing	-	\$300	\$3	\$303	-	2	-	2
94	Narrow fabric mills and schiffli embroidery	-	\$31	\$264	\$295	-	-	3	3
211	Aluminum sheet- plate- and foil manufacturing	-	\$234	\$45	\$279	-	-	-	-
332	Other major household appliance manufacturing	-	\$266	\$10	\$276	-	1	-	1
385	Gasket- packing- and sealing device manufacturing	-	\$258	\$18	\$276	-	2	-	2
294	Industrial truck- trailer- and stacker manufacturing	-	\$146	\$117	\$263	-	1	1	1
212	Aluminum extruded product manufacturing	-	\$220	\$30	\$250	-	1	-	1
124	Pulp mills	-	\$239	\$8	\$248	-	1	-	1
197	Gypsum product manufacturing	-	\$243	\$3	\$246	-	1	-	1
8	Cotton farming	-	\$26	\$217	\$244	-	-	2	2
127	Flexible packaging foil manufacturing	-	\$34	\$203	\$237	-	-	1	1
342	Carbon and graphite product manufacturing	-	\$160	\$74	\$234	-	1	-	1
216	Copper rolling- drawing- and extruding	-	\$208	\$9	\$217	-	1	-	1
92	Fiber- yarn- and thread mills	-	\$34	\$174	\$208	-	-	1	1
231	Kitchen utensil- pot- and pan manufacturing	-	\$112	\$92	\$204	-	1	-	1
326	Lighting fixture manufacturing	-	\$186	\$10	\$196	-	1	-	1

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	<i>Sector Name</i>	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>
140	Tradebinding and related work	-	\$70	\$122	\$192	-	1	2	3
221	Ferrous metal foundaries	-	\$181	\$6	\$188	-	1	-	1
223	Nonferrous foundries- except aluminum	-	\$148	\$39	\$188	-	1	-	1
186	Ceramic wall and floor tile manufacturing	-	\$185	\$2	\$187	-	1	-	1
135	All other converted paper product manufacturing	-	\$153	\$31	\$183	-	1	-	1
168	Explosives manufacturing	-	\$145	\$32	\$178	-	1	-	1
361	All other transportation equipment manufacturing	-	\$79	\$97	\$176	-	-	-	-
360	Military armored vehicles and tank parts manufacturing	-	\$1	\$172	\$173	-	-	-	-
98	Fabric coating mills	-	\$94	\$74	\$167	-	-	-	0
138	Blankbook and looseleaf binder manufacturing	-	\$68	\$99	\$167	-	1	1	2
215	Primary nonferrous metal- except copper and aluminum	-	\$108	\$54	\$163	-	-	-	-
288	Pump and pumping equipment manufacturing	-	\$126	\$36	\$162	-	-	-	-
239	Metal tank- heavy gauge- manufacturing	-	\$151	\$4	\$155	-	1	-	1
357	Ship building and repairing	-	\$84	\$68	\$152	-	-	-	-
356	Railroad rolling stock manufacturing	-	\$117	\$24	\$141	-	-	-	-
91	Other tobacco product manufacturing	-	-	\$139	\$139	-	-	-	-
281	Metal forming machine tool manufacturing	-	\$109	\$29	\$138	-	1	-	1
134	Sanitary paper product manufacturing	-	\$4	\$131	\$134	-	-	-	-
191	Cement manufacturing	-	\$122	\$1	\$123	-	-	-	-
266	Printing machinery and equipment manufacturing	-	\$79	\$41	\$120	-	-	-	-
292	Conveyor and conveying equipment manufacturing	-	\$75	\$31	\$106	-	-	-	-
383	Office supplies- except paper- manufacturing	-	\$37	\$66	\$103	-	-	-	-
381	Sporting and athletic goods manufacturing	-	\$1	\$99	\$101	-	-	1	1
289	Air and gas compressor manufacturing	-	\$92	\$3	\$95	-	-	-	-
370	Office furniture- except wood- manufacturing	-	\$52	\$38	\$89	-	-	-	-
354	Guided missile and space vehicle manufacturing	-	\$34	\$55	\$88	-	-	-	-
284	Rolling mill and other metalworking machinery	-	\$67	\$21	\$88	-	-	-	-
224	Iron and steel forging	-	\$74	\$13	\$87	-	-	-	-
264	Paper industry machinery manufacturing	-	\$56	\$26	\$82	-	-	-	-
374	Laboratory apparatus and furniture manufacturing	-	\$6	\$67	\$73	-	-	-	-
220	Secondary processing of other nonferrous	-	\$53	\$20	\$73	-	-	-	-
327	Electric housewares and household fan manufacturing	-	\$43	\$27	\$70	-	-	-	-
330	Household refrigerator and home freezer manufacturing	-	\$2	\$64	\$65	-	-	-	-
104	Sheer hosiery mills	-	-	\$63	\$64	-	-	1	1
131	Die-cut paper office supplies manufacturing	-	\$40	\$19	\$59	-	-	-	-
275	Air purification equipment manufacturing	-	\$58	\$1	\$59	-	-	-	-
293	Overhead cranes- hoists- and monorail systems	-	\$56	\$1	\$57	-	-	-	-

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

<i>Model</i> Sector	<i>Sector Name</i>	Output Impacts (in thousands)				Employment Impacts			
		<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>	<i>Direct</i> Impact	<i>Indirect</i> Impact	<i>Induced</i> Impact	<i>Total</i>
182	Vitreous china plumbing fixture manufacturing	-	\$53	\$4	\$57	-	-	-	-
238	Power boiler and heat exchanger manufacturing	-	\$53	\$3	\$55	-	-	-	-
382	Doll- toy- and game manufacturing	-	\$4	\$49	\$54	-	-	-	-
210	Secondary smelting and alloying of aluminum	-	\$45	\$8	\$53	-	-	-	-
184	Porcelain electrical supply manufacturing	-	\$35	\$9	\$44	-	-	-	-
208	Alumina refining	-	\$23	\$18	\$41	-	-	-	-
260	Mining machinery and equipment manufacturing	-	\$39	\$1	\$40	-	-	-	-
276	Industrial and commercial fan and blower manufacturing	-	\$34	\$2	\$36	-	-	-	-
50	Malt manufacturing	-	\$1	\$35	\$36	-	-	-	-
495	Federal electric utilities	-	\$13	\$20	\$34	-	-	-	-
185	Brick and structural clay tile manufacturing	-	\$33	\$0	\$33	-	-	-	-
265	Textile machinery manufacturing	-	\$18	\$12	\$30	-	-	-	-
225	Nonferrous forging	-	\$23	\$7	\$29	-	-	-	-
209	Primary aluminum production	-	\$23	\$4	\$27	-	-	-	-
132	Envelope manufacturing	-	\$15	\$10	\$25	-	-	-	-
196	Lime manufacturing	-	\$23	-	\$23	-	-	-	-
204	Ferroalloy and related product manufacturing	-	\$19	\$2	\$22	-	-	-	-
183	Vitreous china and earthenware articles manufacturing	-	\$2	\$19	\$21	-	-	-	-
20	Coal mining	-	\$7	\$11	\$18	-	-	-	-
27	Drilling oil and gas wells	-	\$8	\$9	\$17	-	-	-	-
298	Industrial process furnace and oven manufacturing	-	\$9	\$6	\$15	-	-	-	-
355	Propulsion units and parts for space vehicles and guided missiles	-	\$8	\$6	\$15	-	-	-	-
179	Tire manufacturing	-	\$8	\$5	\$13	-	-	-	-
155	Noncellulosic organic fiber manufacturing	-	\$7	\$5	\$13	-	-	-	-
386	Musical instrument manufacturing	-	\$1	\$8	\$8	-	-	-	-
253	Industrial pattern manufacturing	-	\$6	\$1	\$7	-	-	-	-
125	Paper and paperboard mills	-	\$3	\$4	\$6	-	-	-	-
1	Oilseed farming	-	\$1	\$5	\$6	-	-	-	-
22	Copper- nickel- lead- and zinc mining	-	\$4	\$2	\$6	-	-	-	-
325	Electric lamp bulb and part manufacturing	-	\$3	\$3	\$5	-	-	-	-
200	Ground or treated minerals and earths manufacturing	-	\$5	-	\$5	-	-	-	-
331	Household laundry equipment manufacturing	-	-	\$4	\$4	-	-	-	-
328	Household vacuum cleaner manufacturing	-	\$2	\$2	\$4	-	-	-	-
133	Stationery and related product manufacturing	-	\$1	\$2	\$3	-	-	-	-
347	Truck trailer manufacturing	-	\$1	\$1	\$2	-	-	-	-
290	Measuring and dispensing pump manufacturing	-	\$2	-	\$2	-	-	-	-
188	Clay refractory and other structural clay products	-	\$1	-	\$1	-	-	-	-

APPENDIX A—DETAILED CALIFORNIA SECTOR IMPACTS

Model Sector	Sector Name	Output Impacts (in thousands)				Employment Impacts			
		Direct Impact	Indirect Impact	Induced Impact	Total	Direct Impact	Indirect Impact	Induced Impact	Total
29	Support activities for other mining	-	\$1	-	\$1	-	-	-	-
154	Cellulosic organic fiber manufacturing	-	-	-	\$1	-	-	-	-
7	Tobacco farming	-	-	-	-	-	-	-	-
21	Iron ore mining	-	-	-	-	-	-	-	-
35	New residential additions and alterations- nonfarm	-	-	-	-	-	-	-	-
36	New farm housing units and additions and alteratio	-	-	-	-	-	-	-	-
37	Manufacturing and industrial buildings	-	-	-	-	-	-	-	-
38	Commercial and institutional buildings	-	-	-	-	-	-	-	-
39	Highway- street- bridge- and tunnel construction	-	-	-	-	-	-	-	-
40	Water- sewer- and pipeline construction	-	-	-	-	-	-	-	-
41	Other new construction	-	-	-	-	-	-	-	-
44	Maintenance and repair of highways- streets- bridges, and tunnels	-	-	-	-	-	-	-	-
89	Tobacco stemming and redrying	-	-	-	-	-	-	-	-
90	Cigarette manufacturing	-	-	-	-	-	-	-	-
102	Tire cord and tire fabric mills	-	-	-	-	-	-	-	-
121	Manufactured home- mobile home- manufacturing	-	-	-	-	-	-	-	-
187	Nonclay refractory manufacturing	-	-	-	-	-	-	-	-
214	Primary smelting and refining of copper	-	-	-	-	-	-	-	-
218	Secondary processing of copper	-	-	-	-	-	-	-	-
250	Small arms manufacturing	-	-	-	-	-	-	-	-
251	Other ordnance and accessories manufacturing	-	-	-	-	-	-	-	-
256	Ammunition manufacturing	-	-	-	-	-	-	-	-
277	Heating equipment- except warm air furnaces	-	-	-	-	-	-	-	-
278	AC- refrigeration- and forced air heating	-	-	-	-	-	-	-	-
388	Burial casket manufacturing	-	-	-	-	-	-	-	-
500	Noncomparable imports	-	-	-	-	-	-	-	-
501	Scrap	-	-	-	-	-	-	-	-
502	Used and secondhand goods	-	-	-	-	-	-	-	-
503	State & Local Education	-	-	-	-	-	-	-	-
504	State & Local Non-Education	-	-	-	-	-	-	-	-
505	Federal Military	-	-	-	-	-	-	-	-
506	Federal Non-Military	-	-	-	-	-	-	-	-
507	Rest of the world adjustment to final uses	-	-	-	-	-	-	-	-
508	Inventory valuation adjustment	-	-	-	-	-	-	-	-

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 Coefficients based on United States Census Bureau information

Note: Differences due to rounding.

Owner-occupied dwellings sector accounts for home ownership expenditures such as closing costs, property taxes, and other related permits and taxes.

Appendix B—California Industry Groupings

<i>Industry</i>	<i>Output</i>	<i>Employment</i>
California Total	\$2,475,392,387	19,917,460
Housing*	\$273,473,161	960,019
Owner-occupied dwellings	\$101,150,156	0
65% of Real Estate	\$97,089,931	485,592
New residential 1-unit structures, nonfarm	\$50,088,375	275,305
New residential additions and alterations, nonfarm	\$15,695,476	133,968
New multifamily housing structures, nonfarm	\$4,980,667	42,011
Maintenance and repair of farm and nonfarm residential structures	\$4,468,556	23,143
Wholesale and Retail Trade	\$238,445,326	2,684,981
Food and beverage stores	\$27,413,594	350,010
Motor vehicle and parts dealers	\$23,957,039	233,438
General merchandise stores	\$13,354,679	271,360
Clothing and clothing accessories stores	\$11,983,985	188,749
Building material and garden supply stores	\$10,180,427	134,096
Health and personal care stores	\$9,469,386	125,834
Miscellaneous store retailers	\$8,353,890	197,602
Electronics and appliance stores	\$8,229,198	86,320
Nonstore retailers	\$7,582,083	153,445
Gasoline stations	\$6,101,447	61,176
Furniture and home furnishings stores	\$5,856,475	75,015
Sporting goods, hobby, book and music stores	\$4,122,146	104,045
Retail trade subtotal	\$136,604,349	1,981,090
Wholesale trade	\$101,840,977	703,891
Professional, Scientific, and Technical Services	\$197,146,915	1,700,710
Custom computer programming services	\$34,891,023	348,065
Legal services	\$31,316,863	234,227
Architectural and engineering services	\$27,063,420	257,576
Scientific research and development services	\$20,572,703	169,797
Management consulting services	\$16,833,676	142,958
Accounting and bookkeeping services	\$14,717,972	184,135
All other miscellaneous professional and technical services	\$13,482,726	27,430
Advertising and related services	\$12,436,028	102,932
Environmental and other technical consulting	\$6,912,862	45,840
Computer systems design services	\$6,781,912	75,724
Specialized design services	\$4,659,844	38,396
Other computer related services, including facilities management	\$4,180,102	23,032
Veterinary services	\$2,097,835	33,827
Photographic services	\$1,199,949	16,771
Finance and Insurance	\$165,378,377	874,261
Monetary authorities and depository credit intermediation	\$46,581,863	178,923
Insurance carriers	\$34,222,465	171,949
Securities, commodity contracts, investments	\$29,645,332	244,828
Nondepository credit intermediation and related activities	\$26,236,617	121,954
Insurance agencies, brokerages, and related	\$17,378,285	123,304
Funds, trusts, and other financial vehicles	\$11,313,815	33,303
Information	\$161,401,264	511,484
Telecommunications	\$50,131,051	132,335
Motion picture and video industries	\$37,210,684	154,102
Cable networks and program distribution	\$20,627,170	18,109
Software publishers	\$14,838,777	46,873
Information services	\$10,370,563	29,773
Radio and television broadcasting	\$6,670,185	30,539
Data processing services	\$5,427,582	24,527

APPENDIX B—INDUSTRY GROUPINGS

<i>Industry</i>	<i>Output</i>	<i>Employment</i>
Information (continued)		
Newspaper publishers	\$4,418,424	36,717
Periodical publishers	\$3,546,439	14,936
Sound recording industries	\$3,520,756	7,965
Book publishers	\$2,448,256	8,878
Database, directory, and other publishers	\$2,191,377	6,730
State and Local Government		
State & Local Education	\$143,032,922	2,154,869
State & Local Non-Education	\$63,079,328	1,295,696
Other State and local government enterprises	\$54,617,313	724,492
State and local government electric utilities	\$17,130,984	77,139
State and local government passenger transit	\$6,276,394	12,114
	\$1,928,903	45,428
Computer and Electronic Product Manufacturing		
Semiconductors and related device manufacturing	\$131,639,746	304,802
Electronic computer manufacturing	\$37,194,465	56,573
Search, detection, and navigation instruments	\$30,220,172	39,459
All other electronic component manufacturing	\$13,066,076	46,314
Electricity and signal testing instruments	\$9,487,332	43,607
Broadcast and wireless communications equipment	\$5,144,616	17,886
Audio and video equipment manufacturing	\$4,908,416	15,065
Telephone apparatus manufacturing	\$4,743,117	9,964
Computer storage device manufacturing	\$4,715,823	7,660
Analytical laboratory instrument manufacturing	\$3,811,186	6,696
Other computer peripheral equipment manufacturing	\$3,713,621	11,235
Computer terminal manufacturing	\$3,352,959	9,829
Industrial process variable instruments	\$2,134,229	6,941
Electron tube manufacturing	\$1,700,054	8,188
Other communications equipment manufacturing	\$1,421,556	4,290
Software reproducing	\$1,346,642	4,383
Watch, clock, and other measuring and control	\$1,240,249	3,311
Audio and video media reproduction	\$834,574	3,840
Magnetic and optical recording media manufacturing	\$682,660	3,285
Automatic environmental control manufacturing	\$591,220	1,784
Irradiation apparatus manufacturing	\$486,524	2,121
Totalizing fluid meters and counting devices	\$440,043	1,194
	\$404,212	1,177
Health Care and Social Assistance		
Offices of physicians, dentists, and other health practitioners	\$126,955,820	1,589,233
Hospitals	\$45,974,926	478,846
Other ambulatory health care services	\$39,543,320	355,317
Nursing and residential care facilities	\$14,749,435	106,365
Social assistance, except child day care services	\$11,167,001	239,324
Child day care services	\$7,679,048	235,708
Home health care services	\$4,530,990	114,138
	\$3,311,100	59,535
Non-Residential Activities*		
35% of Real Estate	\$125,089,896	951,302
Commercial and institutional buildings	\$52,279,194	261,472
Other new construction	\$31,703,094	326,737
Maintenance and repair of nonresidential buildings	\$11,530,341	91,766
Highway, street, bridge, and tunnel construction	\$10,276,628	92,009
Manufacturing and industrial buildings	\$7,121,445	64,185
Water, sewer, and pipeline construction	\$5,587,399	49,402
Other maintenance and repair construction	\$2,433,314	25,293
Maintenance and repair of highways, streets, bridges, and tunnels	\$2,145,109	23,829
	\$2,013,372	16,609

APPENDIX B—INDUSTRY GROUPINGS

<i>Industry</i>	<i>Output</i>	<i>Employment</i>
Agriculture and Food Processing	\$111,829,140	732,645
Wineries	\$8,298,357	23,310
Fruit and vegetable canning and drying	\$8,223,348	21,318
Vegetable and melon farming	\$7,540,473	51,476
Fruit farming	\$6,890,893	82,871
Cattle ranching and farming	\$5,574,192	52,487
Fluid milk manufacturing	\$5,158,792	8,601
Agriculture and forestry support activities	\$4,986,843	225,527
Soft drink and ice manufacturing	\$4,743,886	8,861
Bread and bakery product, except frozen, manufacturing	\$4,443,620	35,787
Frozen food manufacturing	\$3,694,675	13,934
Greenhouse and nursery production	\$3,631,680	37,788
Cheese manufacturing	\$3,288,257	5,066
Breweries	\$3,145,500	3,763
All other crop farming	\$2,451,551	15,360
Meat processed from carcasses	\$2,390,886	6,721
All other food manufacturing	\$2,216,371	8,549
Tree nut farming	\$2,150,857	17,748
Animal, except poultry, slaughtering	\$2,096,927	5,920
Poultry processing	\$1,862,787	9,760
Flavoring syrup and concentrate manufacturing	\$1,756,457	942
Dog and cat food manufacturing	\$1,673,494	1,673
Roasted nuts and peanut butter manufacturing	\$1,562,103	3,829
Other animal food manufacturing	\$1,401,110	2,381
Confectionery manufacturing from purchased chocolate	\$1,250,442	4,271
Other snack food manufacturing	\$1,235,421	2,489
Logging	\$1,170,336	5,154
Flour milling	\$1,072,894	1,557
Breakfast cereal manufacturing	\$1,055,678	1,119
Spice and extract manufacturing	\$1,025,751	2,308
Ice cream and frozen dessert manufacturing	\$1,023,603	2,245
Poultry and egg production	\$1,019,774	2,501
Other oilseed processing	\$983,567	575
Confectionery manufacturing from cacao beans	\$944,185	1,986
Cotton farming	\$923,866	6,175
Tortilla manufacturing	\$832,844	5,941
Fats and oils refining and blending	\$825,003	688
Cookie and cracker manufacturing	\$780,797	2,452
Nonchocolate confectionery manufacturing	\$729,602	2,727
Seafood product preparation and packaging	\$642,775	2,804
Dry, condensed, and evaporated dairy products	\$614,327	794
Sugar manufacturing	\$583,295	1,080
Coffee and tea manufacturing	\$578,758	1,203
Rice milling	\$557,797	1,015
Mayonnaise, dressing, and sauce manufacturing	\$529,958	1,422
Soybean processing	\$524,003	240
Grain farming	\$523,655	10,396
Mixes and dough made from purchased flour	\$510,393	1,212
Animal production, except cattle and poultry	\$444,300	11,726
Dry pasta manufacturing	\$443,980	1,487
Rendering and meat byproduct processing	\$352,389	695
Distilleries	\$328,396	364
Forest nurseries, forest products, and timber tracts	\$278,759	749
Fishing	\$229,071	6,126
Frozen cakes and other pastries manufacturing	\$192,496	1,329
Wet corn milling	\$170,224	162
Sugarcane and sugar beet farming	\$77,348	2,489
Hunting and trapping	\$75,042	976
Creamery butter manufacturing	\$47,271	106
Malt manufacturing	\$30,907	33
Oilseed farming	\$27,777	363
Other tobacco product manufacturing	\$9,397	14

APPENDIX B—INDUSTRY GROUPINGS

<i>Industry</i>	<i>Output</i>	<i>Employment</i>
Management and Support	\$109,285,859	1,466,024
Management of companies and enterprises	\$42,961,398	263,626
Employment services	\$14,721,056	546,412
Services to buildings and dwellings	\$13,825,258	251,203
Office administrative services	\$10,681,203	59,307
Waste management and remediation services	\$6,184,938	38,457
Business support services	\$5,739,124	78,713
Investigation and security services	\$5,416,891	140,932
Travel arrangement and reservation services	\$4,749,798	40,997
Other support services	\$3,969,753	35,068
Facilities support services	\$1,036,440	11,309
Leisure and Hospitality	\$103,748,095	1,837,880
Food services and drinking places	\$59,624,477	1,205,537
Other amusement, gambling, and recreation industries	\$10,707,744	137,783
Hotels and motels, including casino hotels	\$9,817,902	129,491
Independent artists, writers, and performers	\$8,906,245	76,337
Promoters of performing arts and sports and agents for public figures	\$4,064,360	56,610
Spectator sports	\$2,781,151	62,368
Fitness and recreational sports centers	\$2,644,411	66,915
Performing arts companies	\$2,410,588	69,562
Other accommodations	\$1,415,507	15,903
Museums, historical sites, zoos, and parks	\$1,127,440	12,633
Bowling centers	\$248,270	4,741
Other Services	\$80,896,783	1,468,136
Automotive repair and maintenance, except car washes	\$24,891,201	304,058
Religious organizations	\$8,938,904	297,590
Other personal services	\$8,005,645	65,575
Electronic equipment repair and maintenance	\$6,225,638	47,277
Commercial machinery repair and maintenance	\$5,050,004	44,088
Civic, social, professional and similar organizations	\$4,920,726	64,645
Private households	\$4,423,802	356,811
Household goods repair and maintenance	\$4,288,726	25,207
Personal care services	\$3,913,342	86,852
Drycleaning and laundry services	\$3,232,132	68,864
Grantmaking and giving and social advocacy organizations	\$3,230,014	37,258
Car washes	\$2,481,379	52,168
Death care services	\$1,295,270	17,743
Transportation and Warehousing	\$68,284,283	625,520
Truck transportation	\$18,734,639	173,981
Air transportation	\$11,974,079	54,396
Scenic and sightseeing transportation and support activities for transportation	\$8,162,764	85,270
Postal service	\$7,794,267	85,381
Couriers and messengers	\$6,399,239	94,440
Warehousing and storage	\$5,518,338	62,981
Water transportation	\$2,754,193	5,077
Transit and ground passenger transportation	\$2,664,014	52,734
Rail transportation	\$2,541,289	8,970
Pipeline transportation	\$1,741,461	2,290
Transportation Equipment Manufacturing	\$45,660,026	126,972
Aircraft manufacturing	\$12,518,582	28,430
Automobile and light truck manufacturing	\$7,415,156	7,495
Guided missile and space vehicle manufacturing	\$6,604,473	15,851
Motor vehicle parts manufacturing	\$6,258,780	22,127
Other aircraft parts and equipment	\$4,528,991	22,009
Aircraft engine and engine parts manufacturing	\$1,685,594	4,385
Motorcycle, bicycle, and parts manufacturing	\$1,468,314	3,758

APPENDIX B—INDUSTRY GROUPINGS

<i>Industry</i>	<i>Output</i>	<i>Employment</i>
Transportation Equipment Manufacturing (continued)		
Ship building and repairing	\$979,577	5,865
Motor vehicle body manufacturing	\$786,331	3,231
Motor home manufacturing	\$571,618	1,932
Travel trailer and camper manufacturing	\$560,932	3,399
Propulsion units and parts for space vehicles	\$517,689	2,865
Heavy duty truck manufacturing	\$481,222	819
Boat building	\$417,101	2,202
Military armored vehicles and tank parts manufacturing	\$320,607	740
All other transportation equipment manufacturing	\$215,935	502
Truck trailer manufacturing	\$187,441	910
Railroad rolling stock manufacturing	\$141,683	452
Medical Manufacturing	\$43,184,696	103,838
Pharmaceutical and medicine manufacturing	\$27,410,582	37,423
Surgical and medical instrument manufacturing	\$5,729,012	22,060
Electromedical apparatus manufacturing	\$4,068,028	11,745
Surgical appliance and supplies manufacturing	\$3,208,191	12,479
Ophthalmic goods manufacturing	\$1,237,156	6,330
Dental equipment and supplies manufacturing	\$765,564	4,214
Dental laboratories	\$573,015	8,666
Laboratory apparatus and furniture manufacturing	\$193,148	921
Utilities	\$41,833,078	51,891
Natural gas distribution	\$25,934,770	29,680
Power generation and supply	\$14,643,367	16,675
Water, sewage and other systems	\$1,254,941	5,536
Federal Government	\$29,537,370	431,119
Federal Non-Military	\$14,766,201	166,258
Federal Military	\$14,341,016	261,001
Other Federal Government enterprises	\$428,034	3,856
Federal electric utilities	\$2,119	4

Sacramento Regional Research Institute, April 2006

Data Source: IMPLAN, 2003 coefficients

Note: Differences due to rounding.

Owner-occupied dwellings sector accounts for home ownership expenditures such as closing costs, property taxes, and other related permits and taxes.

Appendix C—California Metropolitan Statistical Areas

<i>Metropolitan Statistical Areas (MSA)</i>	<i>Counties Included in MSA</i>
Bakersfield	Kern County
Chico	Butte County
El Centro	Imperial County
Fresno	Fresno County
Hanford-Corcoran	Kings County
Los Angeles-Long Beach-Santa Ana	Los Angeles and Orange Counties
Madera	Madera County
Merced	Merced County
Modesto	Stanislaus County
Napa	Napa County
Oxnard-Thousand Oaks-Ventura	Ventura County
Redding	Shasta County
Riverside-San Bernardino-Ontario	Riverside and San Bernardino Counties
Sacramento-Arden Arcade-Roseville	El Dorado, Placer, Sacramento and Yolo Counties
Salinas	Monterey County
San Diego-Carlsbad-San Marcos	San Diego County
San Francisco-Oakland-Fremont	Alameda, Contra Costa, Marin, San Francisco and San Mateo Counties
San Jose-Sunnyvale-Santa Clara	Santa Clara and San Benito Counties
San Luis Obispo-Paso Robles	San Luis Obispo County
Santa Barbara-Santa Maria	Santa Barbara County
Santa Cruz-Watsonville	Santa Cruz County
Santa Rosa-Petaluma	Sonoma County
Stockton	San Joaquin County
Vallejo-Fairfield	Solano County
Visalia-Porterville	Tulare County
Yuba City	Sutter and Yuba Counties

Sacramento Regional Research Institute, April 2006
 Source: United States Census Bureau