

**THE ECONOMY-WIDE EFFECTS OF LARGE-SCALE AIR POLLUTION  
CONTROL REGULATIONS**

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**Deleted:** A SAM for California

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## **ABSTRACT**

This report provides a very brief description of a model of the California economy that was designed for the evaluation of environmental and fiscal policies. Most of this report is devoted to the production of a new version of the Environmental Dynamic Revenue Analysis Model, 2003 (EDRAM03). This updated version of the Environmental Dynamic Revenue Analysis Model (EDRAM) differs from the earlier versions in that it uses a more recent base year (fiscal year 2003) as well as more accurate energy accounting and provides much greater detail for industrial sectoring. The greater detail in industrial sectoring facilitates evaluating policies that directly affect only a small fraction of the California economy.

## **EXECUTIVE SUMMARY**

### **BACKGROUND**

The California Environmental Protection Agency/Air Resources Board (CAL EPA/ARB) is responsible for rule making for air quality in California. Many potential rules, such as the State Implementation Plan for the Clean Air Act and the recently adopted rules for the curtailment of greenhouse gases, have potential statewide economic impact. One type of tool for evaluating the statewide economic impact is a computable general equilibrium (CGE) model. A CGE models the statewide economy as the economic interaction through supply and demand of factors, goods and services, among consumers, producers, and government. In order to model fiscal policies, the Department of Finance (DOF) and a team at Berkeley jointly developed such a model in 1996. That model was later enlarged to include more detail on sectors important for air quality and used to evaluate many potential policies for CAL EPA/ARB. The enlarged model is known as the Environmental Dynamic Revenue Analysis Model (EDRAM). In the process of evaluating possible policies called for in AB 1493 (Pavely) in a cooperative effort with the California Energy Commission (CEC), it became evident that the model needed updating and further expansion.

### **METHODS**

There were three major ways in which EDRAM needed to be changed. First, EDRAM was a model of California in 1998-99 and used data that were collected as far back as 1992. The model needed to be updated to a recent year. The new model is called the Environmental Dynamic Revenue Analysis Model, 2003 (EDRAM03) because it is calibrated to match the California economy in fiscal year 2003. Second, the sources for the purchases and sale of energy in EDRAM were strictly taken from the Bureau of Economic Analysis (BEA). Other data from the Energy Information Administration (EIA) are believed to be more accurate, and Lawrence Berkeley Laboratory, working in conjunction with the CEC, analyzed that data for California and kindly made it available to these investigators. The EDRAM03 models energy flows based upon this new data source. Third, the level of disaggregation of industries is much greater in EDRAM03 and has been matched to the likely targets for emission control. Whole state models aggregate firms into sectors of the economy, so, for instance, all food establishments are one sector. By increasing the number of sectors, industries, such as cement, are able to be a whole sector rather than simply a part of a larger sector. It is more accurate to evaluate a potential policy that affects a whole sector in the model, so the match between sectors and potential policies is an important advantage of the newer model.

The major work in this project was the accumulation of the data from multiple sources and the making of such imputations as are necessary to make these sources consistent and the integration of this new database into the CGE model.

## **RESULTS**

The result of the project is the EDRAM03 model, which can be used to evaluate future air-quality related policies.

## **CONCLUSIONS**

This project has produced a CGE model for the evaluation of air-quality improvement policies in California. This model improves on the existing model by being based in a recent year, using better data on energy flows, and having a more disaggregated sectoring to better match potential policies.

## **BODY OF REPORT**

### **INTRODUCTION**

The CAL EPA/ARB is responsible for rule making for air quality in California. Many potential rules, such as the State Implementation Plan for the Clean Air Act and the recently adopted rules for the curtailment of greenhouse gases, have potential statewide economic impact. One type of tool for evaluating the statewide economic impact is a CGE model. A CGE models the statewide economy as the economic interaction through supply and demand of factors, goods and services, among consumers, producers, and government. In order to model fiscal policies, the DOF and a team at Berkeley jointly developed such a model in 1996. That model was later enlarged to include more detail on sectors important for air quality and used to evaluate many potential policies for CAL EPA/ARB. The enlarged model is known as EDRAM. In the process of evaluating possible policies called for in AB 1493 (Pavely) in a cooperative effort with the CEC, it became evident that the model needed updating and further expansion. There were three major ways in which the model was changed: (1) It was calibrated to the California economy in calendar year 2003 rather than fiscal year 1998-99. (2) It made use of better energy data. (3) It provided more detailed sectoring.

The CGE models depend upon a database called a social accounting matrix (SAM). A SAM is a record of transactions at a particular point in time among consumers, governments, producers, and foreign entities. Nearly all of the effort in this project was the revision of the SAM, which is what will be described in great detail in this section. The remainder of the effort in the project was the changes in programming needed for EDRAM to accept this updated SAM. These were mostly technical in nature, such as expanding and changing the names of the set of industries and matching the government flows of funds in the program code to those in the SAM.

Readers interested in a description of the CGE model are directed to Berck, Golan, and Smith (1996). Further useful background material on the use of these models for energy and greenhouse gas analysis can be found in Berck and Hess (2002). This material is not repeated here.

The bulk of the remainder of this report is about the production of the SAM for EDRAM03.

### **MATERIALS AND METHODS**

This document describes the construction of a SAM for California. The SAM is a record of the transactions between institutions, such as consumers, firms, and government, for the calendar year 2003. It is based upon multiple sources, including input-output (IO) tables, California tax and spending records, and California employment data. This SAM includes energy and uses data from the California Energy Balance (CALEB) database for 2000—the most recent data available. There are also ancillary

tables, including the capital coefficients matrix, which records the uses of investment, and several miscellaneous tables which record tax-system details, inter alia.

While the numbers in this SAM are wholly created from recent data, the SAM inherits its structure from the SAMs used for the Dynamic Revenue Analysis Model (DRAM) (see Berck, Golan, and Smith, 1996). This description borrows from the previous documentation, most heavily so in those areas where the new SAM inherits its structure from the previous SAM.

### **Data Organization: SAM**

For the purposes of statistical description, the California economy is divided into 158 distinct sectors. Each sector is an aggregate. For industrial sectors, the aggregation is over closely related industries. So an industrial sector is a list of the aggregate purchases and sales of these related industries. Similarly, a consumer sector shows the income and expenditures of a group of consumers and a government sector shows the income and expenditures of a type of government.

A SAM is a square matrix consisting of a row and column for each sector of the economy. Each entry in the matrix identifies an exchange of goods and services purchased by one sector from another sector or itself. The entries along a row in the SAM show each payment received by that particular sector. Summing the data across the row gives the total of payments made to that sector. The entries down a column in the SAM show the expenditures made by a particular sector. Summing the data down a column gives the total expenditures by sector.

In this SAM the California economy has been divided into a SAM composed of 158 distinct sectors: 92 industrial sectors, 2 factor sectors (labor, capital), 8 household sectors, 9 composite goods sectors, 1 investment sector, 45 government sectors, and 1 sector that represents the rest of the world. The design of the sectoring is an important element in the development of any CGE, social accounting, or IO model because it determines the flows that the model will be able to trace explicitly. If the sectoring is done well, the major flows in the economy, both positive and negative, will be evident. If the sectoring is done poorly, the impact of policy will be blurred with negative and positive flows occurring within a single sector.

In the sections that follow, the criteria for the sectoring of the SAM are presented and each sector is described. The data sources for each sector are also discussed. Industrial sectoring is examined in the first section. The two factor sectors in the model are discussed in the second section. The household sectoring is described in the third section. And the government sectoring is described in the fourth section.

### **The Industrial Sectors**

In this SAM we have chosen to follow the North American Industry Classification System (NAICS) method of describing industrial sectors. The NAICS is a six-digit

classification. The codes are arranged so that major classifications share the same first digit. For instance, agriculture, hunting, and forestry all have 1 as the first digit. Crop production sectors all have the same first three digits, 111, while animal products are 112. Our industrial sectoring basically follows the first three digits of the NAICS codes with some exceptions that we will discuss below. By following the NAICS codes, we are able to match different types of data, such as employment data and IO data, with a fair degree of accuracy. In the future, when the NAICS is completely adopted, without variation, by the major government statistical entities, perfect matching will be possible.

By using the three-digit NAICS codes as the basis for our sectoring, we achieved a very fine (for a SAM) differentiation among sectors.

Appendix Table A-1 displays the names of the sectors, their descriptions, and their concordance with the NAICS.

### ***Major California Industries***

The first criterion considered when establishing adequacy of the industrial sectoring is the importance of the industry in terms of its employment and revenue. Tables 1 and 2 display these figures. The five largest net output sectors in the state are retail, real estate, banking, computer-related manufacturing, and agriculture. (The correspondence between the sector names and their descriptions can be found in Appendix Table A-1.)

**Table 1. Ten Largest Industries According to Value of Total Payment From Other Sectors (in billion 2003 \$)**

Sector	Output (in billion)	Ratio to all industry output
RETAIL	125.99	6.68%
FIREAL	117.921	6.25%
FIBNKS	74.514	3.95%
CMPMFG	61.346	3.25%
AGRIC	55.693	2.95%
INFOPC	52.288	2.77%
MEDAMB	51.275	2.72%
CMPRTS	51.145	2.71%
WHLTUR	51.043	2.70%
CONOTH	48.734	2.58%
Total output in all industry	1887.199	

The ranking of major industries according to the number of employees presented in Table 2 reproduces results similar to those in the previous table. Service and trade

industries are the dominant employment sectors for the state. The largest sector is 7 percent of the state's output.

**Table 2. Wage and Salary Workers by Major Industry, 2003**

Sector name	Employment	Employment (in million)	Ratio to all industry employment
RETAIL	1584938	1.584938	12.74%
PERSRV	619458	0.619458	4.98%
CONOTH	519176	0.519176	4.17%
MEDAMB	498262	0.498262	4.00%
ACCRST	458189	0.458189	3.68%
ACCFST	435385	0.435385	3.50%
ADMTMP	428136	0.428136	3.44%
TRANSP	419580	0.41958	3.37%
BUSSRV	406096	0.406096	3.26%
AGRIC	374047	0.374047	3.01%
Total employment in all industry	12441952	12.441952	

Note: JOBS is California employment by sector, found by averaging employment levels in Employment Development Department data over Q2, 2002, through Q1, 2003.

The retail sector has the largest employment in the state with 13 percent of the employees. In terms of sectoralization, this scheme has isolated most of the potential targets for tax policy, particularly, in the manufacturing sectors. The major payers of taxes in 1994 are given in Table 3.

**Table 3. Industry Sectors Reporting Net Income Subject to State Taxation of One-billion Dollars or More, 1992 (in thousand \$)**

Industry	Net income subject to state taxation
Investment and insurance companies	5,320,185
Wholesale trade	4,126,940
Banks and savings and loans	3,388,928
Retail trade	3,341,524
Electric machinery and equipment	2,636,639
Communications	2,537,911
Electric, gas, and utilities	2,406,728
Business services	2,091,496
Petroleum, coal, and rubber products	1,761,465

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<u>Industry</u>	<u>Net income subject to state taxation</u>
Beverages	1,608,991
Real estate	1,538,680
Chemicals and allied products	1,512,653
Construction	1,088,195

Note: The treatment of taxation sectors remains the same in this SAM as in the 1998 SAM.  
Source: DOF (1994).

All of these sectors are well isolated in our sectoring scheme.

The second criterion considered when establishing the industrial sectoring is the distributive impact of government taxation and spending. In order to trace effectively the impacts of government spending and taxation on the distribution and incidence of production, income, spending, and savings in the economy, it is important to establish an industrial sectoring that can be used to map the effects of government policy. The sectoring in SAM distinguishes those industries that clearly stand to benefit from increased government spending from those industries that may incur negative repercussions from such spending.

As a first cut at differentiating the impacts of government policy, it is important to distinguish major taxpayers by size and by type of tax as was done in the previous section. Not only do the major taxpayers represent the primary source of funding for government spending but they also represent important variables in any industrial-development strategy. Targeted tax cuts or even general tax cuts to industry are primary tools in industrial-development incentive policy. The industrial sectoring must explicitly include the major taxpayers in order to trace the impact of such policies.

The industrial beneficiaries of government spending on infrastructure or education are difficult to isolate. Both theory and empirical observation suggest that the benefits of infrastructure and education are diffused throughout the economy. The direct beneficiaries of industrial-development spending are likely to be more narrowly delineated. A primary focus of many industrial-development strategies has been creating employment in wage-premium, high-export industries. Wage-premium jobs have a high salary to education ratio, and the earning effects of local employment are greater for new jobs in wage-premium industries. More jobs at higher wages provide the biggest “payoff” for employment-creation projects. Export industries are targeted because out-of-state earnings can have large economy-wide impacts.

California’s largest wage-premium export industries (in 1998) were aerospace, motion pictures, engineering and management consulting, and computer software and systems development. Even if these industries are not specifically targeted by development incentives, they are important industries to track with the model. The

economy-wide impact resulting from changes in these industries should be large because they are large employers paying high salaries, making large export earnings.

Again, these sectors are well isolated in our sectoring scheme.

The sectoralization scheme mostly differs from a straight three-digit NAICS setup by the breakout of energy or pollution important sectors, e.g., cement, natural gas distribution, and power generation. These sectors were selected for special treatment by ranking the four-and-lower-digit NAICS sectors, so far as data would allow, by energy usage and preserving those with high energy usage as sectors by themselves. Table 4 shows the energy purchases by the major energy-producing sectors in our final sectoralization.

**Table 4. Industry Total Purchases of Goods from Energy Industries (all billion \$)**

OILREF	21.46928	PLASTC	0.340307	TEXLTH	0.173429	PROOTH	0.08295
DSTGAS	6.111024	ACCHOT	0.331747	FDPROC	0.172258	PROCOM	0.081157
DISTEL	4.290048	CHMDRG	0.324989	FINOTH	0.155621	CONCRT	0.063585
FIREAL	3.413969	PRINT	0.314367	ADMBLD	0.144514	PROLEG	0.06302
TRANSP	2.517194	INFOPC	0.314333	WOOD	0.1398	CMPCMM	0.055395
AGRIC	2.334113	WHLNON	0.310282	CONUTL	0.130648	CMPMED	0.05102
OILGAS	2.193922	PRIMTL	0.277611	SCAOTH	0.12783	DSTOTH	0.050288
CONOTH	1.125058	MEDAMB	0.263604	EDUC	0.123511	ACCSPC	0.048594
OTHPRI	0.744965	FINSEC	0.245905	APPREL	0.122085	VEHPRT	0.047999
CHMBAS	0.627995	CONNON	0.223896	ELCTRC	0.120694	INFCOM	0.042115
BUSSRV	0.596703	FIBNKS	0.223319	INDGAS	0.119477	PROADV	0.038759
PERSRV	0.572432	MACHIN	0.222316	FDMFG	0.119465	PROCNS	0.036452
RETAIL	0.56207	CMPMFG	0.217954	CEMENT	0.112848	ADMSEC	0.036121
WHLTUR	0.540194	INFOTL	0.215443	PAPER	0.106925	PROACC	0.031906
CMPRTS	0.518327	BEVTOB	0.209393	WHLAGN	0.106565	AUTOMF	0.024037
FDOTH	0.472232	CHMSPS	0.208917	PROARC	0.101806	PRODES	0.022482
ACCRST	0.469289	RECAMS	0.203625	GLASS	0.099425	ACCBRS	0.020381
CONSTR	0.456687	VEHAER	0.192586	MSCMFG	0.097282	VEHOTH	0.02032
ADMOTH	0.424884	CMPINS	0.19117	LABDNT	0.096067	VEHBDY	0.015226
CONRES	0.379514	MEDSA	0.18653	RECENT	0.095344	VEHSHP	0.012382
ACCFST	0.364136	PRORES	0.185788	INFOTH	0.092498	VEHMFG	0.007515
MTLFAB	0.354626	MEDNRS	0.179013	PLPMLL	0.091634	FINSUR	0.007218
MEDHSP	0.347479	CHMOTH	0.174594	FURN	0.090092	ADMTMP	0.005305

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In order to evaluate pollution control, including greenhouse-gas-control proposals, the automotive sector has been preserved in less than three-digit aggregation. Automobile and light-truck manufacturing is kept distinct from heavy trucks, and body manufacturing and parts manufacturing are distinct industries.

### ***Producing the Energy-Consistent SAM for Industries***

The fundamental method for producing the SAM rows and columns for the industries was to use the BEA data for 1997 to create an IO table for the United States. The columns of the U.S. table for each industry were then scaled by the ratio of wages paid in the industry in California in calendar year 2003—the ratio in the United States in 1997 to produce estimates of the expenditures and revenues of California industry for 2003.

The industry flows estimated from the BEA data are not entirely consistent with the energy flows in CALEB, which are based on energy data. The reasons for the differences include (1) the fundamentally different sources for the data (data on firms versus data on energy flows) and (2) the construction of California from national data described above. In order to make the SAM consistent with CALEB, the CALEB data for energy use were assigned to the SAM sectors to derive the use of each energy type by each sector in energy units [trillion British thermal units (Btu)]. Then, these data were combined with 2003 price information to correct the major SAM energy transactions for the actual Btu that changed hands at the actual prices. For example, the purchase of wholesale natural gas by the gas distribution sector (i.e., the payments made by DSTGAS to OILGAS) reflect actual Btu at the average 2003 utility gas procurement price. Further, smaller purchases by end-use sectors were also adjusted for the changes in energy prices from 1997 to 2003, which were generally larger than wage inflation.

### **The Factor Sectors**

A factor of production is a stock that generates a flow of services used in the production of goods and services. In a SAM, value added is distributed through the factors of production to household—owners of factors. The two factors of production have been sectored out for SAM: labor and all other factors aggregated into “capital.”

In this SAM, the total value added allocated to labor is \$678.30 billion and to capital, \$488.05 billion.

The factor sectors, in turn, pay households and outside of California households the factor income.

In building EDRAM03, we considered making energy a factor of production rather than an intermediate good. The economic literature does not seem decisive on how energy substitutes for the other factors. Pending a better understanding of the ability of industry to substitute away from energy in manufacturing, we have left our original formulation with energy as an intermediate good.

### **The Household Sectors**

Households have a number of functions in the economy: They receive income from value added, consume goods and services and save and invest, and pay taxes. In the

sectoring of households for the SAM, each of these functions must be represented. However, because Senate Bill 1837 specifies that a complete dynamic analysis must examine taxpayers' behavioral response to changes in taxes, the primary criterion for household sectoring is household tax status. For this SAM, eight household sectors are delineated. These sectors correspond to the marginal tax brackets specified in the California tax code with the addition of a high-income household.

Sectoring of households according to their primary wage earner's marginal tax bracket not only distinguishes the households for tax purposes but it also results in a grouping of households according to income levels. A grouping of households by income allows the modeler to distinguish consumption and income patterns between income levels. The household sectoring was accomplished using the Franchise Tax Board stratified sample data to obtain the distribution of wages and other income by marginal tax rate for California personal income tax data for 2000. This information was used to produce a percentage distribution of factor payments generated by industrial and government sectors to the eight household groups.

The sectors are delineated by marginal tax rate so that sector "9.3 MT" delineates the household group subject to a marginal tax (MT) rate of 9.3.

### **The Investment Sector**

In economic theory, investment is a purchase of goods and services augmenting the capital stock. Capital stocks by industry are imputed for SAM by assuming that the economy was initially in equilibrium and by using published values for average rates of return by industry. Assuming a 5 percent depreciation rate, a gross-investment value by destination of investment for the 92 industrial sectors of SAM is imputed.

These estimates of imputed gross investment are combined with an industry share matrix calculated from the most current (1997) BEA matrix of capital purchases by source and destination for the United States. The share matrix is an ancillary file prepared along with this SAM. Combining the share matrix, which identifies how a dollar of gross investment made by an industry is distributed across the source industries, with the imputed gross-investment estimates resulted in a matrix of investment demand by source.

A series of assumptions are incorporated in the SAM investment calculations. To the extent that the economy is not in equilibrium in the base year, the levels of investment will be misrepresented. To the extent that the distribution of investment sources has changed since 1997, further misrepresentation is introduced. However, the gains from reflecting with precision how an investment decision in one sector results in investment demand in other sectors would appear to outweigh these potential sources of error.

## **The Government Sectors**

A purpose of the SAM is to analyze the dynamics of California state revenue. However, the SAM must account for government expenditure in order to trace any feedback effect to state revenue from changing demand for goods, services, and factors as expenditure changes. Further, some elements of government are mandated to change their expenditures as their revenue changes (such as Caltrans) and the state's distribution of expenditure changes as its general fund revenues change (Proposition 98).

As a result of these considerations, government sectors must be organized so that both revenue flows and expenditure flows can be traced explicitly. The major government revenues are taxes, sales of services, and intergovernmental transfers. The major government expenditures are the purchase of goods and services, transfer payments to households, wages, and intergovernmental transfers. Federal, state, and local governments all engage in revenue collection and expenditure, and all three levels of government are represented in SAM. California state government revenue and taxation receive the greatest scrutiny while federal and local governments are held primarily exogenous to the model.

For the SAM, 36 government sectors representing federal, state, and local governments have been created. This sectoring allows the modeler to trace explicitly the major government expenditure and revenue flows. A description of the criteria and sectoring for each level of government follows. The sectoring of the government sectors is nearly the same as in the original SAM; the change from the original SAM is the inclusion of additional detail on state government.

### **Federal-Government Sectoring**

In order to model the federal government for the purposes of SAM, seven federal-government sectors are created: five to account for federal-government revenue flows and two to account for federal-government expenditure flows. The primary sources of revenue for the federal government are personal income tax, corporation income tax, social insurance taxes, excise taxes, estate and gift taxes, and customs duties.

Federal-government expenditure is divided into two sectors to separate the pattern of defense expenditures (goods and service acquisition from particular sectors and rental of labor) from the rest of the federal government's expenditures in California (transfer payments to individuals, intergovernmental transfer payments, purchases of goods and services, and factor rentals).

Note that most elements of the federal government are exogenous to California. Taxation rates, purchases of goods and services, and rental of factors are fixed in real terms though nominal expenditures are allowed to change in response to prices. Transfer payments to individuals (Social Security and federal pensions) are fixed in per-household nominal terms with the number of households receiving these held at a fixed fraction of

nonworking households derived from analysis of tax sample data. The federal-government sectors are described in detail below.

#### SOCIAL SECURITY (FTSOC)

This is the social-security component of federal revenues. The primary source of payments made by industries, households, and other governments to FTSOC is DOF personal income data estimates. The primary source of the distribution of payments from FTSOC is the stratified tax sample of the Federal Tax Bureau (FTB) for year 2000.

#### PERSONAL INCOME TAX (FTPIT)

This is the personal income tax component of federal revenues. Data for federal personal income taxes are from Internal Revenue Service (IRS) data stratified by FTB staff and made available to DOF. These data are allocated according to SAM household types. Discrepancies between federal and state tax tables are accommodated by applying an overall correcting constant to each household type's tax calculation to return estimates of actual taxes received. It is important to note that the model explicitly accounts for the deductibility of state and local taxes from federal incomes subject to taxes. The FTB-supplied average rates of itemized deductions are used for each household type.

#### CORPORATION TAX (FTPRO)

This is the corporation tax component of federal revenues. Corporate profit tax (FTPRO) is taken from the IRS 2002 Data Book, updated by 9 percent, and then allocated to the payments-to-capital line of the industry IO matrix.

#### DUTIES (FTDUT)

Nonsector-specific excise tax (FTDUT) was allocated on payments to capital for goods producing industries only. This is the import duty tax component of federal revenues. Import and export data for regional economies are quite poor in detail. One major problem with the data is the lack of ability to distinguish which items are simply passing through the state en route to a final destination.

#### MISCELLANEOUS (FTMSC)

This is the miscellaneous tax component of federal revenues. All other federal taxes are grouped into the miscellaneous component. Of this aggregation, excise taxes on tobacco, alcohol, and liquid fuels are the major taxes. The others are distributed across the rest of the industrial sectors by their percentage share of domestic demand.

#### FEDERAL NONDEFENSE SPENDING (FSNON)

This sector accounts for federal nondefense spending and receives its income from the five federal revenue sectors. Its expenditures are purchases of goods and services combined with rentals of factors and intergovernmental transfers to federal defense spending (FSDEF), California expenditure units, and local expenditure units.

Published summaries of local government revenue and expenditure combined with the state's budget summary identifies the destination of all but FSDEF transfers. The FSDEF transfers are made equal to FSDEF expenditures.

While not fully implemented at the federal level, it is assumed that all intergovernmental transfers from the federal government to California and local governments are block grants (i.e., unrestricted federal grants). Given the indirect relationship between liquid fuels taxes and transfers for transportation and the thrust at the federal level to turn all health and human services into block grants, this seems a reasonable assumption. In making this assumption, any connection between economic activity in California and federal grants to California and local governments is ignored.

FSDEF

This sector accounts for federal defense spending. An intergovernmental transfer from FSNON to FSDEF is established to equal the total of expenditures.

### ***State Government Sectoring***

In order to model the California state government for the purposes of DRAM, 27 state government sectors are created: 20 to account for government revenue flows and 7 to account for government expenditure flows.

State revenues are collected into three types of funds: the general fund, special funds, and nongovernmental funds. The general fund is the largest government accounting unit. Most taxes and fees that are collected without a specific expenditure allocation are deposited into the general fund. Revenue collected from special taxes, fees, or revenue designated to a specific expenditure destination are collected through special funds. Nongovernmental funds are managed by the state of California but are off-budget items. Two nongovernmental funds (unemployment/disability insurance and workers' compensation) are explicitly modeled in SAM. State revenues are also augmented by federal funds. These are a source of income for California but are counted as intergovernmental transfers. All California state government revenue details are extracted from the California state statistics.

The units for California revenue and expenditure are best summarized in table form, with Table 5 identifying the sources of revenues and Table 6, how expenditures are grouped in SAM.

**Table 5. California Revenue-Receiving Units in SAM**

Sector	Name
CTHHS	Various household taxes
CTBOZ	Alcohol taxes
CTCIG	Cigarette taxes
CTHOR	Horse racing
CTEST	Estate taxes
CTTRL	Trailer fees
CTLIC	Motor-vehicle license fees
CTDIE	Diesel fuel TAXES
CTREG	Motor-vehicle registration fees
CTMSC	Miscellaneous
CTINS	Insurance gross premium tax
CTGAS	Gasoline fuel taxes
CTSAU	Sales and use taxes
CTBAC	Bank and corporation tax
CTLAB	Labor taxes/UI and workers' comp
CTPIT	Personal income tax
CTRGU	Regulatory licenses and fees
CTSVC	Service to the public
CTPAM	Use of property and money
CGENF	General fund

**Table 6. California Expenditure Units in DRAM**

Model sector	Major departments	Major sources of revenue	Expenditure
CSTRA	Caltrans/CHP	Highway users' taxes/ Motor-vehicle fees	Engineering services/ construction/ transfers to local governments
CSCOR	Youth and adult correction agency	General tax revenue	Labor/ goods & services
CSK14	Education	General tax revenue	Transfers to local governments
CSUNI	Higher education	General tax revenue	Labor/ goods & services

Continued on next page.

**Table 6 continued.**

Model sector	Major departments	Major sources of revenue	Expenditure
CSWEL CSHTH	Health and welfare	General tax revenue/ transfers from USA	Transfers to households and local governments
CSOTH	Legislative, judicial, executive, state, and consumer services, business, housing, trade and commerce, resources, general government	General tax revenue/ special funds granted to local governments	Rental of factors/ goods & services/ transfers to local governments

One revenue account, CGENF, deserves special mention. This account receives transfers from revenue units according to proportions reported in the budget summary. It transfers its revenues to expenditure units according to three guiding principles. The first is the application of Proposition 98 in either its Test 2 or Test 3 forms. When Test 2 is applied, a transfer from CGENF to local kindergarten through 14 (LSK14) education is made in amounts proportionate to previous transfers updated by changes in average daily attendance and per-capita personal income. Test 3 mandates a transfer in proportion to changes in average daily attendance and per-capita general fund revenues. Without belaboring the details of Proposition 98, the choice of Test 2 or 3 is more of a public choice decision than an economic one. The CGE model that was built from this SAM accounts for these flows. Thus, the model can be applied to either the choice of Test 2 or 3 decision.

For each expenditure unit, published summaries of expenditures are consulted to obtain the most precise distribution of these expenditures across the SAM industry, factor, and household sectors.

### ***Local Government Sectoring***

Because local governments are exogenous to our model, their level of detail in SAM is minimized. As with federal units, the major sources of local revenue and expenditures from published reports (relying generally on the series of annual reports, *Financial Transactions Concerning...*, issued by the Controller's Office for cities, counties, and other local governmental units) are identified. The local revenue sources fall into four categories: property taxes, fees, miscellaneous revenues, and intergovernmental transfers from the federal government and California. The sectoring of local government revenue agencies reflects these sources. Local government expenditure agencies are sectoried according to expenditure on transportation, corrections and legal affairs, education, health and welfare, etc. A description of each of the local government sectors is given below.

#### LOCAL PROPERTY TAX (LTPRP)

Many local entities, such as counties, cities, and special districts, have the legal authority to levy taxes on certain real property. With the advent of tax reform in the 1970s (such as Proposition 13), these revenues have fallen to about a quarter of local government revenues.

Since the taxed value of property has a limited relationship to market prices and since no data appear to exist to properly identify the value of real estate by industry or household type, the overall level of property-tax revenue by all local governments is identified and treated as a per-working household tax and as an excise tax on business. The per-household rate is set proportionate to incomes in the base data but not allowed to vary in the model from these levels.

#### GOVERNMENT LOCAL TAX, SALES AND USE (L TSAU)

This is the local government share of the sales tax and use taxes.

#### GOVERNMENT LOCAL TAX, MISCELLANEOUS ON FIRMS (LTFMS)

Other taxes levied by local governments on firms.

#### GOVERNMENT LOCAL TAX, MISCELLANEOUS ON HOUSEHOLDS (LTHHS)

Other taxes levied by local governments on households.

#### LOCAL MISCELLANEOUS (LTMSC)

Local governments operate some utilities at a profit, generate profits from other business-type activities, and have other minor sources of income. While not a major source of local governmental revenues, these are included as a separate “taxing” authority of local governments.

#### LOCAL TRANSPORTATION (LSTRA)

Transportation is a key element of expenditure at the local level. Other sources of revenue account for only about one-half of the revenue for transportation.

#### LOCAL CORRECTIONS (LSCOR)

Local corrections, including courts, are established to reflect the state’s pattern of expenditures.

#### LSK14

The LSK14 expenditures total over \$80.73 billion. Approximately one-half of these expenditures are funded by California intergovernmental transfers that are guided

by Proposition 98. The remainder of revenues is from local property taxes and other local revenues.

#### LOCAL WELFARE (LSWEL)

Local spending for welfare totals over \$16.37 billion.

#### LOCAL HEALTH (LSHTH)

Local spending for welfare totals over \$8.36 billion.

#### LOCAL OTHER (LSOTH)

The remainder of local governments is aggregated into this local other grouping. Policing, fire, utilities, refuse, and parks and recreation form the majority of this sector. Revenue and expenditure not specifically allocated to other local governments and identified in published reports is allocated to LTMSC.

### **The Rest-of-World Sector**

California has a large, complex economy that maintains trading relationships with other regional economies in the United States and other countries. In SAM, economic activity outside of California is modeled as a single economic unit. Thus, a household in Ohio buying California's oranges is as foreign as a firm in Osaka buying circuit boards built in San Jose. It is assumed that, like in California, households and firms outside of California maximize utility and profits. California exports to Ohio or Osaka compete with local production in those economies and with goods and services produced elsewhere in the world.

Finding reliable data for these exports and for imports from the rest of the United States or the rest of the world is not possible. Foreign trade statistics are notoriously weak. Exports from Pacific ports in California are only partially documented as to their original sources, and transshipments through California for export are frequently identified as exports from California. Imports arriving in California's ports are documented even more poorly as to their final destination. Trade between California and the rest of the United States attracts no usable documentation for trade-analysis purposes. With the advent of the North American Free Trade Agreement (NAFTA), the already-limited documentation of trade between California and two of its three largest bilateral trade partners (Mexico and Canada) is deteriorating.

Faced with weak and unreliable data, SAM relies on Impact Analysis for Planning (IMPLAN) as the primary source for trade data. The IMPLAN contains estimates of interstate and international trade by 528 sectors. These sectors are aggregated into the SAM industry sectors. Completion of SAM involved ad-hoc balancing of the payments to and from the industry sectors using import and export values. Trade equals production minus consumption.

The levels of imports and exports are singularly the weakest and least-supportable data of SAM.

## **RESULTS**

Based upon the methods above, we constructed EDRAM03 and its SAM and other supporting files.

## **DISCUSSION**

There are a number of issues in constructing a state level model that are not satisfactorily resolved and are, perhaps, irresolvable. Trade remains a major point of uncertainty in this class of models. Migration is now better understood than it was when this model was first written, largely because of much longer data series. Further attention to the specification for migration is probably warranted at this time. With the evaluation of AB 1493 (Pavely), it was desired to evaluate policies far into the future. The approach taken there was to construct a policy model with a base year of 2020. That approach could be repeated based upon EDRAM03, but other investigators working with the CEC are pursuing the approach of producing a sequence of models that are linked to each other. The latter is a promising approach to valuing these future policies.

Modeling consumer behavior with a large number of potential goods is always a challenge. If one were to try to do this in a direct econometric fashion, one would be confronted with estimating over 10,000 coefficients to reflect substitution and income-expansion possibilities. The approach taken, here, is the same as that in previous DRAM and EDRAM models. A linear-approximate almost ideal demand system (AIDS) was the estimated base for aggregated goods. Demand for the goods in the industrial sectors was then taken as a fixed proportion of the demand for the aggregated goods. There are two potential issues with this approach. The first has to do with AIDS demand systems in general, and that is that they are not guaranteed to have the properties predicted by economic theory, particularly when prices are very different from the model's initial prices. The second is that the elasticity of demand for the industrial-sector goods is much lower than the elasticity for the aggregate goods. The alternative demand system is Cobb-Douglas, which imposes equal income and price elasticities on all goods. Most particularly, it sets the price elasticity of energy goods well above econometric estimates. We have retained the AIDS representation of demand in EDRAM.

At this point, the family of models that include EDRAM have been used as policy tools for nearly a decade. With this revision, the models are better tuned to potential environmental regulation.

## **SUMMARY AND CONCLUSIONS**

This concludes the discussion of the major features of the SAM. This SAM is the most complete description of transactions in 2003 in the state of California. It has been rectified to reflect the energy flows reported by the EIA, by sector, and therefore provides

the perfect base on which to construct models of the California economy. Because of its use of sectors matched to energy and emissions, it is particularly suited to model the effects of pollution control and energy policy on California. Finally, it is based in 2003, which is the last year that sufficient data exist and quite close to the present, making for more relevant policy runs.

## **RECOMMENDATIONS**

There are a number of issues that are left unaddressed by the current revision of EDAM. Given the current policy climate, it is important to extend the model out to 2020 either by a series of linked models or by a stand-alone 2020 model. The EDAM03 would benefit from a re-evaluation of the consumer-demand sector and from the migration equation. Finally, the experimental work that we have done with energy as a factor of production rather than an intermediate good purchased in fixed proportions should be incorporated into a production version of the model. These are all reasonable tasks for the coming year.

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## GLOSSARY OF TERMS

AIDS:	almost ideal demand system
ARB:	Air Resources Board
BEA:	Bureau of Economic Analysis
Btu:	British thermal units
CAL EPA:	California Environmental Protection Agency
CALEB:	California Energy Balance
CEC:	California Energy Commission
CGE:	computable general equilibrium
DOF:	Department of Finance
DRAM:	Dynamic Revenue Analysis Model
EDRAM:	Environmental Dynamic Revenue Analysis Model
EDRAM03:	Environmental Dynamic Revenue Analysis Model, 2003
EIA:	Energy Information Administration
FSDEF:	federal defense spending
FSNON:	federal nondefense spending
FTB:	Federal Tax Bureau
FTDUT:	duties
FTMSC:	miscellaneous
FTPIT:	personal income tax
FTPRO:	corporation tax
FTSOC:	Social Security
IMPLAN:	Impact Analysis for Planning
IO:	input-output
IRS:	Internal Revenue Service
LSCOR:	local corrections
LSHTH:	local health
LSK14:	local kindergarten through 14
LSOTH:	local other
LSTRA:	local transportation
LSWEL:	local welfare
LTFMS:	government local tax, miscellaneous on firms
LTHHS:	government local tax, miscellaneous on households
LTMSC:	local miscellaneous
LTPRP:	local property tax
L TSAU:	government local tax, sales and use
MT:	marginal tax
NAFTA:	North American Free Trade Agreement
NAICS:	North American Industry Classification System
SAM:	social accounting matrix

## APPENDIX

### THE SECTORS

Table A-1. Industrial Sectoring and Codes

NAICS	NAICS Description	Model Sector
11110	Soybean Farming	AGRIC
11120	Oilseed (except Soybean) Farming	AGRIC
11130	Dry Pea and Bean Farming	AGRIC
11140	Wheat Farming	AGRIC
11150	Corn Farming	AGRIC
11160	Rice Farming	AGRIC
11191	Oilseed and Grain Combination Farming	AGRIC
11199	All Other Grain Farming	AGRIC
11211	Potato Farming	AGRIC
11219	Other Vegetable (except Potato) and Melon Farming	AGRIC
11310	Orange Groves	AGRIC
11320	Citrus (except Orange) Groves	AGRIC
11331	Apple Orchards	AGRIC
11332	Grape Vineyards	AGRIC
11333	Strawberry Farming	AGRIC
11334	Berry (except Strawberry) Farming	AGRIC
11335	Tree Nut Farming	AGRIC
11336	Fruit and Tree Nut Combination Farming	AGRIC
11339	Other Noncitrus Fruit Farming	AGRIC
11411	Mushroom Production	AGRIC
11419	Other Food Crops Grown Under Cover	AGRIC
11421	Nursery and Tree Production	AGRIC
11422	Floriculture Production	AGRIC
11910	Tobacco Farming	AGRIC
11920	Cotton Farming	AGRIC
11930	Sugarcane Farming	AGRIC
11940	Hay Farming	AGRIC
11991	Sugar Beet Farming	AGRIC
11992	Peanut Farming	AGRIC
11998	All Other Miscellaneous Crop Farming	AGRIC
12111	Beef Cattle Ranching and Farming	AGRIC
12112	Cattle Feedlots	AGRIC
12120	Dairy Cattle and Milk Production	AGRIC
12130	Dual-Purpose Cattle Ranching and Farming	AGRIC
12210	Hog and Pig Farming	AGRIC
12310	Chicken Egg Production	AGRIC
12320	Broilers and Other Meat Type Chicken Production	AGRIC
12330	Turkey Production	AGRIC

112340	Poultry Hatcheries	AGRIC
112390	Other Poultry Production	AGRIC
112410	Sheep Farming	AGRIC
112420	Goat Farming	AGRIC
112511	Finfish Farming and Fish Hatcheries	AGRIC
112512	Shellfish Farming	AGRIC
112519	Other Animal Aquaculture	AGRIC
112910	Apiculture	AGRIC
112920	Horses and Other Equine Production	AGRIC
112930	Fur-Bearing Animal and Rabbit Production	AGRIC
112990	All Other Animal Production	AGRIC
113110	Timber Tract Operations	OTHPRI
113210	Forest Nurseries and Gathering of Forest Products	OTHPRI
113310	Logging	OTHPRI
114111	Finfish Fishing	OTHPRI
114112	Shellfish Fishing	OTHPRI
114119	Other Marine Fishing	OTHPRI
114210	Hunting and Trapping	OTHPRI
115111	Cotton Ginning	OTHPRI
115112	Soil Preparation, Planting, and Cultivating	OTHPRI
115113	Crop Harvesting, Primarily by Machine	OTHPRI
115114	Postharvest Crop Activities (except Cotton Ginning)	OTHPRI
115115	Farm Labor Contractors and Crew Leaders	OTHPRI
115116	Farm Management Services	OTHPRI
115210	Support Activities for Animal Production	OTHPRI
115310	Support Activities for Forestry	OTHPRI
211111	Crude Petroleum and Natural Gas Extraction	OILGAS
211112	Natural Gas Liquid Extraction	OILGAS
212111	Bituminous Coal and Lignite Surface Mining	OTHPRI
212112	Bituminous Coal Underground Mining	OTHPRI
212113	Anthracite Mining	OTHPRI
212210	Iron Ore Mining	OTHPRI
212221	Gold Ore Mining	OTHPRI
212222	Silver Ore Mining	OTHPRI
212231	Lead Ore and Zinc Ore Mining	OTHPRI
212234	Copper Ore and Nickel Ore Mining	OTHPRI
212291	Uranium-Radium-Vanadium Ore Mining	OTHPRI
212299	All Other Metal Ore Mining	OTHPRI
212311	Dimension Stone Mining and Quarrying	OTHPRI
212312	Crushed and Broken Limestone Mining and Quarrying	OTHPRI
212313	Crushed and Broken Granite Mining and Quarrying	OTHPRI
212319	Other Crushed and Broken Stone Mining and Quarrying	OTHPRI
212321	Construction Sand and Gravel Mining	OTHPRI
212322	Industrial Sand Mining	OTHPRI
212324	Kaolin and Ball Clay Mining	OTHPRI

212325	Clay and Ceramic and Refractory Minerals Mining	OTHPRI
212391	Potash, Soda, and Borate Mineral Mining	OTHPRI
212392	Phosphate Rock Mining	OTHPRI
212393	Other Chemical and Fertilizer Mineral Mining	OTHPRI
212399	All Other Nonmetallic Mineral Mining	OTHPRI
213111	Drilling Oil and Gas Wells	OTHPRI
213112	Support Activities for Oil and Gas Operations	OTHPRI
213113	Support Activities for Coal Mining	OTHPRI
213114	Support Activities for Metal Mining	OTHPRI
213115	Support Activities for Nonmetallic Minerals (except Fuels)	OTHPRI
221111	Hydroelectric Power Generation	DISTEL
221112	Fossil Fuel Electric Power Generation	DISTEL
221113	Nuclear Electric Power Generation	DISTEL
221119	Other Electric Power Generation	DISTEL
221121	Electric Bulk Power Transmission and Control	DISTEL
221122	Electric Power Distribution	DISTEL
221210	Natural Gas Distribution	DSTGAS
221310	Water Supply and Irrigation Systems	DSTOTH
221320	Sewage Treatment Facilities	DSTOTH
221330	Steam and Air-Conditioning Supply	DSTOTH
236115	New Single-Family Housing Construction (except Operative Builders)	CONRES
236116	New Multifamily Housing Construction (except Operative Builders)	CONRES
236117	New Housing Operative Builders	CONRES
236118	Residential Remodelers	CONRES
236210	Industrial Building Construction	CONNON
236220	Commercial and Institutional Building Construction	CONNON
237110	Water and Sewer Line and Related Structures Construction	CONUTL
237120	Oil and Gas Pipeline and Related Structures Construction	CONUTL
237130	Power and Communication Line and Related Structures Construction	CONUTL
237210	Land Subdivision	CONNON
237310	Highway, Street, and Bridge Construction	CONSTR
237990	Other Heavy and Civil Engineering Construction	CONOTH
238110	Poured Concrete Foundation and Structure Contractors	CONOTH
238111		CONOTH
238112		CONOTH
238120	Structural Steel and Precast Concrete Contractors	CONOTH
238121		CONOTH
238122		CONOTH
238130	Framing Contractors	CONOTH
238131		CONOTH
238132		CONOTH
238140	Masonry Contractors	CONOTH

238141		CONOTH
238142		CONOTH
238150	Glass and Glazing Contractors	CONOTH
238151		CONOTH
238152		CONOTH
238160	Roofing Contractors	CONOTH
238161		CONOTH
238162		CONOTH
238170	Siding Contractors	CONOTH
238171		CONOTH
238172		CONOTH
238190	Other Foundation, Structure, and Building Exterior Contractors	CONOTH
238191		CONOTH
238192		CONOTH
238200	Building Equipment Contractors	CONOTH
238210	Electrical Contractors	CONOTH
238211		CONOTH
238212		CONOTH
238220	Plumbing, Heating, and Air-Conditioning Contractors	CONOTH
238221		CONOTH
238222		CONOTH
238290	Other Building Equipment Contractors	CONOTH
238291		CONOTH
238292		CONOTH
238300	Building Finishing Contractors	CONOTH
238310	Drywall and Insulation Contractors	CONOTH
238311		CONOTH
238312		CONOTH
238320	Painting and Wall Covering Contractors	CONOTH
238321		CONOTH
238322		CONOTH
238330	Flooring Contractors	CONOTH
238331		CONOTH
238332		CONOTH
238340	Tile and Terrazzo Contractors	CONOTH
238341		CONOTH
238342		CONOTH
238350	Finish Carpentry Contractors	CONOTH
238351		CONOTH
238352		CONOTH
238390	Other Building Finishing Contractors	CONOTH
238391		CONOTH
238392		CONOTH
238900	Other Specialty Trade Contractors	CONOTH
238910	Site Preparation Contractors	CONOTH

238911		CONOTH
238912		CONOTH
238990	All Other Specialty Trade Contractors	CONOTH
238991		CONOTH
238992		CONOTH
311111	Dog and Cat Food Manufacturing	FDMFG
311119	Other Animal Food Manufacturing	FDMFG
311211	Flour Milling	FDMFG
311212	Rice Milling	FDMFG
311213	Malt Manufacturing	FDMFG
311221	Wet Corn Milling	FDMFG
311222	Soybean Processing	FDMFG
311223	Other Oilseed Processing	FDMFG
311225	Fats and Oils Refining and Blending	FDMFG
311230	Breakfast Cereal Manufacturing	FDMFG
311311	Sugarcane Mills	FDMFG
311312	Cane Sugar Refining	FDMFG
311313	Beet Sugar Manufacturing	FDMFG
311320	Chocolate and Confectionery Manufacturing from Cacao Beans	FDMFG
311330	Confectionery Manufacturing from Purchased Chocolate	FDMFG
311340	Nonchocolate Confectionery Manufacturing	FDMFG
311411	Frozen Fruit, Juice, and Vegetable Manufacturing	FDPROC
311412	Frozen Specialty Food Manufacturing	FDPROC
311421	Fruit and Vegetable Canning	FDPROC
311422	Specialty Canning	FDPROC
311423	Dried and Dehydrated Food Manufacturing	FDPROC
311511	Fluid Milk Manufacturing	FDOTH
311512	Creamery Butter Manufacturing	FDOTH
311513	Cheese Manufacturing	FDOTH
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	FDOTH
311520	Ice Cream and Frozen Dessert Manufacturing	FDOTH
311611	Animal (except Poultry) Slaughtering	FDOTH
311612	Meat Processed from Carcasses	FDOTH
311613	Rendering and Meat Byproduct Processing	FDOTH
311615	Poultry Processing	FDOTH
311711	Seafood Canning	FDOTH
311712	Fresh and Frozen Seafood Processing	FDOTH
311811	Retail Bakeries	FDOTH
311812	Commercial Bakeries	FDOTH
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	FDOTH
311821	Cookie and Cracker Manufacturing	FDOTH
311822	Flour Mixes and Dough Manufacturing from Purchased Flour	FDOTH
311823	Dry Pasta Manufacturing	FDOTH

311830	Tortilla Manufacturing	FDOTH
311911	Roasted Nuts and Peanut Butter Manufacturing	FDOTH
311919	Other Snack Food Manufacturing	FDOTH
311920	Coffee and Tea Manufacturing	FDOTH
311930	Flavoring Syrup and Concentrate Manufacturing	FDOTH
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	FDOTH
311942	Spice and Extract Manufacturing	FDOTH
311991	Perishable Prepared Food Manufacturing	FDOTH
311999	All Other Miscellaneous Food Manufacturing	FDOTH
312111	Soft Drink Manufacturing	BEVTOB
312112	Bottled Water Manufacturing	BEVTOB
312113	Ice Manufacturing	BEVTOB
312120	Breweries	BEVTOB
312130	Wineries	BEVTOB
312140	Distilleries	BEVTOB
312210	Tobacco Stemming and Redrying	BEVTOB
312221	Cigarette Manufacturing	BEVTOB
312229	Other Tobacco Product Manufacturing	BEVTOB
313111	Yarn Spinning Mills	TEXLTH
313112	Yarn Texturizing, Throwing, and Twisting Mills	TEXLTH
313113	Thread Mills	TEXLTH
313210	Broadwoven Fabric Mills	TEXLTH
313221	Narrow Fabric Mills	TEXLTH
313222	Schiffli Machine Embroidery	TEXLTH
313230	Nonwoven Fabric Mills	TEXLTH
313241	Weft Knit Fabric Mills	TEXLTH
313249	Other Knit Fabric and Lace Mills	TEXLTH
313311	Broadwoven Fabric Finishing Mills	TEXLTH
313312	Textile and Fabric Finishing (except Broadwoven Fabric) Mills	TEXLTH
313320	Fabric Coating Mills	TEXLTH
314110	Carpet and Rug Mills	TEXLTH
314121	Curtain and Drapery Mills	TEXLTH
314129	Other Household Textile Product Mills	TEXLTH
314911	Textile Bag Mills	TEXLTH
314912	Canvas and Related Product Mills	TEXLTH
314991	Rope, Cordage, and Twine Mills	TEXLTH
314992	Tire Cord and Tire Fabric Mills	TEXLTH
314999	All Other Miscellaneous Textile Product Mills	TEXLTH
315111	Sheer Hosiery Mills	APPREL
315119	Other Hosiery and Sock Mills	APPREL
315191	Outerwear Knitting Mills	APPREL
315192	Underwear and Nightwear Knitting Mills	APPREL
315211	Men's and Boys' Cut and Sew Apparel Contractors	APPREL
315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	APPREL

315221	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing	APPREL
315222	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing	APPREL
315223	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing	APPREL
315224	Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing	APPREL
315225	Men's and Boys' Cut and Sew Work Clothing Manufacturing	APPREL
315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	APPREL
315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing	APPREL
315232	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing	APPREL
315233	Women's and Girls' Cut and Sew Dress Manufacturing	APPREL
315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing	APPREL
315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	APPREL
315291	Infants' Cut and Sew Apparel Manufacturing	APPREL
315292	Fur and Leather Apparel Manufacturing	APPREL
315299	All Other Cut and Sew Apparel Manufacturing	APPREL
315991	Hat, Cap, and Millinery Manufacturing	APPREL
315992	Glove and Mitten Manufacturing	APPREL
315993	Men's and Boys' Neckwear Manufacturing	APPREL
315999	Other Apparel Accessories and Other Apparel Manufacturing	APPREL
316110	Leather and Hide Tanning and Finishing	TEXLTH
316211	Rubber and Plastics Footwear Manufacturing	TEXLTH
316212	House Slipper Manufacturing	TEXLTH
316213	Men's Footwear (except Athletic) Manufacturing	TEXLTH
316214	Women's Footwear (except Athletic) Manufacturing	TEXLTH
316219	Other Footwear Manufacturing	TEXLTH
316991	Luggage Manufacturing	TEXLTH
316992	Women's Handbag and Purse Manufacturing	TEXLTH
316993	Personal Leather Good (except Women's Handbag and Purse) Manufacturing	TEXLTH
316999	All Other Leather Good Manufacturing	TEXLTH
321113	Sawmills	WOOD
321114	Wood Preservation	WOOD
321211	Hardwood Veneer and Plywood Manufacturing	WOOD
321212	Softwood Veneer and Plywood Manufacturing	WOOD
321213	Engineered Wood Member (except Truss) Manufacturing	WOOD
321214	Truss Manufacturing	WOOD
321219	Reconstituted Wood Product Manufacturing	WOOD
321911	Wood Window and Door Manufacturing	WOOD
321912	Cut Stock, Resawing Lumber, and Planing	WOOD

321918	Other Millwork (including Flooring)	WOOD
321920	Wood Container and Pallet Manufacturing	WOOD
321991	Manufactured Home (Mobile Home) Manufacturing	WOOD
321992	Prefabricated Wood Building Manufacturing	WOOD
321999	All Other Miscellaneous Wood Product Manufacturing	WOOD
322110	Pulp Mills	PLPMLL
322121	Paper (except Newsprint) Mills	PLPMLL
322122	Newsprint Mills	PLPMLL
322130	Paperboard Mills	PLPMLL
322211	Corrugated and Solid Fiber Box Manufacturing	PAPER
322212	Folding Paperboard Box Manufacturing	PAPER
322213	Setup Paperboard Box Manufacturing	PAPER
322214	Fiber Can, Tube, Drum, and Similar Products Manufacturing	PAPER
322215	Nonfolding Sanitary Food Container Manufacturing	PAPER
322221	Coated and Laminated Packaging Paper and Plastics Film Manufacturing	PAPER
322222	Coated and Laminated Paper Manufacturing	PAPER
322223	Plastics, Foil, and Coated Paper Bag Manufacturing	PAPER
322224	Uncoated Paper and Multiwall Bag Manufacturing	PAPER
322225	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses	PAPER
322226	Surface-Coated Paperboard Manufacturing	PAPER
322231	Die-Cut Paper and Paperboard Office Supplies Manufacturing	PAPER
322232	Envelope Manufacturing	PAPER
322233	Stationery, Tablet, and Related Product Manufacturing	PAPER
322291	Sanitary Paper Product Manufacturing	PAPER
322299	All Other Converted Paper Product Manufacturing	PAPER
323110	Commercial Lithographic Printing	PRINT
323111	Commercial Gravure Printing	PRINT
323112	Commercial Flexographic Printing	PRINT
323113	Commercial Screen Printing	PRINT
323114	Quick Printing	PRINT
323115	Digital Printing	PRINT
323116	Manifold Business Forms Printing	PRINT
323117	Books Printing	PRINT
323118	Blankbook, Loose-leaf Binders, and Devices Manufacturing	PRINT
323119	Other Commercial Printing	PRINT
323121	Tradebinding and Related Work	PRINT
323122	Prepress Services	PRINT
324110	Petroleum Refineries	OILREF
324121	Asphalt Paving Mixture and Block Manufacturing	OILREF
324122	Asphalt Shingle and Coating Materials Manufacturing	OILREF
324191	Petroleum Lubricating Oil and Grease Manufacturing	OILREF
324199	All Other Petroleum and Coal Products Manufacturing	OILREF

325110	Petrochemical Manufacturing	CHMBAS
325120	Industrial Gas Manufacturing	INDGAS
325131	Inorganic Dye and Pigment Manufacturing	CHMBAS
325132	Synthetic Organic Dye and Pigment Manufacturing	CHMBAS
325181	Alkalies and Chlorine Manufacturing	CHMBAS
325182	Carbon Black Manufacturing	CHMBAS
325188	All Other Basic Inorganic Chemical Manufacturing	CHMBAS
325191	Gum and Wood Chemical Manufacturing	CHMBAS
325192	Cyclic Crude and Intermediate Manufacturing	CHMBAS
325193	Ethyl Alcohol Manufacturing	CHMBAS
325199	All Other Basic Organic Chemical Manufacturing	CHMBAS
325211	Plastics Material and Resin Manufacturing	CHMBAS
325212	Synthetic Rubber Manufacturing	CHMBAS
325221	Cellulosic Organic Fiber Manufacturing	CHMBAS
325222	Noncellulosic Organic Fiber Manufacturing	CHMBAS
325311	Nitrogenous Fertilizer Manufacturing	CHMBAS
325312	Phosphatic Fertilizer Manufacturing	CHMBAS
325314	Fertilizer (Mixing Only) Manufacturing	CHMBAS
325320	Pesticide and Other Agricultural Chemical Manufacturing	CHMBAS
325411	Medicinal and Botanical Manufacturing	CHMDRG
325412	Pharmaceutical Preparation Manufacturing	CHMDRG
325413	In-Vitro Diagnostic Substance Manufacturing	CHMDRG
325414	Biological Product (except Diagnostic) Manufacturing	CHMDRG
325510	Paint and Coating Manufacturing	CHMOTH
325520	Adhesive Manufacturing	CHMOTH
325611	Soap and Other Detergent Manufacturing	CHMSPS
325612	Polish and Other Sanitation Good Manufacturing	CHMSPS
325613	Surface Active Agent Manufacturing	CHMSPS
325620	Toilet Preparation Manufacturing	CHMSPS
325910	Printing Ink Manufacturing	CHMOTH
325920	Explosives Manufacturing	CHMOTH
325991	Custom Compounding of Purchased Resins	CHMOTH
325992	Photographic Film, Paper, Plate, and Chemical Manufacturing	CHMOTH
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	CHMOTH
326111	Plastics Bag Manufacturing	PLASTC
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	PLASTC
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	PLASTC
326121	Unlaminated Plastics Profile Shape Manufacturing	PLASTC
326122	Plastics Pipe and Pipe Fitting Manufacturing	PLASTC
326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	PLASTC
326140	Polystyrene Foam Product Manufacturing	PLASTC
326150	Urethane and Other Foam Product (except Polystyrene)	PLASTC

	Manufacturing	
326160	Plastics Bottle Manufacturing	PLASTC
326191	Plastics Plumbing Fixture Manufacturing	PLASTC
326192	Resilient Floor Covering Manufacturing	PLASTC
326199	All Other Plastics Product Manufacturing	PLASTC
326211	Tire Manufacturing (except Retreading)	PLASTC
326212	Tire Retreading	PLASTC
326220	Rubber and Plastics Hoses and Belting Manufacturing	PLASTC
326291	Rubber Product Manufacturing for Mechanical Use	PLASTC
326299	All Other Rubber Product Manufacturing	PLASTC
327111	Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing	SCAOTH
327112	Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing	SCAOTH
327113	Porcelain Electrical Supply Manufacturing	SCAOTH
327121	Brick and Structural Clay Tile Manufacturing	SCAOTH
327122	Ceramic Wall and Floor Tile Manufacturing	SCAOTH
327123	Other Structural Clay Product Manufacturing	SCAOTH
327124	Clay Refractory Manufacturing	SCAOTH
327125	Nonclay Refractory Manufacturing	SCAOTH
327211	Flat Glass Manufacturing	GLASS
327212	Other Pressed and Blown Glass and Glassware Manufacturing	GLASS
327213	Glass Container Manufacturing	GLASS
327215	Glass Product Manufacturing Made of Purchased Glass	GLASS
327310	Cement Manufacturing	CEMENT
327320	Ready-Mix Concrete Manufacturing	CONCRT
327331	Concrete Block and Brick Manufacturing	CONCRT
327332	Concrete Pipe Manufacturing	CONCRT
327390	Other Concrete Product Manufacturing	CONCRT
327410	Lime Manufacturing	SCAOTH
327420	Gypsum Product Manufacturing	SCAOTH
327910	Abrasive Product Manufacturing	SCAOTH
327991	Cut Stone and Stone Product Manufacturing	SCAOTH
327992	Ground or Treated Mineral and Earth Manufacturing	SCAOTH
327993	Mineral Wool Manufacturing	SCAOTH
327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	SCAOTH
331111	Iron and Steel Mills	PRIMTL
331112	Electrometallurgical Ferroalloy Product Manufacturing	PRIMTL
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	PRIMTL
331221	Rolled Steel Shape Manufacturing	PRIMTL
331222	Steel Wire Drawing	PRIMTL
331311	Alumina Refining	PRIMTL
331312	Primary Aluminum Production	PRIMTL
331314	Secondary Smelting and Alloying of Aluminum	PRIMTL

331315	Aluminum Sheet, Plate, and Foil Manufacturing	PRIMTL
331316	Aluminum Extruded Product Manufacturing	PRIMTL
331319	Other Aluminum Rolling and Drawing	PRIMTL
331411	Primary Smelting and Refining of Copper	PRIMTL
331419	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)	PRIMTL
331421	Copper Rolling, Drawing, and Extruding	PRIMTL
331422	Copper Wire (except Mechanical) Drawing	PRIMTL
331423	Secondary Smelting, Refining, and Alloying of Copper	PRIMTL
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	PRIMTL
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	PRIMTL
331511	Iron Foundries	PRIMTL
331512	Steel Investment Foundries	PRIMTL
331513	Steel Foundries (except Investment)	PRIMTL
331521	Aluminum Die-Casting Foundries	PRIMTL
331522	Nonferrous (except Aluminum) Die-Casting Foundries	PRIMTL
331524	Aluminum Foundries (except Die-Casting)	PRIMTL
331525	Copper Foundries (except Die-Casting)	PRIMTL
331528	Other Nonferrous Foundries (except Die-Casting)	PRIMTL
332111	Iron and Steel Forging	MTLFAB
332112	Nonferrous Forging	MTLFAB
332114	Custom Roll Forming	MTLFAB
332115	Crown and Closure Manufacturing	MTLFAB
332116	Metal Stamping	MTLFAB
332117	Powder Metallurgy Part Manufacturing	MTLFAB
332211	Cutlery and Flatware (except Precious) Manufacturing	MTLFAB
332212	Hand and Edge Tool Manufacturing	MTLFAB
332213	Saw Blade and Handsaw Manufacturing	MTLFAB
332214	Kitchen Utensil, Pot, and Pan Manufacturing	MTLFAB
332311	Prefabricated Metal Building and Component Manufacturing	MTLFAB
332312	Fabricated Structural Metal Manufacturing	MTLFAB
332313	Plate Work Manufacturing	MTLFAB
332321	Metal Window and Door Manufacturing	MTLFAB
332322	Sheet Metal Work Manufacturing	MTLFAB
332323	Ornamental and Architectural Metal Work Manufacturing	MTLFAB
332410	Power Boiler and Heat Exchanger Manufacturing	MTLFAB
332420	Metal Tank (Heavy Gauge) Manufacturing	MTLFAB
332431	Metal Can Manufacturing	MTLFAB
332439	Other Metal Container Manufacturing	MTLFAB
332510	Hardware Manufacturing	MTLFAB
332611	Spring (Heavy Gauge) Manufacturing	MTLFAB
332612	Spring (Light Gauge) Manufacturing	MTLFAB
332618	Other Fabricated Wire Product Manufacturing	MTLFAB

332710	Machine Shops	MTLFAB
332721	Precision Turned Product Manufacturing	MTLFAB
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	MTLFAB
332811	Metal Heat Treating	MTLFAB
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	MTLFAB
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	MTLFAB
332911	Industrial Valve Manufacturing	MTLFAB
332912	Fluid Power Valve and Hose Fitting Manufacturing	MTLFAB
332913	Plumbing Fixture Fitting and Trim Manufacturing	MTLFAB
332919	Other Metal Valve and Pipe Fitting Manufacturing	MTLFAB
332991	Ball and Roller Bearing Manufacturing	MTLFAB
332992	Small Arms Ammunition Manufacturing	MTLFAB
332993	Ammunition (except Small Arms) Manufacturing	MTLFAB
332994	Small Arms Manufacturing	MTLFAB
332995	Other Ordnance and Accessories Manufacturing	MTLFAB
332996	Fabricated Pipe and Pipe Fitting Manufacturing	MTLFAB
332997	Industrial Pattern Manufacturing	MTLFAB
332998	Enameled Iron and Metal Sanitary Ware Manufacturing	MTLFAB
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	MTLFAB
333111	Farm Machinery and Equipment Manufacturing	MACHIN
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	MACHIN
333120	Construction Machinery Manufacturing	MACHIN
333131	Mining Machinery and Equipment Manufacturing	MACHIN
333132	Oil and Gas Field Machinery and Equipment Manufacturing	MACHIN
333210	Sawmill and Woodworking Machinery Manufacturing	MACHIN
333220	Plastics and Rubber Industry Machinery Manufacturing	MACHIN
333291	Paper Industry Machinery Manufacturing	MACHIN
333292	Textile Machinery Manufacturing	MACHIN
333293	Printing Machinery and Equipment Manufacturing	MACHIN
333294	Food Product Machinery Manufacturing	MACHIN
333295	Semiconductor Machinery Manufacturing	MACHIN
333298	All Other Industrial Machinery Manufacturing	MACHIN
333311	Automatic Vending Machine Manufacturing	MACHIN
333312	Commercial Laundry, Dry cleaning, and Pressing Machine Manufacturing	MACHIN
333313	Office Machinery Manufacturing	MACHIN
333314	Optical Instrument and Lens Manufacturing	MACHIN
333315	Photographic and Photocopying Equipment Manufacturing	MACHIN
333319	Other Commercial and Service Industry Machinery Manufacturing	MACHIN
333411	Air Purification Equipment Manufacturing	MACHIN
333412	Industrial and Commercial Fan and Blower Manufacturing	MACHIN

333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	MACHIN
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	MACHIN
333511	Industrial Mold Manufacturing	MACHIN
333512	Machine Tool (Metal Cutting Types) Manufacturing	MACHIN
333513	Machine Tool (Metal Forming Types) Manufacturing	MACHIN
333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	MACHIN
333515	Cutting Tool and Machine Tool Accessory Manufacturing	MACHIN
333516	Rolling Mill Machinery and Equipment Manufacturing	MACHIN
333518	Other Metalworking Machinery Manufacturing	MACHIN
333611	Turbine and Turbine Generator Set Units Manufacturing	MACHIN
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	MACHIN
333613	Mechanical Power Transmission Equipment Manufacturing	MACHIN
333618	Other Engine Equipment Manufacturing	MACHIN
333911	Pump and Pumping Equipment Manufacturing	MACHIN
333912	Air and Gas Compressor Manufacturing	MACHIN
333913	Measuring and Dispensing Pump Manufacturing	MACHIN
333921	Elevator and Moving Stairway Manufacturing	MACHIN
333922	Conveyor and Conveying Equipment Manufacturing	MACHIN
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	MACHIN
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	MACHIN
333991	Power-Driven Hand-tool Manufacturing	MACHIN
333992	Welding and Soldering Equipment Manufacturing	MACHIN
333993	Packaging Machinery Manufacturing	MACHIN
333994	Industrial Process Furnace and Oven Manufacturing	MACHIN
333995	Fluid Power Cylinder and Actuator Manufacturing	MACHIN
333996	Fluid Power Pump and Motor Manufacturing	MACHIN
333997	Scale and Balance (except Laboratory) Manufacturing	MACHIN
333999	All Other Miscellaneous General Purpose Machinery Manufacturing	MACHIN
334111	Electronic Computer Manufacturing	CMPMFG
334112	Computer Storage Device Manufacturing	CMPMFG
334113	Computer Terminal Manufacturing	CMPMFG
334119	Other Computer Peripheral Equipment Manufacturing	CMPMFG
334210	Telephone Apparatus Manufacturing	CMPCMM
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	CMPCMM
334290	Other Communications Equipment Manufacturing	CMPCMM
334310	Audio and Video Equipment Manufacturing	CMPRTS
334411	Electron Tube Manufacturing	CMPRTS

334412	Bare Printed Circuit Board Manufacturing	CMPRTS
334413	Semiconductor and Related Device Manufacturing	CMPRTS
334414	Electronic Capacitor Manufacturing	CMPRTS
334415	Electronic Resistor Manufacturing	CMPRTS
334416	Electronic Coil, Transformer, and Other Inductor Manufacturing	CMPRTS
334417	Electronic Connector Manufacturing	CMPRTS
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	CMPRTS
334419	Other Electronic Component Manufacturing	CMPRTS
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	CMPINS
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	CMPINS
334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	CMPINS
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	CMPINS
334514	Totalizing Fluid Meter and Counting Device Manufacturing	CMPINS
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	CMPINS
334516	Analytical Laboratory Instrument Manufacturing	CMPINS
334517	Irradiation Apparatus Manufacturing	CMPINS
334518	Watch, Clock, and Part Manufacturing	CMPINS
334519	Other Measuring and Controlling Device Manufacturing	CMPINS
334611	Software Reproducing	CMPMED
334612	Prerecorded Compact Disc (except Software), Tape, and Record Reproducing	CMPMED
334613	Magnetic and Optical Recording Media Manufacturing	CMPMED
335110	Electric Lamp Bulb and Part Manufacturing	ELCTRC
335121	Residential Electric Lighting Fixture Manufacturing	ELCTRC
335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	ELCTRC
335129	Other Lighting Equipment Manufacturing	ELCTRC
335211	Electric Housewares and Household Fan Manufacturing	ELCTRC
335212	Household Vacuum Cleaner Manufacturing	ELCTRC
335221	Household Cooking Appliance Manufacturing	ELCTRC
335222	Household Refrigerator and Home Freezer Manufacturing	ELCTRC
335224	Household Laundry Equipment Manufacturing	ELCTRC
335228	Other Major Household Appliance Manufacturing	ELCTRC
335311	Power, Distribution, and Specialty Transformer Manufacturing	ELCTRC
335312	Motor and Generator Manufacturing	ELCTRC
335313	Switchgear and Switchboard Apparatus Manufacturing	ELCTRC
335314	Relay and Industrial Control Manufacturing	ELCTRC

335911	Storage Battery Manufacturing	ELCTRC
335912	Primary Battery Manufacturing	ELCTRC
335921	Fiber Optic Cable Manufacturing	ELCTRC
335929	Other Communication and Energy Wire Manufacturing	ELCTRC
335931	Current-Carrying Wiring Device Manufacturing	ELCTRC
335932	Noncurrent-Carrying Wiring Device Manufacturing	ELCTRC
335991	Carbon and Graphite Product Manufacturing	ELCTRC
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	ELCTRC
336111	Automobile Manufacturing	AUTOMF
336112	Light Truck and Utility Vehicle Manufacturing	AUTOMF
336120	Heavy Duty Truck Manufacturing	VEHMFG
336211	Motor Vehicle Body Manufacturing	VEHBDY
336212	Truck Trailer Manufacturing	VEHMFG
336213	Motor Home Manufacturing	VEHMFG
336214	Travel Trailer and Camper Manufacturing	VEHMFG
336311	Carburetor, Piston, Piston Ring, and Valve Manufacturing	VEHPRT
336312	Gasoline Engine and Engine Parts Manufacturing	VEHPRT
336321	Vehicular Lighting Equipment Manufacturing	VEHPRT
336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing	VEHPRT
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	VEHPRT
336340	Motor Vehicle Brake System Manufacturing	VEHPRT
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	VEHPRT
336360	Motor Vehicle Seating and Interior Trim Manufacturing	VEHPRT
336370	Motor Vehicle Metal Stamping	VEHPRT
336391	Motor Vehicle Air-Conditioning Manufacturing	VEHPRT
336399	All Other Motor Vehicle Parts Manufacturing	VEHPRT
336411	Aircraft Manufacturing	VEHAER
336412	Aircraft Engine and Engine Parts Manufacturing	VEHAER
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	VEHAER
336414	Guided Missile and Space Vehicle Manufacturing	VEHAER
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	VEHAER
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	VEHAER
336510	Railroad Rolling Stock Manufacturing	VEHOTH
336611	Ship Building and Repairing	VEHSHP
336612	Boat Building	VEHSHP
336991	Motorcycle, Bicycle, and Parts Manufacturing	VEHOTH
336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing	VEHOTH
336999	All Other Transportation Equipment Manufacturing	VEHOTH
337110	Wood Kitchen Cabinet and Countertop Manufacturing	FURN

337121	Upholstered Household Furniture Manufacturing	FURN
337122	Nonupholstered Wood Household Furniture Manufacturing	FURN
337124	Metal Household Furniture Manufacturing	FURN
337125	Household Furniture (except Wood and Metal) Manufacturing	FURN
337127	Institutional Furniture Manufacturing	FURN
337129	Wood Television, Radio, and Sewing Machine Cabinet Manufacturing	FURN
337211	Wood Office Furniture Manufacturing	FURN
337212	Custom Architectural Woodwork and Millwork Manufacturing	FURN
337214	Office Furniture (except Wood) Manufacturing	FURN
337215	Showcase, Partition, Shelving, and Locker Manufacturing	FURN
337910	Mattress Manufacturing	FURN
337920	Blind and Shade Manufacturing	FURN
339111	Laboratory Apparatus and Furniture Manufacturing	LABDNT
339112	Surgical and Medical Instrument Manufacturing	LABDNT
339113	Surgical Appliance and Supplies Manufacturing	LABDNT
339114	Dental Equipment and Supplies Manufacturing	LABDNT
339115	Ophthalmic Goods Manufacturing	LABDNT
339116	Dental Laboratories	LABDNT
339911	Jewelry (except Costume) Manufacturing	MSCMFG
339912	Silverware and Hollowware Manufacturing	MSCMFG
339913	Jewelers' Material and Lapidary Work Manufacturing	MSCMFG
339914	Costume Jewelry and Novelty Manufacturing	MSCMFG
339920	Sporting and Athletic Goods Manufacturing	MSCMFG
339931	Doll and Stuffed Toy Manufacturing	MSCMFG
339932	Game, Toy, and Children's Vehicle Manufacturing	MSCMFG
339941	Pen and Mechanical Pencil Manufacturing	MSCMFG
339942	Lead Pencil and Art Good Manufacturing	MSCMFG
339943	Marking Device Manufacturing	MSCMFG
339944	Carbon Paper and Inked Ribbon Manufacturing	MSCMFG
339950	Sign Manufacturing	MSCMFG
339991	Gasket, Packing, and Sealing Device Manufacturing	MSCMFG
339992	Musical Instrument Manufacturing	MSCMFG
339993	Fastener, Button, Needle, and Pin Manufacturing	MSCMFG
339994	Broom, Brush, and Mop Manufacturing	MSCMFG
339995	Burial Casket Manufacturing	MSCMFG
339999	All Other Miscellaneous Manufacturing	MSCMFG
423110	Automobile and Other Motor Vehicle Merchant Wholesalers	WHL DUR
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	WHL DUR
423130	Tire and Tube Merchant Wholesalers	WHL DUR
423140	Motor Vehicle Parts (Used) Merchant Wholesalers	WHL DUR
423210	Furniture Merchant Wholesalers	WHL DUR

423220	Home Furnishing Merchant Wholesalers	WHL DUR
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	WHL DUR
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	WHL DUR
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers	WHL DUR
423390	Other Construction Material Merchant Wholesalers	WHL DUR
423410	Photographic Equipment and Supplies Merchant Wholesalers	WHL DUR
423420	Office Equipment Merchant Wholesalers	WHL DUR
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	WHL DUR
423440	Other Commercial Equipment Merchant Wholesalers	WHL DUR
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	WHL DUR
423460	Ophthalmic Goods Merchant Wholesalers	WHL DUR
423490	Other Professional Equipment and Supplies Merchant Wholesalers	WHL DUR
423510	Metal Service Centers and Other Metal Merchant Wholesalers	WHL DUR
423520	Coal and Other Mineral and Ore Merchant Wholesalers	WHL DUR
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	WHL DUR
423620	Electrical and Electronic Appliance, Television, and Radio Set Merchant Wholesalers	WHL DUR
423690	Other Electronic Parts and Equipment Merchant Wholesalers	WHL DUR
423710	Hardware Merchant Wholesalers	WHL DUR
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	WHL DUR
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	WHL DUR
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	WHL DUR
423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	WHL DUR
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	WHL DUR
423830	Industrial Machinery and Equipment Merchant Wholesalers	WHL DUR
423840	Industrial Supplies Merchant Wholesalers	WHL DUR
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	WHL DUR
423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	WHL DUR
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	WHL DUR
423920	Toy and Hobby Goods and Supplies Merchant Wholesalers	WHL DUR
423930	Recyclable Material Merchant Wholesalers	WHL DUR
423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers	WHL DUR

423990	Other Miscellaneous Durable Goods Merchant Wholesalers	WHLDUR
424110	Printing and Writing Paper Merchant Wholesalers	WHLNON
424120	Stationery and Office Supplies Merchant Wholesalers	WHLNON
424130	Industrial and Personal Service Paper Merchant Wholesalers	WHLNON
424210	Drugs and Druggists' Sundries Merchant Wholesalers	WHLNON
424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	WHLNON
424320	Men's and Boys' Clothing and Furnishings Merchant Wholesalers	WHLNON
424330	Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	WHLNON
424340	Footwear Merchant Wholesalers	WHLNON
424410	General Line Grocery Merchant Wholesalers	WHLNON
424420	Packaged Frozen Food Merchant Wholesalers	WHLNON
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	WHLNON
424440	Poultry and Poultry Product Merchant Wholesalers	WHLNON
424450	Confectionery Merchant Wholesalers	WHLNON
424460	Fish and Seafood Merchant Wholesalers	WHLNON
424470	Meat and Meat Product Merchant Wholesalers	WHLNON
424480	Fresh Fruit and Vegetable Merchant Wholesalers	WHLNON
424490	Other Grocery and Related Products Merchant Wholesalers	WHLNON
424510	Grain and Field Bean Merchant Wholesalers	WHLNON
424520	Livestock Merchant Wholesalers	WHLNON
424590	Other Farm Product Raw Material Merchant Wholesalers	WHLNON
424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	WHLNON
424690	Other Chemical and Allied Products Merchant Wholesalers	WHLNON
424710	Petroleum Bulk Stations and Terminals	WHLNON
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	WHLNON
424810	Beer and Ale Merchant Wholesalers	WHLNON
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers	WHLNON
424910	Farm Supplies Merchant Wholesalers	WHLNON
424920	Book, Periodical, and Newspaper Merchant Wholesalers	WHLNON
424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	WHLNON
424940	Tobacco and Tobacco Product Merchant Wholesalers	WHLNON
424950	Paint, Varnish, and Supplies Merchant Wholesalers	WHLNON
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	WHLNON
425110	Business to Business Electronic Markets	WHLAGN
425120	Wholesale Trade Agents and Brokers	WHLAGN
441110	New Car Dealers	RETAIL

441120	Used Car Dealers	RETAIL
441210	Recreational Vehicle Dealers	RETAIL
441221	Motorcycle Dealers	RETAIL
441222	Boat Dealers	RETAIL
441229	All Other Motor Vehicle Dealers	RETAIL
441310	Automotive Parts and Accessories Stores	RETAIL
441320	Tire Dealers	RETAIL
442110	Furniture Stores	RETAIL
442210	Floor Covering Stores	RETAIL
442291	Window Treatment Stores	RETAIL
442299	All Other Home Furnishings Stores	RETAIL
443111	Household Appliance Stores	RETAIL
443112	Radio, Television, and Other Electronics Stores	RETAIL
443120	Computer and Software Stores	RETAIL
443130	Camera and Photographic Supplies Stores	RETAIL
444110	Home Centers	RETAIL
444120	Paint and Wallpaper Stores	RETAIL
444130	Hardware Stores	RETAIL
444190	Other Building Material Dealers	RETAIL
444210	Outdoor Power Equipment Stores	RETAIL
444220	Nursery, Garden Center, and Farm Supply Stores	RETAIL
445110	Supermarkets and Other Grocery (except Convenience) Stores	RETAIL
445120	Convenience Stores	RETAIL
445210	Meat Markets	RETAIL
445220	Fish and Seafood Markets	RETAIL
445230	Fruit and Vegetable Markets	RETAIL
445291	Baked Goods Stores	RETAIL
445292	Confectionery and Nut Stores	RETAIL
445299	All Other Specialty Food Stores	RETAIL
445310	Beer, Wine, and Liquor Stores	RETAIL
446110	Pharmacies and Drug Stores	RETAIL
446120	Cosmetics, Beauty Supplies, and Perfume Stores	RETAIL
446130	Optical Goods Stores	RETAIL
446191	Food (Health) Supplement Stores	RETAIL
446199	All Other Health and Personal Care Stores	RETAIL
447110	Gasoline Stations with Convenience Stores	RETAIL
447190	Other Gasoline Stations	RETAIL
448110	Men's Clothing Stores	RETAIL
448120	Women's Clothing Stores	RETAIL
448130	Children's and Infants' Clothing Stores	RETAIL
448140	Family Clothing Stores	RETAIL
448150	Clothing Accessories Stores	RETAIL
448190	Other Clothing Stores	RETAIL
448210	Shoe Stores	RETAIL
448310	Jewelry Stores	RETAIL

448320	Luggage and Leather Goods Stores	RETAIL
451110	Sporting Goods Stores	RETAIL
451120	Hobby, Toy, and Game Stores	RETAIL
451130	Sewing, Needlework, and Piece Goods Stores	RETAIL
451140	Musical Instrument and Supplies Stores	RETAIL
451211	Book Stores	RETAIL
451212	News Dealers and Newsstands	RETAIL
451220	Prerecorded Tape, Compact Disc, and Record Stores	RETAIL
452111	Department Stores (except Discount Department Stores)	RETAIL
452112	Discount Department Stores	RETAIL
452910	Warehouse Clubs and Supercenters	RETAIL
452990	All Other General Merchandise Stores	RETAIL
453110	Florists	RETAIL
453210	Office Supplies and Stationery Stores	RETAIL
453220	Gift, Novelty, and Souvenir Stores	RETAIL
453310	Used Merchandise Stores	RETAIL
453910	Pet and Pet Supplies Stores	RETAIL
453920	Art Dealers	RETAIL
453930	Manufactured (Mobile) Home Dealers	RETAIL
453991	Tobacco Stores	RETAIL
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	RETAIL
454111	Electronic Shopping	RETAIL
454112	Electronic Auctions	RETAIL
454113	Mail-Order Houses	RETAIL
454210	Vending Machine Operators	RETAIL
454311	Heating Oil Dealers	RETAIL
454312	Liquefied Petroleum Gas (Bottled Gas) Dealers	RETAIL
454319	Other Fuel Dealers	RETAIL
454390	Other Direct Selling Establishments	RETAIL
481111	Scheduled Passenger Air Transportation	TRANSP
481112	Scheduled Freight Air Transportation	TRANSP
481211	Nonscheduled Chartered Passenger Air Transportation	TRANSP
481212	Nonscheduled Chartered Freight Air Transportation	TRANSP
481219	Other Nonscheduled Air Transportation	TRANSP
482111	Line-Haul Railroads	TRANSP
482112	Short Line Railroads	TRANSP
483111	Deep Sea Freight Transportation	TRANSP
483112	Deep Sea Passenger Transportation	TRANSP
483113	Coastal and Great Lakes Freight Transportation	TRANSP
483114	Coastal and Great Lakes Passenger Transportation	TRANSP
483211	Inland Water Freight Transportation	TRANSP
483212	Inland Water Passenger Transportation	TRANSP
484110	General Freight Trucking, Local	TRANSP
484121	General Freight Trucking, Long-Distance, Truckload	TRANSP

484122	General Freight Trucking, Long-Distance, Less Than Truckload	TRANSP
484210	Used Household and Office Goods Moving	TRANSP
484220	Specialized Freight (except Used Goods) Trucking, Local	TRANSP
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	TRANSP
485111	Mixed Mode Transit Systems	TRANSP
485112	Commuter Rail Systems	TRANSP
485113	Bus and Other Motor Vehicle Transit Systems	TRANSP
485119	Other Urban Transit Systems	TRANSP
485210	Interurban and Rural Bus Transportation	TRANSP
485310	Taxi Service	TRANSP
485320	Limousine Service	TRANSP
485410	School and Employee Bus Transportation	TRANSP
485510	Charter Bus Industry	TRANSP
485991	Special Needs Transportation	TRANSP
485999	All Other Transit and Ground Passenger Transportation	TRANSP
486110	Pipeline Transportation of Crude Oil	TRANSP
486210	Pipeline Transportation of Natural Gas	TRANSP
486910	Pipeline Transportation of Refined Petroleum Products	TRANSP
486990	All Other Pipeline Transportation	TRANSP
487110	Scenic and Sightseeing Transportation, Land	TRANSP
487210	Scenic and Sightseeing Transportation, Water	TRANSP
487990	Scenic and Sightseeing Transportation, Other	TRANSP
488111	Air Traffic Control	TRANSP
488119	Other Airport Operations	TRANSP
488190	Other Support Activities for Air Transportation	TRANSP
488210	Support Activities for Rail Transportation	TRANSP
488310	Port and Harbor Operations	TRANSP
488320	Marine Cargo Handling	TRANSP
488330	Navigational Services to Shipping	TRANSP
488390	Other Support Activities for Water Transportation	TRANSP
488410	Motor Vehicle Towing	TRANSP
488490	Other Support Activities for Road Transportation	TRANSP
488510	Freight Transportation Arrangement	TRANSP
488991	Packing and Crating	TRANSP
488999	All Other Support Activities for Transportation	TRANSP
491110	Postal Service	TRANSP
492110	Couriers	TRANSP
492210	Local Messengers and Local Delivery	TRANSP
493110	General Warehousing and Storage	TRANSP
493120	Refrigerated Warehousing and Storage	TRANSP
493130	Farm Product Warehousing and Storage	TRANSP
493190	Other Warehousing and Storage	TRANSP
511110	Newspaper Publishers	PRINT
511120	Periodical Publishers	PRINT

511130	Book Publishers	PRINT
511140	Directory and Mailing List Publishers	PRINT
511191	Greeting Card Publishers	PRINT
511199	All Other Publishers	PRINT
511210	Software Publishers	PRINT
512110	Motion Picture and Video Production	INFOPC
512120	Motion Picture and Video Distribution	INFOPC
512131	Motion Picture Theaters (except Drive-Ins)	INFOPC
512132	Drive-In Motion Picture Theaters	INFOPC
512191	Teleproduction and Other Postproduction Services	INFOPC
512199	Other Motion Picture and Video Industries	INFOPC
512210	Record Production	INFOTH
512220	Integrated Record Production/Distribution	INFOTH
512230	Music Publishers	INFOTH
512240	Sound Recording Studios	INFOTH
512290	Other Sound Recording Industries	INFOTH
515111	Radio Networks	INFOTH
515112	Radio Stations	INFOTH
515120	Television Broadcasting	INFOTH
515210	Cable and Other Subscription Programming	INFOTH
516110	Internet Publishing and Broadcasting	INFOTH
517110	Wired Telecommunications Carriers	INFOTL
517211	Paging	INFOTL
517212	Cellular and Other Wireless Telecommunications	INFOTL
517310	Telecommunications Resellers	INFOTL
517410	Satellite Telecommunications	INFOTL
517510	Cable and Other Program Distribution	INFOTL
517910	Other Telecommunications	INFOTL
518111	Internet Service Providers	INFCOM
518112	Web Search Portals	INFCOM
518210	Data Processing, Hosting, and Related Services	INFCOM
519110	News Syndicates	INFCOM
519120	Libraries and Archives	INFCOM
519190	All Other Information Services	INFCOM
521110	Monetary Authorities - Central Bank	FIBNKS
522110	Commercial Banking	FIBNKS
522120	Savings Institutions	FIBNKS
522130	Credit Unions	FIBNKS
522190	Other Depository Credit Intermediation	FIBNKS
522210	Credit Card Issuing	FIBNKS
522220	Sales Financing	FIBNKS
522291	Consumer Lending	FIBNKS
522292	Real Estate Credit	FIBNKS
522293	International Trade Financing	FIBNKS
522294	Secondary Market Financing	FIBNKS
522298	All Other Nondepository Credit Intermediation	FIBNKS

522310	Mortgage and Nonmortgage Loan Brokers	FIBNKS
522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities	FIBNKS
522390	Other Activities Related to Credit Intermediation	FIBNKS
523110	Investment Banking and Securities Dealing	FINSEC
523120	Securities Brokerage	FINSEC
523130	Commodity Contracts Dealing	FINSEC
523140	Commodity Contracts Brokerage	FINSEC
523210	Securities and Commodity Exchanges	FINSEC
523910	Miscellaneous Intermediation	FINSEC
523920	Portfolio Management	FINSEC
523930	Investment Advice	FINSEC
523991	Trust, Fiduciary, and Custody Activities	FINSEC
523999	Miscellaneous Financial Investment Activities	FINSEC
524113	Direct Life Insurance Carriers	FINSUR
524114	Direct Health and Medical Insurance Carriers	FINSUR
524126	Direct Property and Casualty Insurance Carriers	FINSUR
524127	Direct Title Insurance Carriers	FINSUR
524128	Other Direct Insurance (except Life, Health, and Medical) Carriers	FINSUR
524130	Reinsurance Carriers	FINSUR
524210	Insurance Agencies and Brokerages	FINSUR
524291	Claims Adjusting	FINSUR
524292	Third Party Administration of Insurance and Pension Funds	FINSUR
524298	All Other Insurance Related Activities	FINSUR
525110	Pension Funds	FINOTH
525120	Health and Welfare Funds	FINOTH
525190	Other Insurance Funds	FINOTH
525910	Open-End Investment Funds	FINOTH
525920	Trusts, Estates, and Agency Accounts	FINOTH
525930	Real Estate Investment Trusts	FINOTH
525990	Other Financial Vehicles	FINOTH
531110	Lessors of Residential Buildings and Dwellings	FIREAL
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	FIREAL
531130	Lessors of Miniwarehouses and Self-Storage Units	FIREAL
531190	Lessors of Other Real Estate Property	FIREAL
531210	Offices of Real Estate Agents and Brokers	FIREAL
531311	Residential Property Managers	FIREAL
531312	Nonresidential Property Managers	FIREAL
531320	Offices of Real Estate Appraisers	FIREAL
531390	Other Activities Related to Real Estate	FIREAL
532111	Passenger Car Rental	FINOTH
532112	Passenger Car Leasing	FINOTH
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	FINOTH

532210	Consumer Electronics and Appliances Rental	FINOTH
532220	Formal Wear and Costume Rental	FINOTH
532230	Video Tape and Disc Rental	FINOTH
532291	Home Health Equipment Rental	FINOTH
532292	Recreational Goods Rental	FINOTH
532299	All Other Consumer Goods Rental	FINOTH
532310	General Rental Centers	FINOTH
532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	FINOTH
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	FINOTH
532420	Office Machinery and Equipment Rental and Leasing	FINOTH
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	FINOTH
533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	FINOTH
541110	Offices of Lawyers	PROLEG
541120	Offices of Notaries	PROLEG
541191	Title Abstract and Settlement Offices	PROLEG
541199	All Other Legal Services	PROLEG
541211	Offices of Certified Public Accountants	PROACC
541213	Tax Preparation Services	PROACC
541214	Payroll Services	PROACC
541219	Other Accounting Services	PROACC
541310	Architectural Services	PROARC
541320	Landscape Architectural Services	PROARC
541330	Engineering Services	PROARC
541340	Drafting Services	PROARC
541350	Building Inspection Services	PROARC
541360	Geophysical Surveying and Mapping Services	PROARC
541370	Surveying and Mapping (except Geophysical) Services	PROARC
541380	Testing Laboratories	PROARC
541410	Interior Design Services	PRODES
541420	Industrial Design Services	PRODES
541430	Graphic Design Services	PRODES
541490	Other Specialized Design Services	PRODES
541511	Custom Computer Programming Services	PROCOM
541512	Computer Systems Design Services	PROCOM
541513	Computer Facilities Management Services	PROCOM
541519	Other Computer Related Services	PROCOM
541611	Administrative Management and General Management Consulting Services	PROCNS
541612	Human Resources and Executive Search Consulting Services	PROCNS
541613	Marketing Consulting Services	PROCNS
541614	Process, Physical Distribution, and Logistics Consulting Services	PROCNS
541618	Other Management Consulting Services	PROCNS

541620	Environmental Consulting Services	PRORES
541690	Other Scientific and Technical Consulting Services	PRORES
541710	Research and Development in the Physical, Engineering, and Life Sciences	PRORES
541720	Research and Development in the Social Sciences and Humanities	PRORES
541810	Advertising Agencies	PROADV
541820	Public Relations Agencies	PROADV
541830	Media Buying Agencies	PROADV
541840	Media Representatives	PROADV
541850	Display Advertising	PROADV
541860	Direct Mail Advertising	PROADV
541870	Advertising Material Distribution Services	PROADV
541890	Other Services Related to Advertising	PROADV
541910	Marketing Research and Public Opinion Polling	PROOTH
541921	Photography Studios, Portrait	PROOTH
541922	Commercial Photography	PROOTH
541930	Translation and Interpretation Services	PROOTH
541940	Veterinary Services	PROOTH
541990	All Other Professional, Scientific, and Technical Services	PROOTH
551111	Offices of Bank Holding Companies	BUSSRV
551112	Offices of Other Holding Companies	BUSSRV
551114	Corporate, Subsidiary, and Regional Managing Offices	BUSSRV
561110	Office Administrative Services	BUSSRV
561210	Facilities Support Services	ADMBLD
561310	Employment Placement Agencies	ADMTMP
561320	Temporary Help Services	ADMTMP
561330	Professional Employer Organizations	ADMTMP
561410	Document Preparation Services	BUSSRV
561421	Telephone Answering Services	BUSSRV
561422	Telemarketing Bureaus	BUSSRV
561431	Private Mail Centers	BUSSRV
561439	Other Business Service Centers (including Copy Shops)	BUSSRV
561440	Collection Agencies	BUSSRV
561450	Credit Bureaus	BUSSRV
561491	Repossession Services	BUSSRV
561492	Court Reporting and Stenotype Services	BUSSRV
561499	All Other Business Support Services	BUSSRV
561510	Travel Agencies	BUSSRV
561520	Tour Operators	BUSSRV
561591	Convention and Visitors Bureaus	BUSSRV
561599	All Other Travel Arrangement and Reservation Services	BUSSRV
561611	Investigation Services	ADMSEC
561612	Security Guards and Patrol Services	ADMSEC

561613	Armored Car Services	ADMSEC
561621	Security Systems Services (except Locksmiths)	ADMSEC
561622	Locksmiths	ADMSEC
561710	Exterminating and Pest Control Services	ADMBLD
561720	Janitorial Services	ADMBLD
561730	Landscaping Services	ADMBLD
561740	Carpet and Upholstery Cleaning Services	ADMBLD
561790	Other Services to Buildings and Dwellings	ADMBLD
561910	Packaging and Labeling Services	ADMOTH
561920	Convention and Trade Show Organizers	ADMOTH
561990	All Other Support Services	ADMOTH
562111	Solid Waste Collection	ADMOTH
562112	Hazardous Waste Collection	ADMOTH
562119	Other Waste Collection	ADMOTH
562211	Hazardous Waste Treatment and Disposal	ADMOTH
562212	Solid Waste Landfill	ADMOTH
562213	Solid Waste Combustors and Incinerators	ADMOTH
562219	Other Nonhazardous Waste Treatment and Disposal	ADMOTH
562910	Remediation Services	ADMOTH
562920	Materials Recovery Facilities	ADMOTH
562991	Septic Tank and Related Services	ADMOTH
562998	All Other Miscellaneous Waste Management Services	ADMOTH
611110	Elementary and Secondary Schools	EDUC
611210	Junior Colleges	EDUC
611310	Colleges, Universities, and Professional Schools	EDUC
611410	Business and Secretarial Schools	EDUC
611420	Computer Training	EDUC
611430	Professional and Management Development Training	EDUC
611511	Cosmetology and Barber Schools	EDUC
611512	Flight Training	EDUC
611513	Apprenticeship Training	EDUC
611519	Other Technical and Trade Schools	EDUC
611610	Fine Arts Schools	EDUC
611620	Sports and Recreation Instruction	EDUC
611630	Language Schools	EDUC
611691	Exam Preparation and Tutoring	EDUC
611692	Automobile Driving Schools	EDUC
611699	All Other Miscellaneous Schools and Instruction	EDUC
611710	Educational Support Services	EDUC
621111	Offices of Physicians (except Mental Health Specialists)	MEDAMB
621112	Offices of Physicians, Mental Health Specialists	MEDAMB
621210	Offices of Dentists	MEDAMB
621310	Offices of Chiropractors	MEDAMB
621320	Offices of Optometrists	MEDAMB
621330	Offices of Mental Health Practitioners (except	MEDAMB

	Physicians)	
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	MEDAMB
621391	Offices of Podiatrists	MEDAMB
621399	Offices of All Other Miscellaneous Health Practitioners	MEDAMB
621410	Family Planning Centers	MEDAMB
621420	Outpatient Mental Health and Substance Abuse Centers	MEDAMB
621491	HMO Medical Centers	MEDAMB
621492	Kidney Dialysis Centers	MEDAMB
621493	Freestanding Ambulatory Surgical and Emergency Centers	MEDAMB
621498	All Other Outpatient Care Centers	MEDAMB
621511	Medical Laboratories	MEDAMB
621512	Diagnostic Imaging Centers	MEDAMB
621610	Home Health Care Services	MEDAMB
621910	Ambulance Services	MEDAMB
621991	Blood and Organ Banks	MEDAMB
621999	All Other Miscellaneous Ambulatory Health Care Services	MEDAMB
622110	General Medical and Surgical Hospitals	MEDHSP
622210	Psychiatric and Substance Abuse Hospitals	MEDHSP
622310	Specialty (except Psychiatric and Substance Abuse) Hospitals	MEDHSP
623110	Nursing Care Facilities	MEDNRS
623210	Residential Mental Retardation Facilities	MEDNRS
623220	Residential Mental Health and Substance Abuse Facilities	MEDNRS
623311	Continuing Care Retirement Communities	MEDNRS
623312	Homes for the Elderly	MEDNRS
623990	Other Residential Care Facilities	MEDNRS
624110	Child and Youth Services	MEDSA
624120	Services for the Elderly and Persons with Disabilities	MEDSA
624190	Other Individual and Family Services	MEDSA
624210	Community Food Services	MEDSA
624221	Temporary Shelters	MEDSA
624229	Other Community Housing Services	MEDSA
624230	Emergency and Other Relief Services	MEDSA
624310	Vocational Rehabilitation Services	MEDSA
624410	Child Day Care Services	MEDSA
711110	Theater Companies and Dinner Theaters	RECENT
711120	Dance Companies	RECENT
711130	Musical Groups and Artists	RECENT
711190	Other Performing Arts Companies	RECENT
711211	Sports Teams and Clubs	RECENT
711212	Racetracks	RECENT
711219	Other Spectator Sports	RECENT
711310	Promoters of Performing Arts, Sports, and Similar Events with Facilities	RECENT

711320	Promoters of Performing Arts, Sports, and Similar Events without Facilities	RECENT
711410	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	RECENT
711510	Independent Artists, Writers, and Performers	RECENT
712110	Museums	RECAMS
712120	Historical Sites	RECAMS
712130	Zoos and Botanical Gardens	RECAMS
712190	Nature Parks and Other Similar Institutions	RECAMS
713110	Amusement and Theme Parks	RECAMS
713120	Amusement Arcades	RECAMS
713210	Casinos (except Casino Hotels)	RECAMS
713290	Other Gambling Industries	RECAMS
713910	Golf Courses and Country Clubs	RECAMS
713920	Skiing Facilities	RECAMS
713930	Marinas	RECAMS
713940	Fitness and Recreational Sports Centers	RECAMS
713950	Bowling Centers	RECAMS
713990	All Other Amusement and Recreation Industries	RECAMS
721110	Hotels (except Casino Hotels) and Motels	ACCHOT
721120	Casino Hotels	ACCHOT
721191	Bed-and-Breakfast Inns	ACCHOT
721199	All Other Traveler Accommodation	ACCHOT
721211	RV (Recreational Vehicle) Parks and Campgrounds	ACCHOT
721214	Recreational and Vacation Camps (except Campgrounds)	ACCHOT
721310	Rooming and Boarding Houses	ACCHOT
722110	Full-Service Restaurants	ACCRST
722211	Limited-Service Restaurants	ACCFST
722212	Cafeterias	ACCFST
722213	Snack and Nonalcoholic Beverage Bars	ACCFST
722310	Food Service Contractors	ACCSPC
722320	Caterers	ACCSPC
722330	Mobile Food Services	ACCSPC
722410	Drinking Places (Alcoholic Beverages)	ACCBRS
811111	General Automotive Repair	PERSRV
811112	Automotive Exhaust System Repair	PERSRV
811113	Automotive Transmission Repair	PERSRV
811118	Other Automotive Mechanical and Electrical Repair and Maintenance	PERSRV
811121	Automotive Body, Paint, and Interior Repair and Maintenance	PERSRV
811122	Automotive Glass Replacement Shops	PERSRV
811191	Automotive Oil Change and Lubrication Shops	PERSRV
811192	Car Washes	PERSRV
811198	All Other Automotive Repair and Maintenance	PERSRV
811211	Consumer Electronics Repair and Maintenance	PERSRV

811212	Computer and Office Machine Repair and Maintenance	PERSRV
811213	Communication Equipment Repair and Maintenance	PERSRV
811219	Other Electronic and Precision Equipment Repair and Maintenance	PERSRV
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	PERSRV
811411	Home and Garden Equipment Repair and Maintenance	PERSRV
811412	Appliance Repair and Maintenance	PERSRV
811420	Reupholstery and Furniture Repair	PERSRV
811430	Footwear and Leather Goods Repair	PERSRV
811490	Other Personal and Household Goods Repair and Maintenance	PERSRV
812111	Barber Shops	PERSRV
812112	Beauty Salons	PERSRV
812113	Nail Salons	PERSRV
812191	Diet and Weight Reducing Centers	PERSRV
812199	Other Personal Care Services	PERSRV
812210	Funeral Homes and Funeral Services	PERSRV
812220	Cemeteries and Crematories	PERSRV
812310	Coin-Operated Laundries and Drycleaners	PERSRV
812320	Dry-cleaning and Laundry Services (except Coin-Operated)	PERSRV
812331	Linen Supply	PERSRV
812332	Industrial Launderers	PERSRV
812910	Pet Care (except Veterinary) Services	PERSRV
812921	Photofinishing Laboratories (except One-Hour)	PERSRV
812922	One-Hour Photofinishing	PERSRV
812930	Parking Lots and Garages	PERSRV
812990	All Other Personal Services	PERSRV
813110	Religious Organizations	PERSRV
813211	Grantmaking Foundations	PERSRV
813212	Voluntary Health Organizations	PERSRV
813219	Other Grantmaking and Giving Services	PERSRV
813311	Human Rights Organizations	PERSRV
813312	Environment, Conservation and Wildlife Organizations	PERSRV
813319	Other Social Advocacy Organizations	PERSRV
813410	Civic and Social Organizations	PERSRV
813910	Business Associations	PERSRV
813920	Professional Organizations	PERSRV
813930	Labor Unions and Similar Labor Organizations	PERSRV
813940	Political Organizations	PERSRV
813990	Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)	PERSRV
814110	Private Households	PERSRV
921110	Executive Offices	NA
921120	Legislative Bodies	NA
921130	Public Finance Activities	NA

921140	Executive and Legislative Offices, Combined	NA
921150	American Indian and Alaska Native Tribal Governments	NA
921190	Other General Government Support	NA
922110	Courts	NA
922120	Police Protection	NA
922130	Legal Counsel and Prosecution	NA
922140	Correctional Institutions	NA
922150	Parole Offices and Probation Offices	NA
922160	Fire Protection	NA
922190	Other Justice, Public Order, and Safety Activities	NA
923110	Administration of Education Programs	NA
923120	Administration of Public Health Programs	NA
923130	Administration of Human Resource Programs (except Education, Public Health, and Veterans' Affairs Programs)	NA
923140	Administration of Veterans' Affairs	NA
924110	Administration of Air and Water Resource and Solid Waste Management Programs	NA
924120	Administration of Conservation Programs	NA
925110	Administration of Housing Programs	NA
925120	Administration of Urban Planning and Community and Rural Development	NA
926110	Administration of General Economic Programs	NA
926120	Regulation and Administration of Transportation Programs	NA
926130	Regulation and Administration of Communications, Electric, Gas, and Other Utilities	NA
926140	Regulation of Agricultural Marketing and Commodities	NA
926150	Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors	NA
927110	Space Research and Technology	NA
928110	National Security	NA
928120	International Affairs	NA