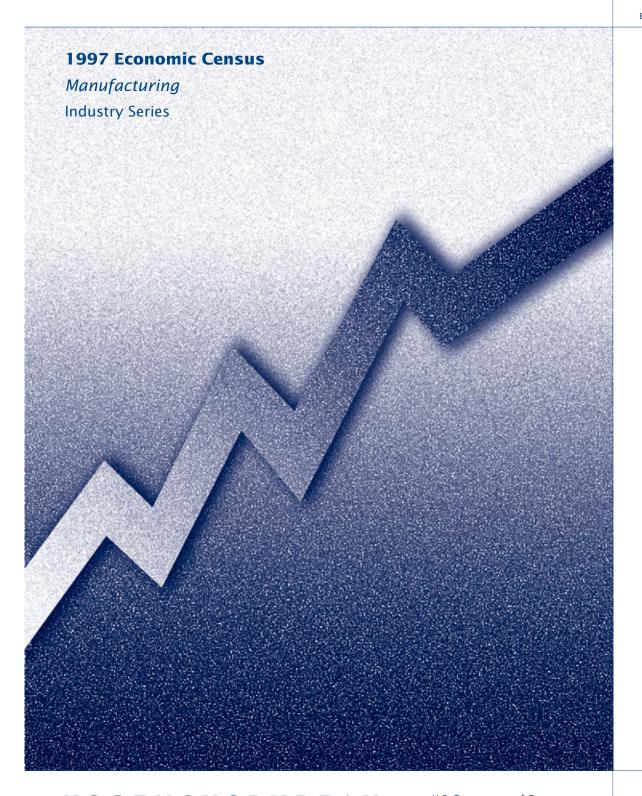
### Fruit and Vegetable Canning

1997

Issued January 2000

EC97M-3114C(RV)



### USCENSUSBUREAU

Helping You Make Informed Decisions

U.S. Department of Commerce Economics and Statistics Administration U.S. CENSUS BUREAU



#### ACKNOWLEDGMENTS

The staff of the Manufacturing and Construction Division prepared this report. Judy M. Dodds, Assistant Chief for Census and Related Programs, was responsible for the overall planning, management, and coordination. Kenneth Hansen, Chief, Manufactured Durables Branch, assisted by Mike Brown, Renee Coley, Raphael Corrado, and Milbren Thomas, Section Chiefs, Michael Zampogna, Former Chief, Manufactured Nondurables Branch, assisted by Allen Foreman, Robert Miller, Robert Reinard, and Nat Shelton, Section Chiefs, and Tom Lee, Robert Rosati, and Tom Flood, Special Assistants, performed the planning and implementation. Stephanie Angel, Brian Appert, Stanis Batton, Carol Beasley, Chris Blackburn, Larry Blumberg, Vera Harris-Bourne, Brenda Campbell, Suzanne Conard, Vance Davis, Mary Ellickson, Matt Gaines, Merry Glascoe, Kay Hanks, Karen Harshbarger, Nancy Higgins, James Hinckley, Walter Hunter, Jim Jamski, Evelyn Jordan, Robert Lee, John Linehan, Paul Marck, Keith McKenzie, Philippe Morris, Joanna Nguyen, Betty Pannell, Joyce Pomeroy, Venita Powell, Cynthia Ramsey, Chris Savage, Aronda Stovall, Sue Sundermann, Thanos Theodoropoulos, Dora Thomas, Ann Truffa, Ronanne Vinson, Keeley Voor, Denneth Wallace, Tempie Whittington, Lissene Witt, and Mike Yamaner provided primary staff assistance.

**Brian Greenberg,** Assistant Chief for Research and Methodology Programs, assisted by **Stacey Cole,** Chief, Manufacturing Programs Methodology Branch, and **Robert Struble,** Section Chief, provided the mathematical and statistical techniques as well as the coverage operations. **Jeffrey Dalzell** and **Cathy Ritenour** provided primary staff assistance.

**Mendel D. Gayle,** Chief, Forms, Publications, and Customer Services Branch, assisted by **Julius Smith Jr.** and **Baruti Taylor,** Section Chiefs, performed overall

coordination of the publication process.

Kim Credito, Patrick Duck, Chip

Murph, Wanda Sledd, and Veronica

White provided primary staff assistance.

The Economic Planning and Coordination Division, Lawrence A. Blum, Assistant Chief for Collection Activities and Shirin A. Ahmed, Assistant Chief for Post-Collection Processing, assisted by Dennis Shoemaker, Chief, Post-Collection Census Processing Branch, Brandy Yarbrough, Section Chief, Sheila Proudfoot, Richard Williamson, Andrew W. Hait, and Jennifer E. Lins, was responsible for developing the systems and procedures for data collection, editing, review, correction and dissemination

The staff of the National Processing Center, **Judith N. Petty,** Chief, performed mailout preparation and receipt operations, clerical and analytical review activities, data keying, and geocoding review.

The Geography Division staff developed geographic coding procedures and associated computer programs.

The Economic Statistical Methods and Programming Division, Charles P. Pautler Jr., Chief, developed and coordinated the computer processing systems. Martin S. Harahush, Assistant Chief for Quinquennial Programs, assisted by Barbara Lambert and Christina Arledge were responsible for design and implementation of the computer systems. Gary T. Sheridan, Chief, Manufacturing and Construction Branch, Lori A. Guido and Roy A. Smith, Section Chiefs, supervised the preparation of the computer programs.

Computer Services Division, **Debra Williams**, Chief, performed the computer processing.

The staff of the Administrative and Customer Services Division, **Walter C. Odom,** Chief, performed planning, design, composition, editorial review, and printing planning and procurement for publications, Internet products, and report forms. **Cynthia G. Brooks** provided publication coordination and editing.

### Fruit and Vegetable Canning

1997

Issued January 2000

EC97M-3114C(RV)

#### **1997 Economic Census**

Manufacturing
Industry Series





U.S. Department of Commerce William M. Daley, Secretary Robert L. Mallett, Deputy Secretary

> Economics and Statistics Administration Robert J. Shapiro, Under Secretary for Economic Affairs

U.S. CENSUS BUREAU Kenneth Prewitt, Director



Economics and Statistics Administration Robert J. Shapiro, Under Secretary for Economic Affairs



### U.S. CENSUS BUREAU Kenneth Prewitt,

Director

**William G. Barron,**Deputy Director

**Paula J. Schneider,** Principal Associate Director for Programs

**Frederick T. Knickerbocker,** Associate Director for Economic Programs

**Thomas L. Mesenbourg,** Assistant Director for Economic Programs

**William G. Bostic Jr.,** Chief, Manufacturing and Construction Division

#### **CONTENTS**

	duction to the Economic Censusufacturing	1 5
TABI	LES	
1. 2. 3. 4. 5. 6a. 6b. 7.	Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997	7 7 8 9 10 13
APP	ENDIXES	
A. B. C. D. E. F.	Explanation of Terms NAICS Codes, Titles, and Descriptions Coverage and Methodology Geographic Notes Metropolitan Areas Footnotes for Products Statistics and Materials Consumed by Kind Comparability of Product Classes and Product Codes: 1997 to 1992	A-1 B-1 C-1   G-1
	Not applicable for this report.	

#### Introduction to the Economic Census

#### PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

#### ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52 Finance and Insurance 53

Real Estate and Rental and Leasing 54 Professional, Scientific, and Technical Services

55 Management of Companies and Enterprises 56 Administrative and Support and Waste

Management and Remediation Services

61 **Educational Services** 

Health Care and Social Assistance 62

Arts. Entertainment, and Recreation 71

72 Accommodation and Foodservices

Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

#### RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

#### **GEOGRAPHIC AREA CODING**

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

#### **BASIS OF REPORTING**

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

#### **DOLLAR VALUES**

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

#### **AVAILABILITY OF ADDITIONAL DATA**

#### **Reports in Print and Electronic Media**

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

#### **Special Tabulations**

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division Service Sector Statistics Division

301-457-4673 301-457-2668

#### HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

#### SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the Guide to the 1997 Economic Census and Related Statistics at www.census.gov/econquide. More information on the methodology, procedures, and history of the censuses will be published in the History of the 1997 Economic Census at www.census.gov/econ/www/history.html.

#### ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

- Α Standard error of 100 percent or more.
- D Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
- F Exceeds 100 percent because data include establishments with payroll exceeding rev-
- Ν Not available or not comparable.
- Revenue not collected at this level of detail for Q multiestablishment firms.
- S Withheld because estimates did not meet publication standards.

- V Represents less than 50 vehicles or .05 percent.
- Χ Not applicable.
- Υ Disclosure withheld because of insufficient
  - coverage of merchandise lines.
- Ζ Less than half the unit shown. 0 to 19 employees.
- a b
- 20 to 99 employees.
- 100 to 249 employees. C
- 250 to 499 employees. e
- f 500 to 999 employees.
- 1,000 to 2,499 employees. g
- h 2,500 to 4,999 employees.
- 5,000 to 9,999 employees.
- 10,000 to 24,999 employees.
- k 25,000 to 49,999 employees.
- 50,000 to 99,999 employees.
- 100,000 employees or more. m
- 10 to 19 percent estimated.
- р q 20 to 29 percent estimated.
- Revised. r
- Sampling error exceeds 40 percent.
- Not elsewhere classified. nec
- Not specified by kind. nsk
- Represents zero (page image/print only).
- (CC) Consolidated city.
- Independent city. (IC)

1997 ECONOMIC CENSUS INTRODUCTION 3 This page is intentionally blank.

### Manufacturing

#### **SCOPE**

The 1997 Economic Census – Manufacturing covers all manufacturing establishments with one or more paid employees. Manufacturing is defined as the mechanical, physical, or chemical transformation of materials or substances into new products. The assembly of components into new products is also considered manufacturing, except when it is appropriately classified as construction.

Establishments in the manufacturing sector are often described as plants, factories, or mills and typically use power-driven machines and materials-handling equipment. Also included in the manufacturing sector are some establishments that make products by hand, like custom tailors and the makers of custom draperies. While manufacturers typically do not sell to the public, some establishments like bakeries and candy stores that make products on the premises may be included.

While logging and publishing are no longer in the scope of manufacturing, data for these industries are included in the manufacturing industry reports, but are not included in the manufacturing state, summary, and other reports.

#### **GENERAL**

This report, from the 1997 Economic Census – Manufacturing, is one of a series of 480 industry reports and 51 geographic area reports, each of which provides statistics for individual industries or states, respectively. Seven of the industry reports are for industries no longer in the manufacturing sector but are included with manufacturing for the 1997 census year. Also included for this sector are General, Product, and Materials Consumed Summary reports, a special report on Concentration Ratios in Manufacturing, and data files on Location of Manufacturing Plants.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, value of shipments, capital expenditures, etc. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more in the industry.

State reports, which include the District of Columbia, present similar statistics at the "all manufacturing" level for each state and its metropolitan areas (MAs) with 250

employees or more, and for counties, consolidated cities, and places with 500 employees or more. The state reports also include six-digit NAICS level data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports, as well as revisions to the data made after the release of the industry and state reports.

The Products and Materials Consumed reports summarize the products and materials data published in the industry reports. The Product Summary report also includes data from the Current Industrial Reports (CIR) and a special table with data for products that are primary to more than one industry, which are not in the industry reports.

The Concentration Ratios report publishes data on the percentage of value of shipments accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Hirschmann-Herfindahl Indexes for each industry.

The Location of Manufacturing data files contain statistics on the number of establishments for the three- and six-digit NAICS industry by state, county, place, and ZIP Code by employment-size of the establishment.

#### **GEOGRAPHIC AREAS COVERED**

Statistics at the six-digit NAICS industry level are shown for states and the District of Columbia in both the state and industry reports for cells with 100 employees or more

The state reports also include data at the "all manufacturing" level for a variety of geographies that meet the employment criteria.

Data are available for the metropolitan areas (MAs) with 250 employees or more. The term MA is a general term used to encompass all of the specifically defined metropolitan areas. A consolidated metropolitan statistical area (CMSA) is made up of two or more contiguous primary metropolitan statistical areas (PMSAs) with a combined population of at least 1 million. A PMSA is a subdivision of a CMSA that demonstrates very strong internal economic and social links separate from the ties to other portions of the CMSA. A metropolitan statistical area (MSA) is an integrated economic and social unit with a population of at least 50,000. An MA is made up of one or more counties meeting standards of metropolitan character. In New England, cities and towns, rather than counties, are the

U.S. Census Bureau, 1997 Economic Census

component geographic units. Determination of the MAs was made by the Office of Management and Budget (OMB) as of June 30, 1997. The population estimates were from the 1990 Census of Population or a subsequent special census. When applicable, the make-up of an MA is included in Appendix E. Changes to geographical boundaries are noted in Appendix D.

The state reports include data for counties with 500 employees or more. These are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs and census areas. Maryland, Missouri, Nevada, and Virginia have one or more places that are independent of county organizations. These places are treated as counties and places. The counties and places are defined as of January 1, 1997.

The state reports include data for places with 500 employees or more. Places are typically cities, towns, and villages. They may be incorporated municipalities, semiindependent municipalities, special economic urban areas (SEUAs), or other place equivalents.

The state reports also include data for consolidated cities with 500 employees or more. Consolidated cities are made up of separately incorporated municipalities.

#### **COMPARABILITY OF THE 1992 AND 1997 CENSUSES**

The adoption of the North American Industry Classification System (NAICS) has had a major impact on the comparability of data between the 1992 and 1997 censuses. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past. If industries are not comparable between the two censuses, historic data are not shown. When applicable, Appendix G shows the product class and product comparability between the two systems.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those leaving manufacturing are logging and portions of publishing. Prominent among the industries coming into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. Data for the industries coming into manufacturing as well as those leaving manufacturing are included in the manufacturing industry report series for 1997. However, the state and summary reports only include data for industries in the NAICS definition of manufacturing.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with manufacturing are not included along side the manufacturing data. This change affects data in the state reports and the general summary.

#### **DISCLOSURE**

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure, and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. However, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures that can be suppressed even though value of shipments data are published.

#### AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The Census Bureau conducts the Annual Survey of Manufactures (ASM) in each of the 4 years between the economic censuses. The ASM is a probability-based sample of approximately 58,000 establishments and collects many of the same industry statistics (including employment, payroll, value of shipments, etc.) as the economic census. However, there are selected statistics not included in the ASM. Among these are the number of companies and establishments, detailed product and materials data, and substate geographic data.

In addition to the ASM, the Census Bureau conducts a Current Industrial Reports (CIR) program. The CIR publishes detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. For the 1997 Economic Census - Manufacturing, the annual CIR data are included in the Product Summary report.

The Census Bureau also conducts the monthly Manufacturers' Shipments, Inventories, and Orders (M3) program, which publishes detailed statistics for manufacturing industries at the U.S. level.

#### Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS			All	All em	oloyees	Pr	oduction work	ers				Total capital
or SIC code	Industry	Com- panies <sup>1</sup>	estab- lish- ments <sup>2</sup>	Number	Payroll (\$1,000)	Number	Hours (1.000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	expendi- tures (\$1,000)
		p an in a c			(+1,)		( - , /	(+1,)	(+ ., /	(+1,000)	(+.,/	(+1,)
311421 203300 203510	Fruit & vegetable canning Canned fruits & vegetables	<b>663</b> N	<b>824</b> 695	<b>64 016</b> 56 081	<b>1 726 293</b> 1 537 288	<b>52 884</b> 46 463	<b>106 367</b> 93 168	<b>1 241 683</b> 1 111 516	<b>7 017 553</b> 6 274 463	<b>8 977 673</b> 8 248 019	<b>15 978 798</b> 14 508 303	<b>534 195</b> 469 010
203510	Pickles, sauces, & salad dressings (pt)	N	129	7 935	189 005	6 421	13 199	130 167	743 090	729 654	1 470 495	65 185

<sup>&</sup>lt;sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control. <sup>2</sup>Includes establishments with payroll at any time during the year.

#### Table 2. Industry Statistics for Selected States: 1997

[States that are disclosures or with less than 100 employees are not shown. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

	All establishments All employees Production workers											
Industry and geographic area	E¹	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
311421, FRUIT & VEGETABLE CANNING												
United States	1	824	418	64 016	1 726 293	52 884	106 367	1 241 683	7 017 553	8 977 673	15 978 798	534 195
California Florida Hawaii * Illinois Michigan	1 1	142 39 15 31 37	95 17 2 17 20	17 278 5 336 768 2 086 3 452	516 295 178 218 18 420 59 669 74 443	15 014 3 691 710 1 751 2 977	30 421 6 083 1 175 4 329 5 756	407 184 94 567 15 530 41 417 56 771	2 111 387 552 837 37 882 229 220 302 907	2 528 274 1 314 344 59 443 226 931 352 023	4 638 512 1 866 048 97 300 457 256 655 510	137 339 126 472 2 743 12 739 35 899
Minnesota. New Jersey New Mexico New York Oregon	1 1 - 2 3	19 17 8 57 34	12 11 3 31 15	2 139 1 391 752 3 863 1 725	46 922 48 872 10 044 108 715 42 364	1 985 952 548 2 846 1 509	4 290 2 032 800 6 096 2 657	40 207 28 747 7 119 68 338 28 438	140 112 208 195 22 459 562 358 139 265	217 130 237 383 24 895 749 927 152 234	356 440 444 085 47 365 1 313 693 287 547	8 090 12 409 1 380 31 398 9 113
Pennsylvania Washington Wisconsin	1 - 2	28 35 59	14 19 45	2 289 3 183 4 767	61 349 76 495 117 060	1 859 2 833 4 128	3 795 5 413 8 907	41 186 55 721 91 616	236 422	313 005 399 806 489 120	529 670 635 258 905 192	11 673 15 659 28 953

<sup>\*</sup> Hawaii has no incorporated places in the sense of functioning governmental units; however, in agreement with Hawaiian law, the Bureau of the Census reports data for census designated places (CDPs) which have been designated as place equivalents. Those CDPs, only for the state of Hawaii, with 2,500 or more population are recognized.

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

#### Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
11421, FRUIT & VEGETABLE CANNING		311421, FRUIT & VEGETABLE CANNING—Con.	
ompanies <sup>1</sup> number	663	Value added	7 017 553
l establishments	824 406 229 189	Total inventories, beginning of year \$1,000. Finished goods inventories, beginning of year \$1,000. Work-in-process inventories, beginning of year \$1,000. Materials and supplies inventories, beginning of year \$1,000.	3 965 868 2 866 853 466 729 632 286
employees	64 016 2 304 084 1 726 293 577 791	Total inventories, end of year \$1,000. Finished goods inventories, end of year \$1,000. Work-in-process inventories, end of year \$1,000. Materials and supplies inventories, end of year \$1,000.	3 947 290 2 780 253 483 157 683 880
oduction workers, average for year	52 884 37 863 42 278	Gross book value of total assets at beginning of year	5 113 600 534 195 86 348
Production workers on August 12         number.           Production workers on November 12         number.           oduction-worker hours         1,000.           oduction-worker wages         \$1,000.	86 066 45 329 106 367 1 241 683	Capital expenditures for machinery and equipment (new and used) \$1,000.  Total retirements <sup>2</sup> \$1,000.  Gross book value of total assets at end of year \$1,000.	447 847 125 183 5 522 612
		Total depreciation during year <sup>2</sup> \$1,000	343 175
tal cost of materials       \$1,000         Cost of materials, parts, containers, etc., consumed       \$1,000         Cost of resales       \$1,000         Cost of fuels       \$1,000         Cost of purchased electricity       \$1,000         Cost of contract work       \$1,000	8 977 673 8 481 251 181 768 132 957 122 914 58 783	Total rental payments <sup>2</sup> \$1,000 .  Buildings and other structures rental payments <sup>2</sup> \$1,000 .  Machinery and equipment rental payments <sup>2</sup> \$1,000 .  Cost of purchased services for the repair of buildings and other	157 925 58 742 99 183
uantity of electricity purchased for heat and power1,000 kWhuantity of electricity generated less sold for heat and power1,000 kWh	2 001 492 D	structures <sup>3</sup> \$1,000. Response coverage ratio <sup>4</sup> percent. Cost of purchased services for the repair of machinery and equipment <sup>3</sup> \$1,000.	23 734 76
otal value of shipments         \$1,000           Primary products value of shipments         \$1,000           Secondary products value of shipments         \$1,000           Total miscellaneous receipts         \$1,000           Value of resales         \$1,000           Contract receipts         \$1,000           Other miscellaneous receipts         \$1,000	212 813	Flesponse coverage ratio <sup>4</sup> percent.         Cost of purchased communications services <sup>3</sup> \$1,000.         Response coverage ratio <sup>4</sup> percent.         Cost of purchased legal services <sup>3</sup> \$1,000.         Response coverage ratio <sup>4</sup> percent.         Cost of purchased accounting and bookkeeping services <sup>3</sup> \$1,000.         Response coverage ratio <sup>4</sup> percent.	126 958 76 10 230 76 5 674 76 7 648
imary products specialization ratio	91 16 924 097 14 321 378 2 602 719	Cost of purchased advertising services <sup>3</sup> \$1,000.  Response coverage ratio <sup>4</sup> percent.  Cost of purchased software and other data processing services <sup>3</sup> \$1,000.  Response coverage ratio <sup>4</sup> percent.  Cost of purchased refuse removal (including hazardous waste)	22 152 76 2 977 76
overage ratio percent	84	services <sup>3</sup> \$1,000	19 199 76

Note: The amounts shown for purchased services reflect only those services that establishments purchase from other companies.

<sup>&</sup>lt;sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>These items are collected in the ASM and estimated for the remaining establishments; therefore, the levels of estimation are higher than for other items in the table.

<sup>3</sup>Based on ASM sample data.

<sup>4</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

#### Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			All shments	All em	oloyees	Pr	oduction work	ers				
Employment size class	E¹	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
311421, FRUIT & VEGETABLE CANNING												
All establishments	1	824	418	64 016	1 726 293	52 884	106 367	1 241 683	7 017 553	8 977 673	15 978 798	534 195
Establishments with 1 to 4 employees	7	213	-	359	6 939	336	644	5 553	32 331	43 935	76 320	2 297
Establishments with 5 to 9	-	94	_	630	12 474	513	737	9 519	42 673	61 535	104 277	2 530
employees	_	99	_	1 391	33 560	1 103	1 823	21 574	152 522	210 074	363 510	7 546
employees	3	120	120	3 881	105 718	3 011	6 069	69 223	329 584	489 919	842 007	22 434
employees	2	109	109	7 845	200 342	6 310	13 210	136 698	755 468	1 084 077	1 842 025	64 560
Establishments with 100 to 249 employees	2	117	117	18 496	469 487	15 187	31 705	330 788	1 937 918	2 340 502	4 281 472	155 149
Establishments with 250 to 499	_											
employees Establishments with 500 to 999	1	55	55	18 638	515 253	16 015	32 277	404 369	2 417 274	2 575 795	4 949 851	144 865
employees Establishments with 1,000 to 2,499	-	15	15	D	D	D	D	D	D	D	D	D
employees Establishments with 2,500 employees	-	2	2	D	D	D	D	D	D	D	D	D
or more	-	-	-	-	_	_	-	_	-	-	-	_
Administrative records <sup>2</sup>	9	313	-	1 848	33 313	1 615	2 226	26 371	123 527	175 278	299 057	7 495

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

#### Table 5. Industry Statistics by Industry and Primary Product Class Specialization: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS		All	All em	ployees	Pr	oduction work	ers	Value added			Total capital
industry or product class code	Industry or primary product class	estab- lish- ments	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	expendi- tures (\$1,000)
311421	Fruit & vegetable canning.	824	64 016	1 726 293	52 884	106 367	1 241 683	7 017 553	8 977 673	15 978 798	534 195
3114211 3114214	Canned fruits, except baby foods Canned vegetables, except hominy	51	11 576	315 715	10 419	20 847	256 861	1 258 542	1 420 155	2 664 142	51 826
3114217 311421A 311421D	and mushrooms	121 10 4	14 326 631 132	312 297 19 242 3 887	12 444 472 118	25 714 897 377	244 376 12 033 3 104	1 146 432 42 086 9 602	1 345 856 78 842 7 555	2 494 555 120 936 17 510	66 989 2 590 D
3114210	sauces, pastes, etc.	76	10 802	337 120	9 000	18 358	249 933	1 898 134	1 987 793	3 858 969	114 165
311421G 311421J	Canned jams, jellies, and preserves Canned fruit juices, nectars, and	41	3 834	119 512	2 963	6 181	79 536	526 277	597 611	1 129 202	22 885
311421M	concentrates	55	9 076	291 580	6 537	12 602	177 665	819 567	2 036 471	2 862 167	162 670
311421P	strength	30 64	2 946 7 075	80 173 169 673	2 124 5 679	4 223 12 039	42 818 114 684	424 676 669 738	491 242 645 451	929 356 1 312 950	36 940 61 890

#### Table 6a. Products Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			19	997			19	992	
NAICS		Number of		Product	shipments	Number of		Product	shipments
product	Product	companies with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)	companies with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
311421	Canned fruits and vegetables	N	Х	х	16 924 097	N	х	Х	N
3114211	Canned fruits, except baby foods	N	Х	X	2 287 979	N	Х	Х	2 371 854
31142111 3114211111	Canned fruits	N	Х	Х	2 287 782	N	X	Х	N
3114211121	2 s) Canned applesauce 1,000 cases (24/2 1/	11	Х	5 403.7	84 027	14	X	P5 311.3	75 244
3114211131	2 s) Canned apricots	13	Х	27 334.0	370 428	16	X	25 711.9	351 789
3114211141	2 s) Canned cherries, red pitted 1,000 cases (24/2 1/	6	Х	1 919.5	50 739	7	Х	2 089.3	47 435
3114211151	2 s) Canned cherries, sweet	8	Х	1 343.9	20 262	9	Х	623.3	12 424
	2 s)	8	X	1 061.1	21 231	10	X	1 051.3	19 243
3114211161	Canned cranberries and cranberry sauce								
3114211171	2 s) Canned fruit cocktail 1,000 cases (24/2 1/	3	Х	2 644.2	52 521	3	X	D	D
3114211181	2 s)	3	Х	10 727.1	268 957	5	X	15 991.9	282 750
	mixed fruits other than fruit cocktail) 1,000 cases (24/2 1/2 s)	6	х	3 055.9	77 861	5	x	4 793.7	99 481
3114211191	Canned olives, ripe and green ripe (including stuffed) (drained net								
	weight)	9	х	15 691.8	379 395	10	x	11 234.2	283 517
31142111A1	Canned peaches, including spiced 1,000 cases (24/2 1/2 s)	8	х	28 346.8	458 173	14	x	30 497.5	502 908
31142111B1	Canned pears, including spiced 1,000 cases (24/2 1/								
31142111C1	2 s) Canned pineapple (all styles) 1,000 cases (24/2 1/	7	Х	13 342.1	196 709	8	X	13 687.9	205 490
31142111D1	2 s) Other canned fruits 1,000 cases (24/2 1/	2	Х	D	D	5	X	8 580.9	151 755
31142111E1	2 s) Canned apple pie mixes 1,000 cases (24/2 1/	19	Х	D	D	19	X	D	D
31142111F1	2 s) Canned cherry pie mixes 1,000 cases (24/2 1/	8	Х	1 842.1	36 589	10	X	1 363.8	27 376
31142111G1	2 s) Canned peach pie mixes 1,000 cases (24/2 1/	7	Х	3 378.6	67 006	9	X	3 178.2	68 818
31142111H1	2 s) Other canned fruit pie mixes 1,000 cases (24/2 1/	4	Х	428.5	10 584	6	Х	351.6	8 332
	2 s)	12	Х	2 432.0	68 277	13	Х	1 633.2	48 174
3114211Y 3114211YWV	Canned fruits, except baby foods, nsk	N N	X X	X	197 197	N N	X	X X	N 12 762
3114214	Canned vegetables, except hominy and	N	х	v	0.700.070	N	x	X	0.004.000
31142141	mushrooms  Canned vegetables	N N	X	X X	2 723 079 2 717 107	N N	x	X	2 694 390 N
3114214111	Canned green lima beans	7	X	2 604.1	23 843	9	x	2 549.2	22 015
3114214121	Canned green and wax beans (including blue lake) 1,000 cases (24/303		-						
3114214131	\$) Canned carrots 1,000 cases (24/303	19	X	55 019.6	412 657	25	X	55 141.1	431 677
3114214141	Canned vegetable combinations (mixed	11	X	6 103.1	45 632	13	х	5 540.7	41 534
0114214141	vegetables, succotash, carrots and peas, vegetable salad, etc.) 1,000 cases (24/303								
3114214151	s) Canned green peas	12	Х	12 864.7	123 465	19	Х	11 947.6	119 085
	s)	14	X	23 635.6	205 158	19	X	29 448.4	254 580
3114214161	Other canned peas (blackeye, crowder, purple hull, field, etc.) 1,000 cases (24/303								
3114214171	s)	6	Х	2 391.2	23 688	6	X	2 315.2	20 788
	pie mix	5	Х	2 962.7	41 879	8	x	D	D
3114214181	Canned spinach	5	х	6 313.1	53 981	6	x	6 089.2	50 537
3114214191	Canned sweet potatoes, including pie								
31142141A1	s) Canned white potatoes	3	X	6 650.5	91 814	6	X	P8 296.8	87 548
	s)	11	Х	6 787.2	49 457	13	X	6 487.6	48 752
31142141B1	Canned sauerkraut	7	Х	9 267.6	70 814	10	х	6 378.5	46 950
31142141C1	Canned asparagus 1,000 cases (24/303 s)	8	Х	4 344.6	82 210	15	x	4 532.7	86 768
31142141D1	Canned beets	5	X	9 203.9	65 469	9	x	9 442.8	68 747
31142141E1	Canned sweet corn, whole kernel 1,000 cases (24/303 s)	13	X	58 432.4	433 785	17	x	68 459.1	515 134
31142141F1	Canned sweet corn, cream style 1,000 cases (24/303 s)	12	X	20 561.6	157 241	13	x	14 851.2	116 643
31142141G1	Canned tomatoes (including stewed) 1,000 cases (24/303 s).	28	X	67 645.5	620 409	37	x	58 361.4	538 637
31142141H1	Other canned vegetables 1,000 cases (24/303 24/303	29	X	14 802.5	215 605	24	x	56 361.4 D	536 637 D
3114214Y	Canned vegetables, except hominy and	29	^	1-7 002.3	210 000		^	D	D
3114214YWV	mushrooms, nsk	N	X	Х	5 972	N	х	Х	N
○→L.I→I.VVV	mushrooms, nsk	l N	X	Х	5 972	l N	x	Х	8 461

See footnotes at end of table.

#### Table 6a. Products Statistics: 1997 and 1992—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

introductory text.	For explanation of terms, see appendixes		. , ,	` '	<u> </u>				
			19	997			19	992	
NAICS		Number of		Product	shipments	Number of		Product	shipments
product	Product	companies with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)	companies with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
311421	Canned fruits and vegetables — Con.								
3114217	Canned hominy and mushrooms	N	х	x	148 602	N	x	x	202 040
31142171 3114217111	Canned hominy and mushrooms	N	Х	х	148 598	N	x	X	N
3114217121	s) Canned mushrooms 1,000 cases (24/303 s)	13	X X	3 940.6 4 179.9	29 778 118 820	14	X X	4 057.2 5 452.2	26 531 175 509
3114217Y 3114217YWV	Canned hominy and mushrooms, nsk	N N	X	X	4	N N	X	X X	N —
311421A	Canned vegetable juices	N N	X	x	442 438	N N	x	X	409 389
311421A1 311421A111	Canned vegetable juices	N	Х	х	441 873	N	х	Х	N
311421A121	more tomato juice)	21 7	X	130.5 P12.3	399 995 41 878	21 7	X	125.1 5.2	391 322 17 783
311421AY 311421AYWV	Canned vegetable juices, nsk	N N	X	X	565 565	N N	X	X	N 284
311421D	Catsup and other canned tomato sauces, pastes, etc.	N	х	х	4 234 497	N	x	X	3 671 644
311421D1 311421D111	Canned spaghetti, pizza, and marinara sauces	N	Х	×	1 457 080	N	x	x	N
0111213111	sauces, with or without other added ingredients, except salsa, including those with less than 20 percent meat 1,000 cases (12/12 glass)	33	x	170 133.2	1 457 080	N	x	х	N
311421D2	Canned tomato, catsup, chili, and								
311421D221	barbecue sauces, tomato paste, and tomato pulp and puree	N	Х	х	2 433 140	N	X	Х	N
311421D231	tall, etc.)	16	Х	13 872.5	159 494	15	Х	11 761.5	154 039
311421D241 311421D251	glass)  Canned catsup, 14 oz to 32 oz 1,000 cases of 24  Canned catsup, all other sizes (including individual serving sizes) 1,000 cases (12/12	21 15	X	68 441.9 29 721.7	253 974 437 941	22 14	X X	61 227.9 31 826.8	226 043 485 318
311421D261	Canned chili sauce	20 15	X X	65 687.4 14 304.4	610 373 106 300	22 16	x x	P48 380.6 10 533.0	462 244 78 861
311421D271	Canned barbecue sauce 1,000 cases (12/12	26	X	24 297.5	191 154	24	X	27 398.1	264 026
311421D281 311421D291	glass)	23	Х	23 216.5	587 530	21	Х	22 123.8	575 654
04440470	s)	10	X	12 351.1	86 374	18	X	10 732.5	85 357
311421D3 311421D3A1 311421D3B1	Canned salsa	N 31 17	X X X	X 11 264.6 3 566.1	319 868 192 198 45 793	N N N	X X X	X X X	N N N
311421D3C1	Canned salsa, other sizes 1,000 cases (12/12 glass)	27	Х	5 377.7	81 877	N	х	х	N
311421DY	Catsup and other tomato sauces, pastes, etc., nsk	N	x	×	24 409	N	x	Х	N
311421DYWV	Catsup and other tomato sauces, pastes, etc., nsk	N	Х	x	24 409	N	x	X	24 757
311421G	Canned jams, jellies, and preserves	N	X	Х	1 007 148	N	х	X	922 315
311421G1 311421G111	Canned jams, jellies, and preserves Canned strawberry jams and preserves, pure	N 23	X X	X 343.2	974 222 263 390	N 26	X X	X 314.1	N 251 737
311421G121	Canned raspberry jams and preserves, pure	17	X	211.8	151 590	14	x	217.2	156 137
311421G131	Other canned jams and preserves, pure mil lb.	29		144.1	96 676	N N		X X	N
311421G141 311421G151	Canned grape jelly, pure mil lb Other canned jellies, pure mil lb	18 23	X X X	236.8 141.9	158 247 109 295	21 26	X X X	225.0 9129.3	153 745 100 807
311421G161 311421G171	Fruit spread mil lb Canned imitation jellies, jams, and preserves mil lb	9	X X	P16.0 58.2	17 556 46 588	N 6	X X	X 56.2	N 43 609
311421G181 311421G191 311421G1A1	Canned marmalades mill b. Canned fruit butter mill b. Canned maraschino cherries (excluding	10 15	X X X	26.7 S	23 551 46 812	8 10	X X X	P24.3 P56.1	21 685 57 350
JITEIGIAI	glace and candied)mil gal	7	х	10.6	60 517	8	x	9.7	58 441
311421GY 311421GYWV	Jams, jellies, and preserves, nsk	N N	X	X	32 926 32 926	N N	X	X	N 32 656

See footnotes at end of table.

#### Table 6a. Products Statistics: 1997 and 1992—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			19	97			19	192	
NAICS		Number of companies		Product	shipments	Number of companies		Product	shipments
product code	Product	with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)	with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
311421	Canned fruits and vegetables — Con.								
311421J	Canned fruit juices, nectars, and concentrates	N	х	х	2 915 653	N	х	х	3 319 661
311421J1 311421J111	Canned orange juice, single strength	N 36	X	X 494.1	1 433 361 1 433 361	N 43	X	X 624.6	N 1 815 013
311421J2 311421J221 311421J231	Canned fruit juices except orange	N 34	X	X 235.8	1 458 638 491 595	N 43	X	X 232.1	N 486 584
311421J241 311421J251	strength mil gal Canned prune juice, single strength mil gal Other canned whole fruit juices and	20 8	X X	P61.3 D	188 923 D	26 13	×	54.7 P13.0	181 956 45 168
311421J261 311421J271	mixtures of whole fruit juices	33 3	X X	146.5 D	495 555 D	38 4	×	176.2 P2.5	510 196 7 718
	equív	18	Х	P58.7	191 130	17	X	57.2	210 076
311421JY 311421JYWV	Canned fruit juices, nectars, and concentrates, nsk.  Canned fruit juices, nectars, and concentrates, nsk.	N N	x x	x x	23 654 23 654	N N	x x	x x	N 62 950
311421M	Fresh fruit juices and nectars, single strength	N N	X	×	1 426 476	N	x	x	1 227 963
311421M1	Fresh fruit juices and nectars, single								
311421M111	strengthFresh orange juices and nectars, single	N	X	Х	1 408 737	N	X	X	N
311421M121	strength mil gal Other fresh juices amd nectars, single	111	Х	P342.9	717 832	136	X	251.0	540 292
311421M131	strengthmil gal Concentrated fruit juice (except for	60	Х	160.5	406 410	70	X	P167.4	436 443
	fountain use)	16	х	103.4	284 495	16	х	P83.6	236 206
311421MY	Fresh fruit juices and nectars, single		v	v	17 700	N.	V	v	NI.
311421MYWV	strength, nsk Fresh fruit juices and nectars, single strength, nsk	N N	X X	X X	17 739 17 739	N N	X X	X X	N 15 022
311421P	Pickles and other pickled products	N	Х	Х	1 232 949	N	х	Х	1 206 939
311421P1 311421P111 311421P121 311421P131 311421P141	Pickles and other pickled products. Finished dill cucumber pickles mil gal. Finished sour cucumber pickles mil gal. Finished sweet cucumber pickles mil gal. Refrigerated finished cucumber pickles,	N 20 5 14	X X X	X 131.3 D 122.1	1 231 331 501 433 D 197 155	N 21 7 17	X X X	X 139.2 9.8 117.3	N 502 234 38 540 193 589
311421P151	inclūding overnight, half sour, artificially acidified, etc mil gal Other finished pickles and pickled	16	Х	44.7	152 248	17	x	24.5	85 515
0444048404	products (mushrooms, peppers, onions, etc.) mil gal	20	Х	20.5	86 040	14	x	43.2	162 559
311421P161 311421P171 311421P181 311421P191 311421P1A1 311421P1B1	sauce) mil gal. Finished relishes mil gal. Finished sauerkraut mil gal. Other finished pickled products mil gal. Unfinished pickles (salt stock) mil gal. Unfinished bried cherries mil gal.	11 20 7 14 7 3	× × × × ×	3.8 33.4 9.5 23.2 22.7 4.1	24 052 134 309 20 492 51 270 20 644 19 145	10 20 7 10 7 4	X X X X	P2.8 P30.3 P4.0 16.1 P17.7 3.1	19 542 97 555 8 472 37 065 17 820 18 426
311421P1C1	Other bulk unfinished pickled products, such as mushrooms, sauerkraut, etc mil gal	2	x	D	D	8	x	8.3	24 629
311421PY 311421PYWV	Pickles and other pickled products, nsk	N N	x x	x x	1 618 1 618	N N	x x	x x	N 993
311421W	Fruit and vegetable canning, nsk, total	N	X	×	505 276	N	x	X	993 N
311421WY	Fruit and vegetable canning, nsk, for both		^	^	505 276	"	^	^	IN.
311421WYWW	nonadministrative-and administrative- record establishments  Fruit and vegetable canning, nsk, for nonadministrative-record	N	х	х	505 276	N	x	х	N
311421WYWY	establishments	N N	X	X	264 751 240 525	N N	×	X	N
	administrative-record establishments	I N	Х	Х	∠40 525	IN IN	Х	Х	N

Note: For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p 10 to 19 percent estimated; q 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

<sup>#</sup> Additional information is available for this item; see Appendix F.

@ Additional data are available for these codes at the aggregate U.S. level in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.

\$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

#### Table 6b. Product Class Shipments for Selected States: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipmen (\$1,000)	ts
code		1997	199
3114211	CANNED FRUITS, EXCEPT BABY FOODS		
	United States	2 287 979	2 371 85
	California	1 292 079	1 227 51
	Illinois	30 604 149 779	166 08
	New York	179 930	155 69
	Washington	173 230	222 53
114214	CANNED VEGETABLES, EXCEPT HOMINY AND MUSHROOMS		
	United States	2 723 079	2 694 39
	California	593 430	474 25
	Illinois Indiana	98 584 73 230	161 90 49 27
	Michigan	42 978	52 02
	Minnesota	274 993	355 69
	North Carolina	32 951	26 48 41 57
	OhioOregon	65 238 132 164	41 57 71 24
	Texas	36 238 121 882	114 34
	Wisconsin	697 784	664 41
114217	CANNED HOMINY AND MUSHROOMS		
117217		140 000	000 04
	United States	148 602	202 04
	CaliforniaPennsylvania	15 340 88 552	14 54 125 07
11421A	CANNED VEGETABLE JUICES		
	United States	442 438	409 389
	California	126 797	100 719
	Indiana	29 050	20 700
11421D	CATSUP AND OTHER CANNED TOMATO SAUCES, PASTES, ETC.		
	United States	4 234 497	3 671 644
	California	1 868 702	1 575 450
	Indiana	248 006 40 447	118 48 <sup>-</sup>
	New Jersey	201 014	123 758
	New York	112 673	391 536
	Ohio	702 462 109 302	635 562 103 579
	Texas.	279 737	113 520
	Wisconsin	27 810	48 219
311421G	CANNED JAMS, JELLIES, AND PRESERVES		
	United States	1 007 148	922 315
	California	184 445	205 053
	Illinois	17 367 4 701	12 145 N
	Kentucky	25 632 70 879	20 290
	Michigan		N
	New York	148 922 224 735	131 633 N
	Oregon	19 720 108 886	N 52 645
	Pennsylvania	100 000	52 640
311421J	CANNED FRUIT JUICES, NECTARS, AND CONCENTRATES		
	United States	2 915 653	3 319 661
	California	296 526	265 857
	Florida	1 414 387   57 689	1 543 602 223 764
	New Jersey	142 994	191 333
	New York	240 381	206 908
	Ohio	25 801 161 351	22 506 200 387
	Texas	88 224	125 176
	Virginia	36 061   244 710	77 09
	Wisconšin	26 526	24 79
11421M	FRESH FRUIT JUICES AND NECTARS, SINGLE STRENGTH		
	United States	1 426 476	1 227 963
	Alabama	23 742	16 33
	California Colorado	231 038 6 060	190 35 7 25
	Connecticut	10 797	16 52
	Florida	432 847	193 130
	Hawaii	14 892	1
	Indiana	13 419	
	lowaKentucky	8 587   20 160	1 24 62

See footnotes at end of table.

#### Table 6b. Product Class Shipments for Selected States: 1997 and 1992—Con.

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipments (\$1,000)				
code		1997	1992			
311421M	FRESH FRUIT JUICES AND NECTARS, SINGLE STRENGTH—Con.					
	Massachusetts Michigan New Jersey New York North Carolina Ohio Pennsylvania Tennessee	32 211 33 707 221 483 10 794	34 270 85 309 14 326 169 665 14 081 26 603 57 524 31 437			
311421P	Texas. Virginia Washington  PICKLES AND OTHER PICKLED PRODUCTS	28 271 8 648 57 888	45 350 9 190 120 869			
	United States	1 232 949	1 206 939			
	California	65 755 316 578 29 041 9 845 32 240 72 572	179 641 290 716 35 538 N 7 868 N			

#### Table 7. Materials Consumed by Kind: 1997 and 1992

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS		19	97	19	992
material code	Material consumed	Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
311421	FRUIT & VEGETABLE CANNING				
11131000	Fresh oranges         1,000 s tons.           Fresh apples         1,000 s tons.           Fresh apricots         1,000 s tons.           Fresh grapes         1,000 s tons.           Fresh peaches         1,000 s tons.	3 270.5	603 735	1 635.0	282 658
11133100		P1 513.4	249 173	1 194.8	176 452
11133901		979.3	25 516	46.5	12 685
11133200		375.6	81 232	511.1	93 705
11133903		599.9	143 777	559.9	132 101
11133905	Fresh pears         1,000 s tons.           Fresh pineapples         1,000 s tons.           Fresh grapefruit         1,000 s tons.           Other fresh fruits         1,000 s tons.           Fresh green peas         1,000 s tons.	466.4	102 158	428.2	95 660
11133907		D	D	351.0	57 560
11132000		343.1	61 220	D	D
11130003		391.2	220 120	385.7	186 868
11121901		242.7	62 794	303.4	79 887
11121100	White potatoes         1,000 s tons.           Other fresh vegetables         1,000 s tons.           Fresh tomatoes         1,000 s tons.           Fresh sweet corn         1,000 s tons.           Fresh green (snap) or wax beans         1,000 s tons.	163.3	19 293	118.7	14 689
11100001		P684.4	139 908	N	N
11121907		11 055.9	653 265	8 220.2	520 022
11121905		1 953.9	137 443	1 864.7	142 954
11121903		P564.0	94 528	528.3	86 729
31131003	Sugar, cane and beet (in terms of sugar solids)	P167.5	76 148	N	N
31122103		891.0	125 628	870.7	119 550
31122117		83.7	12 370	77.5	11 750
31122119		595.6	72 306	651.5	71 174
31161003	Fresh, frozen, and prepared meats	S	33 858	1 157.3	33 658
31161500	Dressed poultry purchased for processing (cooking, smoking, canning, rawboning, freezing, dehydrating)	D	D	D	D
31142311		28.0	23 133	N	N
31142103		133.7	628 742	P140.6	635 126
31141105		677.2	381 870	N	N
31142105		720.7	241 026	567.6	229 154
31121101	Wheat flour 1,000 cwt. Fats and oils, all types (purchased as such) mill lb. Printed labels Flexible packaging materials Paperboard containers, boxes, and corrugated paperboard	968.7	1 513	D	D
31100019		128.1	38 794	N	N
32310000		X	106 414	X	87 697
00190003		X	236 976	X	99 191
32221001		X	333 353	N	N
33243101 32721301 11121909 001900A3 00970099 00971000	Metal cans, can lids and ends Glass containers Cucumbers Bags; plastics, foil, and coated paper All other materials and components, parts, containers, and supplies Materials, ingredients, containers, and supplies	X X 751.6 X X X	1 192 885 556 986 223 078 11 604 1 153 052 398 257	X	1 221 148 N N N N N N

<sup>#</sup> Additional information is available for this item; see Appendix F.

Note: For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p 10 to 19 percent estimated; q 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

<sup>#</sup> Additional information is available for this item; see Appendix F.

@ Additional data are available for these codes at the aggregate U.S. level in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.

\$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

## Appendix A. Explanation of Terms

#### **BEGINNING- AND END-OF-YEAR INVENTORIES**

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

#### **Inventory Data by Stage of Fabrication**

Total inventories and three detailed components (1) finished goods, (2) work-in-process, and (3) materials, supplies, fuels, etc., were collected.

When using inventory data by stage of fabrication for "all industries" and at the three-digit subsector level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by an establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for all publication levels.

#### **COST OF MATERIALS**

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

Included in this item are:

- Cost of parts, components, containers, etc.—Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
- Cost of products bought and sold in the same condition.

- Cost of fuels consumed for heat and power—Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
- 4. Cost of purchased electricity—The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
- 5. Cost of contract work—This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term "Contract Work" refers to the fee a company pays to another company to perform a service.

#### **Specific Materials Consumed**

In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. If less than \$25,000 of a listed material was consumed by an establishment, the cost data could be reported in the "Cost of all other materials...," Census material code 00970099. Also, the cost of materials for small establishments for which administrative records or short forms were used was imputed into the "Materials not specified by kind," Census materials code 00971000.

### Duplication in Cost of Materials and Value of Shipment

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive

1997 ECONOMIC CENSUS APPENDIX A A-1

stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

#### **COST OF PURCHASED SERVICES**

Annual Survey of Manufactures (ASM) establishments were requested to provide information on the cost of purchased services for the repair of buildings and other structures, the repair of machinery, communication services, legal services, accounting and bookkeeping services, advertising, software and other data processing services, and refuse removal. Each of these items reflects the costs paid directly by the establishment and excludes salaries paid to employees of the establishment for these services.

Included in the cost of purchased services for the repair of buildings and machinery are payments made for all maintenance and repair work on buildings and equipment. Payments made to other establishments of the same company and for repair and maintenance of any leased property also are included. Extensive repairs or reconstruction that was capitalized is considered capital expenditures and is, therefore, excluded from this item. Repair and maintenance costs provided by an owner as part of a rental contract or incurred directly by an establishment in using its own work force also are excluded.

Included in the cost of purchased advertising services are payments for printing, media coverage, and other advertising services and materials.

Included in the cost of purchased software and other data processing services are all purchases by the establishment from other companies. Excluded are services provided by other establishments of the same company (such as by a separate data processing unit).

Included in the cost of purchased refuse removal services are all costs of refuse removal services paid by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures.

#### **Response Coverage Ratio**

A response coverage ratio is a measure of the extent to which respondents report for an item. The estimate is made by calculating the ratio value of the weighted total employment data for all the ASM establishments that report the item to the weighted total employment data for all ASM establishments classified in an industry (reporters and non-reporters).

#### **DEPRECIATION CHARGES FOR FIXED ASSETS**

This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.

#### **EMPLOYEES**

This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

#### **Production Workers**

This item includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

#### **All Other Employees**

This item covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It

includes sales (including driver-salespersons), sales delivery (highway truck drivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations utilized as a separate work force.

#### FRINGE BENEFITS

Fringe benefits are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as companyoperated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

### GROSS BOOK VALUE OF DEPRECIABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable assets is collected on all census forms. It shows the value of depreciable assets for the beginning of year and end of year. The data encompass all fixed depreciable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

#### NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

#### **PAYROLL**

This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

The ASM provides estimates of employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

#### PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each

product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	33461	Manufacturing and reproduction of magnetic and optical media
U.S. industry	334612	Reproduction of software
Product class	3346120	Prerecorded compact disc (except software), tape, and record reproducing
BLS link code	3346120X	_
Product code	3346120XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the 1997 census program, information was collected on the output of almost 10,000 individual product items.

In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products (ten-digit codes), and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments information were collected. However, if quantity was not significant or could not be reported by manufacturers, only value of shipments was collected.

Shipments include both commercial shipments and transfers of products to other plants of the same company. For industries in which a considerable portion of the total shipments is transferred to other plants of the same company, separate information on interplant transfers also was collected. Moreover, for products that are used to a large degree within the same establishment as materials or components in the fabrication of other products, total production and often consumption of the item within the plant (quantity produced and consumed) was collected. Typically, the information on production also was collected for products for which there are significant differences between total production and shipments in a given year because of wide fluctuations in finished goods inventories. Other measures of output of products with long production cycles were used as appropriate and feasible.

#### PRIMARY PRODUCT CLASS CODE

This file presents selected statistics for establishments according to their degree of specialization in products primary to their industry. This field contains either the six-digit North American Industrial Classification System (NAICS) industry code corresponding to all establishments in the industry, or the seven-digit NAICS product class code for all establishments within the industry that are specialized in a particular product class. Product class specialization is determined by evaluating the ratio of the largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment.

#### PRODUCTION-WORKER HOURS

This item covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave.

### QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the Annual Survey of Manufactures (ASM) form. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

#### RENTAL PAYMENTS

Total rental payments are collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these companyowned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

#### RETIREMENTS OF DEPRECIABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

#### TOTAL CAPITAL EXPENDITURES (NEW AND USED)

For establishments in operation and any known plants under construction, manufacturers were asked to report their new and used expenditures for (1) permanent additions and major alterations to manufacturing establishments and (2) machinery and equipment used for replacement and additions to plant capacity if they were of the type for which depreciation accounts were ordinarily maintained.

Totals for expenditures include the costs of assets leased from nonmanufacturing concerns through capital leases. New facilities owned by the Federal Government but operated under contract by private companies and plant and equipment furnished to the manufacturer by communities and nonprofit organizations are excluded. Also excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

#### **VALUE ADDED**

This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning-and end-of-year inventories.

For those industries where value of production is collected instead of value of shipments, value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those

industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

"Value added" avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

#### **VALUE OF SHIPMENTS**

This item covers the received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all items made by or for the establishments from material owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of "all other costs" (including company overhead) and profit.

In addition to the value for NAICS defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment's value of product shipments:

- 1. Reported contract work—Receipts for work or services that a plant performed for others on their materials.
- 2. Value of resales—Sales of products brought and sold without further manufacture, processing, or assembly.
- 3. Other miscellaneous receipts—Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. These components are:

- 1. Primary products value of shipments.
- 2. Secondary product value of shipments.
- 3. Total miscellaneous receipts.

Primary product shipments is used in the calculations of industry specialization ratio and industry coverage ratio. The term "Value of primary products shipments made in this industry" is used in this publication and refers to the same data.

1997 ECONOMIC CENSUS APPENDIX A A-5

### Duplication in Cost of Materials and Value of Shipment

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

#### **Specialization and Coverage Ratios**

These items are not collected on the report forms but are derived from the data shown in Table 3. An establishment is classified in a particular industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). Specialization and coverage ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in Tables 1a through 5 and data on product shipments shown in Tables 6a and 6b.

Specialization ratio represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments wherever classified.

## Appendix B. NAICS Codes, Titles, and Descriptions

#### **311421 FRUIT AND VEGETABLE CANNING**

This U.S. industry comprises establishments primarily engaged in manufacturing canned, pickled, and brined fruits and vegetables. Examples of products made in these establishments are canned juices; canned jams and jellies; canned tomato-based sauces, such as catsup, salsa, chili, spaghetti, barbeque, and tomato paste; pickles, relishes, and sauerkraut.

The data published with NAICS code 311421 include the following SIC industries:

2033 Canned fruits and vegetables 2035 Pickles, sauces, and salad dressings (pt)

## Appendix C. Coverage and Methodology

#### MAIL/NONMAIL UNIVERSE

The manufacturing universe includes about 400,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing, but not those industries leaving the manufacturing sector in the classification change. The amounts of information requested from manufacturing establishments were dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the annual survey of manufactures (ASM). The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

 Small single-establishment companies not sent a report form.

Approximately 40 percent of the manufacturing establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cutoff was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cutoff that could be directly assigned a six-digit NAICS code were excused from filing any report. For below cutoff establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements that safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these

establishments but were included in the product and material "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously re-coded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census – Manufacturing, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as "All other" industries within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into three groups:

a. ASM sample establishments.

This group accounts for approximately 15 percent of all manufacturing establishments. The ASM panel covers all the units of large manufacturing establishments as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size. For more information, see the Description of the ASM Survey Sample.

MANUFACTURING APPENDIX C C-1

In an economic census year, the ASM report form (MA-1000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply additional information on gross book value of assets and capital expenditures. ASM establishments were also requested to provide information on retirements, depreciation, rental payments, and supplemental labor costs. For establishments not included in the ASM, these additional items were estimated using relationships observed in the ASM establishment data. The census statistics for these variables are a sum of the ASM establishment data and the estimated data for non-ASM establishments. ASM establishments were also requested to provide information for selected purchased services. The census statistics for the purchased service items were derived solely from the ASM establishments. See Appendix A, Explanation of Terms for an explanation of these items. The census part of the report form is 1 of 220 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of this many forms to canvass the 480 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries as well as secondary products and miscellaneous services that establishments classified in these industries were likely to perform. Respondents were requested to identify the products, the value of each product, and, in many cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided for the respondent to describe significant materials not identified on the form.

A wide variety of special inquiries was included to measure activities peculiar to a given industry, such as operations performed and equipment used.

b. Large and medium establishments (non-ASM).

Approximately 30 percent of all manufacturing establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 220 economic census – manufacturing regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.

c. Small single-establishment companies (non-ASM).

This group includes approximately 15 percent of all manufacturing establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. These establishments received 1 of the 31 versions of the short form, which requested summary product and material data and totals but no details on employment, payroll, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products and materials consumed was not collected on the short form; thus, its use would increase the value of the nsk categories.

### INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Manufacturing was classified in 1 of 480 industries (473 manufacturing industries and 7 former manufacturing industries) in accordance with the industry definitions in the 1997 NAICS Manual. This is the first edition of the NAICS Manual and it is a major change from the 1987 SIC Manual that was used previously. Appendix A of the 1997 NAICS Manual notes the comparability between the 1987 SIC and 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product class and product comparability between the two systems for data in this report.

In the NAICS system, an industry is generally defined as a group of establishments that have similar production processes. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees.

C-2 APPENDIX C MANUFACTURING

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the manufacturing sector for 1997, there are 21 subsectors (three-digit NAICS), 86 industry groups (four-digit NAICS), 184 NAICS industries (five-digit NAICS) that are comparable with Canadian and Mexican classification, and 473 U.S. industries (six-digit NAICS). This represents an expansion of the four-digit SICbased U.S. industries from 459 in 1987. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products, and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits. These counts do not include the seven former manufacturing industries that are included in the 1997 Economic Census - Manufacturing.

For the 1997 Economic Census – Manufacturing, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value. For 1997, there were no "resistance rules" or "frozen industries."

In ASM years, establishments included in the ASM sample with certainty weights are reclassified by industry only if the change in the primary activity from the prior year is significant or if the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year. However, in the following census year, these ASM plants are allowed to shift from one industry to another.

The results of these rules covering the switching of plants from one industry classification to another are that some industries comprise different mixes of establishments in different survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the six-digit NAICS level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-record cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by manufacture, value of shipments, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics, especially the value of shipments, to the product statistics, the composition of the industry's output should be considered.

The extent to which industry and product statistics may be matched with each other is measured by the primary product specialization ratio and the coverage ratio. The primary product specialization ratio is the proportion of industry shipments accounted for by the primary products of establishments classified in the industry. The coverage ratio is the proportion of product shipments accounted for by establishments classified in the industry.

#### **ESTABLISHMENT BASIS OF REPORTING**

The economic census – manufacturing is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each location or establishment. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in distinctly different lines of activity at one location are requested to submit separate reports if the plant records permit such a separation and if the activities are substantial in size.

In 1997, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than \$5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures except for data on number of establishments for a few industries.

The 1997 Economic Census – Manufacturing excludes data for central administrative offices (CAOs). These would include separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company. These data are published in a separate report series.

#### **DESCRIPTION OF THE ASM SURVEY SAMPLE**

The annual survey of manufactures (ASM) sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1994 survey year based on the 1992 Census of Manufactures. This sample will be in place through the 1998 ASM.

MANUFACTURING APPENDIX C C-3

In 1992, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the 1992 manufacturing population was partitioned into two components for developing estimates within the ASM; a mail stratum and a nonmail stratum.

Mail stratum. The mail stratum of the survey is comprised of larger single-location manufacturing companies and all manufacturing establishments of multiunit companies (companies that operate at more than one physical location). Approximately 230,000 of the 370,000 establishments in the 1992 census were assigned to the mail stratum. On an annual basis, the mail stratum is supplemented with larger, newly active single-location companies identified from a list provided by the Internal Revenue Service (IRS) and new manufacturing locations of multiunit companies identified from the Census Bureau's Company Organization Survey (COS).

For the 1994 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1992 census. Supplemental samples representing both 1993 and 1994 births (newly active establishments that were not included in the 1992 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 1998.

The 1994-98 ASM sample design is similar to the one used since 1984. Companies in the 1992 Census of Manufactures with manufacturing shipments of at least \$500 million were defined as company certainties. For these large companies, each manufacturing establishment is included in the mail sample. For the 1994-98 sample, there are approximately 650 certainty companies collectively accounting for over 18,000 establishments.

For the remaining portion of the mail component of the survey, the establishment was defined as the sample unit. All establishments with 250 employees or more were defined as employment certainties. In addition, all establishments producing products in SIC 3571 (Electronic Computers) were defined as certainties. Across these three arbitrary certainty classes, there were approximately 25,000 establishments included in the sample with certainty. Collectively, these certainty establishments accounted for approximately 80 percent of the total value of shipments in the 1992 Census of Manufactures.

Smaller establishments in the remaining portion of the mail stratum were sampled with probabilities ranging from .02 to 1.00. The initial probabilities of selection assigned to these establishments were proportionate to a measure-of-size determined for each establishment. The measure-of-size was a function of the establishment's 1992 industry classification, its 1992 product class data, and the historical variability of the year-to-year estimates of the product class estimates. For each product class (1,755) and four-digit industry (459), a desired reliability

constraint was specified. Using a technique developed by Dr. James R. Chromy of the Research Triangle Institute, the initial establishment probabilities were optimized such that the expected sample satisfied all industry and product class reliability constraints while the sample size was minimized. This technique reduces the likelihood of selecting nonrepresentative samples for individual product classes or industries.

This method of assigning probabilities based on product class shipments is motivated by our primary desire to produce reliable estimates of both product class and industry shipments. The high correlation between shipments and employment, value-added, and other general statistics assures that these variables will also be well represented by the sample. The actual sample selection procedure uses an independent chance of selection method (Poisson sampling) which permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

**Nonmail component.** The initial nonmail component of the survey was comprised of approximately 140,000 small, single-establishment companies that were tabulated as administrative records in the 1992 Census of Manufactures. The nonmail stratum is also supplemented annually using the list of newly active single-location companies provided by the Internal Revenue Service (IRS) and payroll cutoffs. Companies with payroll below the payroll cutoff are added to the nonmail stratum. For this portion of the population, sampling is not used. The data for this group are estimated based on selected information obtained annually from the administrative records of the IRS and Social Security Administration (SSA). This administrative information, which includes payroll, total employment, industry classification, and physical location, is obtained under conditions which safeguard the confidentiality of both tax and census records.

### DESCRIPTION OF THE ASM ESTIMATING PROCEDURE

Most of the ASM estimates derived for the mail stratum are computed using a difference estimator. At the establishment level, there is a strong correlation between the current-year data values and the corresponding 1992 (base) data values. Therefore, within the mailed stratum, for each item at each level of aggregation, an estimate of the "difference" between the current year and the base year is computed from sample cases and added to the corresponding base-year values. For the 1993-1997 ASM estimates, the 1992 Census of Manufactures values serve as the base year. For the 1998 ASM, the base will be updated to be the 1997 Economic Census – Manufacturing.

Due to the positive year-to-year correlation, estimates derived using this methodology are generally more reliable than comparable estimates developed from the current sample data alone. Estimates for the capital expenditures variables are not generated using the difference

C-4 APPENDIX C MANUFACTURING

estimator because the year-to-year correlations are considerably weaker. The standard linear estimator is used for these variables.

For the nonmail stratum, estimates for payroll and employment are directly tabulated from the administrative-record data provided by IRS and SSA. Estimates of data other than payroll and employment are developed from industry averages. Although the nonmail stratum contains approximately 170,000 individual establishments in 1994, it accounts for less than 2 percent of the estimate for total value of shipments at the total manufacturing level.

Corresponding estimates for the mail and nonmail components are combined to produce the estimates included in this publication.

#### QUALIFICATIONS OF THE ASM DATA

The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sample lists but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the difference between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of estimates.

The particular sample selected for the ASM is one of many similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretically comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected ASM statistics in this report. They are represented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, completecoverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.

From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.

From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown at 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total, and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected during the Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown. Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be combined with higher level totals, creating a broader aggregate, which then may be of acceptable reliability.

### DATA FROM THE CURRENT INDUSTRIAL REPORTS (CIR)

The CIR program provides product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. When detail product data are collected in the CIR, they are not also collected in the census. However, the annual CIR data are included in the census Product Summary report.

The CIR program uses a unified data collection, processing, and publication system. The Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic

census – manufacturing. The economic census – manufacturing provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. While the CIR program includes both mandatory and voluntary surveys, the annual data are mandatory.

### **DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS**

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

### VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Manufacturing shows value of shipments data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment.

C-6 APPENDIX C MANUFACTURING

### Appendix D. Geographic Notes

Not applicable for this report.

1997 ECONOMIC CENSUS APPENDIX D D-1

### Appendix E. Metropolitan Areas

Not applicable for this report.

1997 ECONOMIC CENSUS APPENDIX E E-1

# Appendix F. Footnotes for Products Statistics and Materials Consumed by Kind

Not applicable for this report.

### Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3111111	2047323	20473 2047321 2047323	3112111561 3112111671 3112111681	2041123	2041117 2041121 2041123	3112217 3112217111 3112217121	20463	20463 2046353 2046354
3111111231 3111111341 3111111YWV	2047300	2047300	3112111791 31121117A1 31121117B1 31121118C1	2041126	2041126 2041129 2041128 2041131	3112217131 3112217141 3112217YWV	2046300	2046300
3111114 3111114111 3111114221 3111114231	20474	2047443	31121118D1 31121118E1 31121118F1 3112111YWV	2041151 2041161 2041198	2041151 2041161 2041198	311221A 311221A111 311221A221 311221A231	20464 2046462 2046465 2046472	20464 2046462 2046465 2046472
3111114341 3111114351 3111114YWV	2047454 2047457 2047400	2047454 2047457 2047400	3112114 3112114111 3112114121	20412 2041213	20412 2041213 2041219	311221A241	2046475 2046400 20460	2046475 2046400 20460
311111W	20470	20470 2047000 2047002	3112114YWV 3112117 3112117	2041210 2041200 20413		311221WYWW	2046000	2046000 2046002 20751
3111191 3111191111 3111191121 3111191231	2048115	20481 2048111 2048115 2048116	3112117121 3112117131 3112117141	2041315 2041321 2041323	2041315 2041321 2041323	3112221111 3112221221 3112221231 3112221241	2075113 2075115 2075121 2075131	2075113 2075115 2075121 2075131
3111191341 3111191351 3111191361	2048118 2048121 2048122	2048118 2048121 2048122	3112117151 3112117161 3112117171 3112117181	2041365 2041393 2041395 2041397	2041365 2041393 2041395 2041397	3112221YWV 3112224 3112224111	2075100	2075100 20752 pt 2075211
3111191371 3111191381 3111191391 31111913A1	2048124 2048131 2048132	2048123 2048124 2048131 2048132	3112117YWV 311211A 311211A111	2041300 20415 2041511	2041300 20415 2041511	3112224221 3112224231 3112224241 3112224261	2075231	2075231 2075251 2075261 2075297
31111913B1 31111913C1 3111191YWV		2048133 2048134 2048100	311211A121 311211A131 311211A141 311211A151 pt	2041513	2041513 2041515 2041521 2041517	3112224YWV 311222W 311222W	2075200 pt 20750 pt 2075000 pt	2075297 2075200 pt 20750 pt 2075000 pt
3111194 3111194100 3111197 3111197111	20482	20482 2048200 20483 2048301	311211A151 pt 311211A151 pt 311211A161 pt 311211A161 pt	2041530 pt 2041530 pt 2041590 pt 2041590 pt	2041525 2041581	311222WYWY 3112231 3112231100	2075002 pt 20741 2074100	2075002 pt 20741 2074100
3111197121 3111197YWV 311119A	2048301 2048302 2048300	2048301 2048302 2048300 20484	311211A161 pt 311211A161 pt 311211A161 pt	2041590 pt 2041590 pt 2041590 pt	2041586 2041588 2041589	3112234 3112234100	20742 2074200	20742 2074200
311119A100 311119D 311119D111	2048400 20485 2048503	2048400 20485 2048503	311211A171 pt 311211A171 pt 311211A171 pt 311211AYWV	2041596 pt 2041596 pt 2041596 pt 2041500	2041591 2041592 2041595 2041500	3112237 3112237100 311223A 311223A111	20743	20743 2074300 20744 pt 2074414
311119D121	2048504	2048504 2048500 20486	311211D pt	20343 pt	20343 pt 20416	311223A221 311223A231 311223AYWV	2074451	2074451
311119G100	2048600 20487 2048705	2048600 20487 2048705	311211D111 pt 311211D111 pt 311211D121 311211DYWV pt	2034338	2041613 2041627 2034300 pt	311223D	20761	20761 2076113 2076133 2076100
311119J121 311119JYWV	20488	2048706 2048700 20488	311211DYWV pt 311211W pt	20340 pt	20340 pt	311223G	20762	20762 2076223 2076252
311119M111	2048811	2048811 2048812 2048813 2048816	311211W pt 311211WYWW pt 311211WYWW pt 311211WYWY pt	2041000	20410 2034000 pt 2041000 2034002 pt	311223G131 311223G141 311223G151 311223G161	2076257 2076262 2076263 2076264	2076257 2076262 2076263 2076264
311119M151	2048821 2048823 2048825 2048831	2048821 2048823 2048825 2048831	311211WYWY pt 3112120	20440	2041002 20440 2044011	311223G171 311223G181 311223G191 311223GYWV	2076265 2076268 2076273 2076200	2076265 2076268 2076273 2076200
311119M191	2048833 2048800 20489 pt	2048833 2048800 20489 pt	3112120221 3112120331 3112120441 3112120451	2044015 2044017 2044021 2044035	2044015 2044017 2044021 2044035	311223J	20763 pt	2076200 20763 pt 2076311 2076351
311119P111 311119P121 311119P131 311119P141	2048935	2048935 2048939	3112120461 3112120471 3112120481 3112120YWW	2044093 2044000	2044051 2044098 2044093 2044000	311223J131 311223J141 311223JYWV	2076361	2076361
311119P151	2048900 pt	2048900 pt 2048A	3112120YWY 3112130 3112130100	20830	2044002 20830 2083000 pt		20740 pt 20760 pt 2074000 pt	20760 pt 2074000 pt
311119T111 311119T121 311119T131 311119T141	2048A03	2048A03 2048A05	3112130YWW 3112130YWY	2083002	2083002	311223W pt 311223WYWW pt 311223WYWW pt 311223WYWY pt 311223WYWY pt		2076000 pt 2074002 pt 2076002 pt
311119T151 311119T161 311119T171 311119T181	2048A09	2048A09 2048A11 2048A12	3112211111 3112211121 3112211131 pt 3112211131 pt	2046103	2046103 2046104 2046113 2046116	3112251 pt 3112251 pt 3112251 pt	•	20744 pt 20752 pt 20763 pt
311119TYWV 311119W 311119WYWW	2048A00	2048A00 20480 pt	3112211141 3112211251 3112211261 3112211371	2046118	2046118 2046123 2046125 2046129	3112251 pt 3112251 pt	20773 pt 20791	20773 pt 20791
311119WYWY 3112111 3112111111	2048002 pt 20411 2041105	2048002 pt 20411 2041105	3112211YWV 3112214 3112214111	2046100 20462 2046211	2046100 20462 2046211	3112251111 3112251221 3112251331 3112251441	2079113 2079115 2079142 2079151	2079151
3112111221 3112111331 3112111441	2041107 2041111	2041107 2041111 2041113	3112214221 3112214331 pt	2046213 2046218 pt 2046218 pt	2046213 2046215 2046217	3112251551 3112251561 3112251571 3112251581	2079152	2079152 2079153 2079154

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
31122515A1 31122515B1 31122515C1 31122515C1 3112251701 3112251706 3112251711 3112251721 3112251731	2076394 2076395	2079183 2079185 2079198 2077311 pt 2074499 2075299 2076391 2076394 2076395	3113207231 3113207241 3113207251 3113207360 3113207371	2066921 2066911 2066971 2066975 2066963 2066981 2066992	2066911 2066971 2066975 2066963 2066981 2066992 2066993	3114121 3114121111 3114121221 3114121331 3114121331 3114121341 3114121561 3114121561 3114121761 31141217781 31141217781	2038211 2038213 2038215 2038215 2038219 2038223 2038223 2038240 2038228 2038231	2038211 2038213 2038215 2038219 2038221 2038223 2038240 2038228 2038231
3112251741	2076398	2076398 2074400 pt 2075200 pt 2076300 pt 2077300 pt 2079100	311320W	20660	20660 2066000 2066002 20642 2064200	31141217B1 31141217C1 31141217D1 31141217E1 31141217F1 pt 31141217F1 pt 3114121YWV	2038238	2038238 2038239 2038247 2038243 2038245 2038249
311225W pt 311225W pt 311225W pt 311225W pt	20740 pt	20740 pt 20750 pt 20760 pt 20770 pt	311330W pt 311330W pt 311330W pt 311330WYWW pt 311330WYWW pt 311330WYWY pt	5441011	5441000 pt 20640 pt 54410 pt 2064000 pt 5441000 pt 2064002 pt	3114124	20384	20384 2038451 2038459 2038463 2038469 2038400
311225W pt 311225WYWW pt 311225WYWW pt 311225WYWW pt 311225WYWW pt 311225WYWW pt 311225WYWY pt 311225WYWY pt 311225WYWY pt 311225WYWY pt	2075000 pt	2077000 pt 2079000 2074002 pt 2075002 pt 2076002 pt	3113401	5441002 pt	20643 2064300 54410 pt 5441000 pt 20648	3114211121 3114211131	2038002	2038000 2038002 20331 2033112 2033113 2033115 2033122
311225WYWY pt 3112301 3112301111 3112301121 3112301241 3112301351 3112301361	2079002	2079002 20431 2043101 2043103 2043105 2043107 2043109 2043111	3113404530 3113404YWV 3113407 pt. 3113407221 3113407221	2064814 2064815 2064800 20649 2099G pt 2064976 2099G95	2064815 2064800 20649 2099G pt 2064976 2099G98 pt	31142111D1	2033132 2033134 2033136 2033138 2033141 2033157 2033159	2033132 2033134 2033136 2033138 2033141 2033157 2033159
3112304121	2043116 2043118 2043119 2043100 20432 pt 2043201 2043203	2043100 20432 pt 2043201 2043203	3113407YWV pt 3113407YWV pt 311340W pt 311340W pt	2064921 2064900 2099000 pt 20640 pt 20990 pt	2064900 2099G00 pt 20640 pt 20990 pt 54410 pt	3114214 3114214111 3114214121	2033163 2033165 2033169 2033100 20332 2033203 2033203	2033163 2033165 2033169 2033100 20332 2033203 2033205
3112304131 3112304141 3112304151 31123047WV 311230WYWW 311230WYWW 311230WYWW	2043207 2043213 2043200 pt 20430 pt 2043000 pt 2043002 pt	2043207 2043209 pt 2043200 pt 20430 pt 2043000 pt 2043002 pt	311340WYWW pt 311340WYWW pt 311340WYWY pt 311340WYWY pt 311340WYWY pt 3114111	2064000 pt 2099000 pt 5441000 pt 2064002 pt 2099002 pt 5441002 pt 20371	2099000 pt 5441000 pt 2064002 pt 2099002 pt 5441000 pt 20371 2037135		2033235 2033237 2033239 2033253 2033255 2033274 2033275	2033235 2033237 2033239 2033253 2033255 2033274 2033275
3113110111 3113110221 3113110231 3113110231 31131107WW 31131107WY	2061011 2061065 2061085 2061000 2061002 20620 206209	2061011 2061065 2061085 2061000 2061002 20620 2062009	3114111131 3114111141 3114111151 3114111261 3114111371 3114111481 3114111491		2037155 2037157 2037161 2037162	31142141D1 31142141E1 31142141F1 31142141G1 31142141H1 3114214YWV	2033291 2033293 2033294 2033295 2033297 2033298 2033200	2033291 2033293 2033294 2033295 2033297 2033298 2033200
3113120331 3113120441 3113120551 3113120561 3113120571 3113120581 3113120591	2062014 2062015 2062031 2062035 2062041 2062045 2062045 2062053	2062014 2062015 2062031 2062035 2062041 2062045 2062053 2062056	31141116B1	2037172 2037174 2037180 2037183 2037185 2037186 2037187	2037174 2037180 2037183 2037185 2037186	3114217 3114217111 3114217121 3114217YWV 311421A 311421A111 311421A121 311421AYWV	20333 2033315 2033321 2033300 20335 2033515 2033598 2033590	2033321 2033300 20335 2033515 2033598
31131205B1	2062000 2062000 2062002 20630 2063009 2063012 2063013 2063015 2063033	2062000	3114114 3114114111 3114114121 3114114131	2037197	2037197 2037100 20372 2037211 2037213 2037221	311421D	20336	2033631 pt 2033614 2033615 2033622 2033623 2033651
3113130561 3113130671 pt 3113130671 pt 3113130781 3113130791 31131308A1 31131309B1 31131307WW	2063035 2063035 pt 2063053 pt 2063053 pt 2063076 2063082 2063084 2063091 2063000 2063000	2063035 2063035 2063051 2063055 2063076 2063082 2063084 2063091 2063000 2063000	3114114151 3114114161 3114114171 3114114181 3114114191 31141142A1 31141143B1	2037231 2037233 2037235 2037241 2037242 2037245	2037231 2037233 2037235 2037241 2037242 2037245 2037248	311421D281 311421D291 311421D3A1 311421D3B1 311421D3C1 311421DYWV 311421G 311421G	2033667 2033691 2033658 2033659 2033660 2033600	2033667 2033691 2033631 pt 2033631 pt 2033631 pt 2033600
3113201	20661 2066122 2066112	20661 2066122 2066112 2066132 2066152 2066100	31141145D1 31141145E1 31141146F1 31141146G1 31141146H1 3114114YWV	2037253 2037255 2037261 2037263 2037269 2037200	2037253 2037255 2037261 2037263 2037269 2037200	311421G121 311421G131 311421G141 311421G151 311421G161 311421G171 311421G181 311421G191 311421G191	2033812 2033813 2033821 2033825 2033828 2033831 2033841 2033861	2033812 2033813 pt 2033821 2033825 2033813 pt 2033831 2033841 2033851
3113204000	2066200	2066200	1311411WYWY	2037002	2037002	311421GYWV	2033800	2033800

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
311421J 311421J111 311421J221 311421J231 311421J241 311421J251 311421J261	2033A25	2033A78	3115117 3115117111 3115117121 3115117131 3115117YWV	2026313	2026318 2026300 20265	3115200 3115200111 3115200221 3115200331 3115200441 3115200451	2024015	2024014 2024015 2024016 2024021 2024022
311421J271 311421JYWV 311421M 311421M111	2033A94	2033A94 2033A00 2033B 2033B12	311511A111 311511A121 311511AYWV	2026502	2026500 pt 2026500 pt 2026500 pt 20267	3115200471 3115200481 3115200491 31152005A1	2024025 2024026 2024027 2024035	2024099 pt 2024099 pt 2024099 pt 2024031 pt
311421M121 311421M131 311421MYWV 311421P 311421P111	20352	2033B19 2033B21 2033B00 20352 2035211	311511D111 311511D121 311511D131 311511D141 311511D151	2026711	2026714 2026716 2026717	31152005B1 31152005C1 31152005D1 31152005E1 31152005F1	2024037 2024094 2024096 2024052 2024054 2024071	2024094 2024096 2024052 2024054
311421P121 311421P131 311421P141 311421P151 311421P161 311421P171	2035215	2035213 2035215 2035219 2035221 2035231 2035233	311511DYWV 311511G 311511G111 311511G121 311511G131	2026700	2026700 20268 2026813 2026815	31152005H1 3115200YWW 3115200YWY 3116111	2024098	2024099 pt 2024000 2024002 20111
311421P181 311421P191 311421P1A1 311421P1B1 311421P1C1 311421PYWV	2035235	2035235 2035239 2035271 2035275 2035298 2035200	311511GYWV 311511W 311511WYWW 311511WYWY	2026800 20260 2026000	2026800 20260 2026000	3116111221 3116111331 3116111441 3116111551 3116111661 3116111671	2011114	2011114 2011116 2011118 2011131 2011151
311421W pt 311421W pt 311421WYWW pt 311421WYWW pt	20330	20330 20350 pt 2033000 2035000 pt	3115120 3115120111 3115120121 3115120131 3115120YWW	2021013 2021015 2021021 2021000	2021013 2021015 2021021 2021000	3116111YWV 3116114 3116114111 3116114121 3116114131	2011100 20112 2011212 2011217 2011261	2011100 20112 2011212 2011217 2011261
3114224	2035002 pt	2035002 pt 20321 2032100 20322	3115131	20223	20223 2022301 pt 2022302 pt 2022301 pt 2022302 pt	3116114YWV 3116117 3116117111 3116117121 3116117YWV	2011200 20113 2011312	2011200 20113 2011312 2011352
3114224100 3114227 3114227111 3114227121 3114227131	2032200	2032200 20323 2032370 2032371 2032375	3115131YWV 3115134 3115134111 3115134221 3115134231	2022300	2022300 20224 2022411 2022413 2022423	311611A 311611A111 311611A121 311611A131 311611AYWV	20114	2011412 2011417 2011451
3114227141 3114227151 3114227161 3114227171 3114227181	2032379 2032382 2032384	2032376 2032379 2032382 2032384 2032386 2032391	3115134241 3115134251 3115134YWV 3115137 3115137111	2022429 2022400 20225 2022511	2022429 2022400 20225 2022511	311611D	2011517 2011500 20116	2011513 2011517 2011500 20116
3114227YWV 311422A 311422A111 pt 311422A111 pt 311422A121	2032464 pt	2032300 20324 pt 2032463 2032494 2032491	3115137121 3115137YWV 311513A 311513A100	2022500 20226 2022600	2022500 20220 pt 2022000 pt	311611G111	2011612 2011622 2011631 2011635 2011641 2011652	2011622 2011631 2011635 2011641
311422A131	2032471	2032493 2032499 pt 2032468 2032496 2032497 2032499 pt	311513W 311513WYWW 311513WYWY 3115141 3115141111	2022000	2022000 pt 2022002 20235 2023511	311611G171	2011661	2011661 2011600 20117 2011711 2011717
	20320 pt 2032000 pt 2032002 pt	2032002 pt	3115141221 3115141331 31151414441 3115141551 3115141661 3115141671	2023529	2023545 2023547 pt	311611M	2011700	2011735 2011791 2011700 20118
3114231 pt 3114231 pt 3114231111 3114231121 3114231YWV	2099B pt	2099B19 pt	3115141681 3115141791 31151418A1 3115141YWV	20236	20236	311611M100	2011922	2011914 2011922 2011951
3114234 3114234111 3114234121 3114234131 3114234141	2034313 2034315 2034321 2034325	2034313 2034315 2034321 2034325	3115144111 3115144121 3115144131 3115144241 3115144351 31151444WV	2023616	2023616 2023621 2023626 2023628	311611PYWV 311611T pt 311611T pt	2011900	2011900 2011B 20489 pt 2011B15
3114234151 3114234161 3114234181 3114234YWV	2034337 2034340 2034300 pt	2034337	3115147 3115147111 3115147121 3115147131	2023712 2023717 2023719	2023719	311611T121 311611T131 311611T141 311611T151 311611T161 311611T171	2011B41	2011B41 2011B45 2011B55 2011B59 2048941 pt
311423WYWW pt 311423WYWY pt	2034000 pt	2099000 pt 2034002 pt	311514A 311514A111 311514A121 311514A131 311514A241	20238	20238	3116111YWV pt 311611TYWV pt 311611W pt	2011B00	2011B00 2048900 pt 20110 20480 pt
3115111	2026112	20261 2026112 2026115 2026116 2026119 2026100	311514A251 311514A261 311514A271 311514AYWV 311514D	2023807 2023813 2023821 2023800	2023807 2023813 2023819 pt 2023800	311611WYWW pt 311611WYWW pt 311611WYWY pt 311611WYWY pt 3116121 pt	2011000	2048000 pt 2011002 2048002 pt
3115111YWV 3115114 3115114111 3115114221 3115114331	20262	20262 2026212 2026223 2026225	311514D111 311514D121 311514D131 311514D141 311514D151	2023921	2023921 2023923 2023925 2023928 2023932	3116121 pt 3116121111 3116121121 3116121231 3116121341	2013622	2013612 2013622 2013631 2013635
3115114441 3115114451 3115114461 3115114471 3115114481 31151144WV	2026243	2026243 2026245 2026252 2026263	311514D161 311514DYWV 311514W 311514WYWW 311514WYWY	2023900 20230 2023000	2023900 20230 2023000	3116121451 3116121561 3116121671 3116121781 3116121YWV pt	2013652 2013661	2013652 2013661 2013741 2013600

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3116124111	20137 pt 2013711	2013711	3117110YWY pt	2091002	2091002 20922	3118124 3118124111	20512	20512 2051230
3116124221 3116124331		2013717 2013721	3117121111	2092201	2092213 pt	3118124121 3118124231	2051231 2051243	2051231 2051243
3116124441	2013735	2013735	3117121121		2092213 pt 2092213 pt	3118124241	2051244	2051244
3116124451 3116124YWV	2013791 2013700 pt	2013791 2013700 pt	3117121141	2092204	2092213 pt	3118124251 3118124261	2051250 2051251	2051250 2051251
3116127			3117121151 3117121161	2092208	2092213 pt 2092213 pt	3118124271 3118124281	2051260 2051261	2051260 2051261
	2013800		3117121171		2092213 pt 2092213 pt	3118124291 31181242A1	2051270 2051271	2051270 2051271
•	2013B		3117121191 31171211A1	2092211	2092213 pt 2092213 pt	31181242B1	2051280	2051271
311612A111	51470 pt 5147009	5147000 pt	31171211B1	2092215	2092215	31181242C1 31181242D1		2051281 2051290
311612A221 311612A331	2013B13	2013B13	31171211C1	2092217 2092218	2092217 2092218	31181242E1 31181242F1	2051291	2051291
311612A441 311612A451		2013B17 2013B18	31171211E1	2092219 2092223	2092219	31181242F1	2051249 2051200	2051249 2051200
311612A461 311612AYWV pt	2013B21	2013B21	31171211G1	2092224	2092224	3118127	20514	20514
311612AYWV pt	5147000 pt	5147000 pt	31171211J1	2092225 2092226	2092226	3118127111 3118127121	2051413 2051415	2051413 2051415
•	20130		31171211L1	2092227 2092228	2092228	3118127131 3118127YWV	2051419 2051400	2051419 2051400
311612W pt	51470 pt 2013000	51470 pt 2013000	31171211M1	2092231 2092200	2092231 2092200	311812A	20515	20515
311612WYWW pt	5147000 pt	5147000 pt	3117122	20923	20923	311812A111 311812A121 311812AYWV	2051513 2051519	
311612WYWY pt	5147002	5147002	3117122111 3117122221	2092311	2092311 2092313		2051500	2051500
3116131 3116131111		20771 2077111	3117122331 3117122441	2092315	2092315 2092317	311812D pt	20518 pt	
3116131121 3116131YWV		2077113	3117122451 3117122461	2092319	2092319 2092321	311812D pt	20518 pt	20516 20517
3116134 pt			3117122471	2092323	2092323	311812D pt 311812D111	20518 pt	2051313
3116134 pt			3117122581 3117122691	2092328	2092326 pt 2092327 pt	311812D131 311812D151	2051845 2051850	2051700 2051600
3116134111	2077211 2077212	2077211	31171226A1		2092329 pt	311812D181	2051890 2051892	2051398 pt 2051398 pt
3116134231 3116134241	2077237	2077237		2092333	2092326 pt 2092327 pt		2051800	2051300
3116134251	2077346	2077346	31171228D1 31171229E1	2092336	2092329 pt 2092326 pt	311812W pt	20510	20510
3116134261 3116134YWV pt	2077200	2077200	3117122AF1 3117122AG1	2092339	2092327 pt 2092329 pt	311812W pt	20520 pt	20520 pt 2051000
311613W	2077300 pt		3117122YWV		2092300	311812WYWW pt 311812WYWY pt	2052000 pt	2052000 pt 2051002
311613WYWW	2077000 pt	2077000 pt	3117123 3117123111	20925 2092521	20925 2092521	311812WYWY pt	2052002 pt	2052002 pt
311613WYWY			3117123121 3117123131	2092523	2092523	3118130	20530	20530 2053014
3116151111 3116151221	2015133	2015133	3117123141 3117123251	2092524	2092524	3118130221 3118130331	2053011 2053020	2053011 2053020
3116151331	2015136	2015136	3117123261 3117123271	2092526	2092526	3118130341 3118130351	2053017 2053040	2053017 2053040
3116151441 3116151551	2015141	2015141	3117123281 3117123291	2092528 2092529	2092528 2092529	3118130361 3118130371	2053030 2053032	2053025 pt 2053025 pt
	2015100		31171232A1	2092530	2092530	3118130391	2053055 2053060	2053050 pt 2053050 pt
3116154 3116154111	2015221	2015221	31171232B1 31171232C1	2092533 2092534	2092533 2092534	31181303V1 3118130YWW 3118130YWY	2053000 2053002	2053000 2053002
3116154121 3116154YWV	2015223 2015200	2015223 2015200	31171232D1 31171232E1	2092535	2092535 2092536	3118211	20521 pt	20521 pt
3116157 3116157111	20153	20153 2015322	31171232L1		2092500	3118211111 3118211221	2052125 2052135	2052125 2052135
3116157221 3116157331	2015324	2015324	3117124 pt	20773 pt	20773 pt	3118211331 3118211341	2052123 2052133	2052123 2052133
3116157341	2015327	2015327	3117124 pt	20926	20926 2092611	3118211351 3118211391	2052159 2052197	2052151 pt 2052198 pt
3116157YWV			3117124121	2092613	2092613	3118211YWV	2052100 pt	2052100 pt
311615A111	2015414	2015414	3117124211	2092698	2077361 pt	3118214 3118214111	20522	20522 2052213
311615AYWV	2015416 2015400	2015410	3117124231	2077367 2077372	2077379 pt	3118214221 3118214331	2052217 2052215	2052217 2052215
311615D 311615D111 pt	20155	20155 2015511	3117124311 3117124YWV pt	2077314 2077300 pt	2077311 pt 2077300 pt	3118214341 3118214351	2052216 2052218	2052216 2052218
311615D111 pt	2015512 pt	2015513	1	2092600		3118214361 3118214371	2052220	2052220
311615D111 pt	2015531	2015531	311712W pt	·	·	3118214381	2052221 2052235	2052221 2052235
311615D131 311615D141	2015533	2015533	311712W pt	2077000 pt	20920 2077000 pt	3118214391 3118214YWV	2052231 2052200	2052231 2052200
311615D151	2015539	2015539	311712WYWW pt 311712WYWY pt	2077002 pt	2092000 2077002 pt	311821W 311821WYWW	20520 pt 2052000 pt	20520 pt 2052000 pt
311615D171	2015548 2015500	2015548 2015500	311712WYWY pt	2092002		311821WYWY	2052000 pt	2052000 pt 2052002 pt
311615W	20150 pt	20150 pt	3118110	54610	5461000 pt	3118220 3118220121	20450	20450 2045013
311615WYWW 311615WYWY	2015000 pt 2015002 pt	2015000 pt 2015002 pt	3118110121	5461013	5461000 pt	3118220211 3118220231	2045011 2045015	2045011 2045015
3117110 pt	20770 pt	20770 pt	3118110141 3118110151	5461017 5461019	5461000 pt	3118220241 pt 3118220241 pt	2045030 pt	2045017 2045019
3117110 pt	20773 pt	20773 pt	3118110161 31181101V1	5461021 5461090	5461000 pt	3118220241 pt	2045030 pt	2045025
3117110 pt 3117110111	20910 2091012		3118110YWW 3118110YWY	5461000 5461002	5461000 pt	3118220251 3118220261 pt	2045021 2045090 pt	2045021 2045081
3117110221 3117110331	2091013	2091013	3118121 pt		20511	3118220261 pt 3118220261 pt	2045090 pt 2045090 pt	2045085 2045086
3117110331 3117110341 3117110351	2091015	2091015	3118121 pt	20521 pt	20521 pt	3118220261 pt	2045090 pt	2045088
3117110461	2077362	2077361 pt	3118121111	2051121	2051121 2051122	3118220261 pt 3118220271 pt	2045090 pt 2045096 pt	2045089 2045091
3117110471 3117110481	2077371	2077379 pt	3118121231	2051127	2051127	3118220271 pt 3118220271 pt	2045096 pt 2045096 pt	2045092 2045095
3117110591 31171106A1	2091019 2091031	2091019 2091031	3118121241	2051131	2051129 2051131	3118220YWŴ 3118220YWY	2045000 2045002	2045000 2045002
31171107B1	2091051	2091051	3118121361	2051135	2051133 2051135	3118230	20980	20980
31171107C1 31171107D1	2091082	2091082	3118121481 3118121491	2052188	2051137 2052198 pt	3118230111 3118230221	2098001	2098001 2098000 pt
31171107E1	2077000 pt	2077000 pt	31181214A1 31181214G1	2051141	2052198 pt 2051141	3118230331 3118230441	2098003 2098004	2098003 2098004
3117110YWW pt 3117110YWW pt	2077300 pt	2077300 pt 2091000	31181214J1 3118121YWV pt	2051142 2051100	2051142 2051100	3118230451 3118230461	2098005 2098006	2098005 2098006
3117110YWY pt	2077002 pt	2077002 pt	3118121YWV pt	2052100 pt		3118230YWW	2098000	

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3118230YWY	2098002	2098002	3119301 3119301111	20872 2087215	20872 2087215	3119910 pt	20990 pt	20990 pt
3118300 pt	20990 pt	20990 pt	3119301121	2087221	2087221	3119910 pt	20999 pt 2099921	20999 pt 2099921
3118300 pt	20999 pt	20999 pt	3119301YWV	2087200	2087200	3119910111 3119910221	2099931	2099931
3118300100 3118300YWW pt	2099943 2099000 pt	2099943 2099000 pt	3119304	20873 2087321		3119910331 3119910441	2099935 2099945	
3118300YWW pt	2099000 pt 2099900 pt 2099002 pt	2099900 pt 2099002 pt	3119304121 3119304131	2087323 2087325		3119910551 3119910561	2099953 2099955	
3119111		20680 pt	3119304141 3119304151	2087341 2087343	2087341	3119910671 3119910781	2099958 2099959	2099958
3119111111 3119111121	2068013	2068013 2068015	3119304161	2087345	2087345	3119910YWW pt	2099000 pt	2099000 pt
3119111131	2068017	2068017	3119304YWV	2087300	2087300 20874 pt	3119910YWW pt 3119910YWY	2099900 pt 2099002 pt	2099900 pt 2099002 pt
3119111241 3119111251	2068035	2068033 2068035	3119307111	2087459	2087459	3119991	20991	20991
3119111261 3119111371	2068053	2068037 2068053	3119307121 3119307131	2087461 2087471	2087471	3119991111 3119991121	2099113 2099115	2099113 2099115
3119111381 3119111391		2068055 2068057	3119307141 3119307YWV	2087481 2087400 pt	2087481 2087400 pt	3119991131 3119991141	2099153	2099153 2099155
31191113A1 3119111YWV	2068061	2068061 2068000 pt	311930W	20870 pt	20870 pt	3119991151 3119991YWV	2099159	2099159 2099100
3119114	2099F	2099F	311930WYWW	2087000 pt	2087000 pt 2087002 pt	3119994	20993	20993
3119114111	2099F44	2099F44 2099F46	3119411	20996	20996	3119994111	2099325 2099327	2099325 2099327
3119114121 3119114YWV	2099F00	2099F00	3119411111 3119411121	2099611 2099651		3119994121 3119994YWV	2099300	2099300
311911W pt	20680 pt	20680 pt	3119411131 3119411YWV	2099657 2099600	2099657	3119997 3119997111	20994	20994 2099413
311911W pt	20990 pt	20990 pt	3119414	20353	20353	3119997121	2099423	2099423
311911WYWW pt 311911WYWW pt		2068000 pt 2099000 pt	3119414111 3119414221	2035311 2035351	2035311	3119997131 3119997141	2099434 2099455	2099455
311911WYWY pt 311911WYWY pt	2068002	2068002	3119414YWV	2035300	2035300	3119997YWV	2099400 2099A	2099400 2099A
3119191	20961	20961	3119417	20354	20354 2035411	311999A111	2099A01	2099A01
3119191100	2096100		3119417221	2035423	2035423	311999A121 311999A131	2099A02	2099A02 2099A03
3119194			3119417331 3119417441	2035429 2035435	2035429 2035435	311999A141 311999A151	2099A04	2099A04 2099A05
3119194221	2096219 2096225	2096221 pt	3119417YWV	2035400	2035400	311999A161 311999AYWV	2099A06	
3119194331 3119194YWV	2096229 2096200	2096229 2096200	311941W pt	20350 pt	•	311999D	2099B pt	2099B pt
3119197 pt	20521 pt	20521 pt	311941W pt	20990 pt 2035000 pt	2035000 pt	311999D131 311999D141	2099B11	2099B11 2099B13
3119197 pt	20963	20963	311941WYWW pt 311941WYWY pt	2099000 pt	2099000 pt 2035002 pt	311999D151	2099B21	2099B19 pt
3119197111 3119197221	2096300 pt	2052151 pt 2096300 pt	311941WYWY pt	2099002 pt	•	311999DYWV	2099B00 pt 20159	2099B00 pt 20159
3119197YWV pt 3119197YWV pt	2052100 pt	2052100 pt 2096300 pt	3119421 pt	2099E		311999G111	2015911	2015911
311919W pt	•	20520 pt	3119421 pt 3119421111	28991 pt 2899121	2899100 pt	311999G121	2015913	2015915
311919W pt		20960	3119421121 3119421131	2099E31	2099E33	311999G141	2015917 2015951	2015951
311919WYWW pt	2052000 pt	2052000 pt	3119421241 3119421351	2099E38	2099E38 2099E39	311999G161 311999G171	2015953 2015955	
311919WYWW pt 311919WYWY pt	2052002 pt	2096000 2052002 pt	3119421YWV pt 3119421YWV pt	2099E00	2099E00 2899100 pt	311999G181	2015957 2015900	
311919WYWY pt		2096002	3119424 pt	20871	20871	311999J	20874 pt	20874 pt
3119201 3119201111	2095111	20951 2095111	3119424 pt	20952 pt	20952 pt	311999J111 311999J121	2087435 2087437	2087435 2087437
3119201211 3119201331	2095115	2095115 2095121	3119424111 3119424121	2087115	2087115	311999JYWV	2087400 pt	2087400 pt
3119201YWV	2095100	2095100	3119424131 3119424141	2087153	2087153	311999M pt	20324 pt	20324 pt
3119204 pt	20432 pt	20432 pt	3119424YWV pt 3119424YWV pt	2087100	2087100	311999M pt	2032495	
3119204 pt	20952 pt	20952 pt	3119427	•	•	311999M111	2099G25	2099G25
3119204121		2043209 pt	3119427111 3119427121	2099B01	2099B01 2099B03	311999M131	2099G41 2099G51	2099G41 2099G51
3119204YWV pt	2043200 pt	2043200 pt 2095200 pt	3119427131	2099B07	2099B07	311999M151	2099G85 2099G91	2099G85 2099G91
3119207	2099D	2099D	3119427241	2099B05	2099B05 2099B09	311999M171	2099G98 2032400 pt	2099G98 pt 2032400 pt
3119207111	2099D82 2099D83	2099D82 2099D83	3119427YWV	2099B00 pt		311999MYWV pt	2099G00 pt	2099G00 pt
3119207231	2099D86 2099D00		311942W pt	·		311999W pt	20150 pt	20150 pt
	20430 pt			20950 pt		311999W pt	20320 pt	20320 pt
·	•	•	311942W pt	20990 pt		311999W pt	20870 pt	20870 pt 20990 pt
·	20950 pt	20950 pt	311942W pt	28990 pt	2087000 pt	311999W pt 311999WYWW pt	20990 pt	2015000 pt
311920W pt 311920WYWW pt	2043000 pt	20990 pt 2043000 pt	311942WYWW pt 311942WYWW pt	2095000 pt	2099000 pt	311999WYWW pt 311999WYWW pt		2032000 pt 2087000 pt
311920WYWW pt	2095000 pt	2095000 pt	311942WYWW pt 311942WYWY pt	2899000 pt	2899000 pt	311999WYWW pt 311999WYWY pt	2099000 pt	2099000 pt 2015002 pt
311920WYWY pt 311920WYWY pt	2099000 pt 2043002 pt 2095002 pt	2043002 pt 2095002 pt	311942WYWY pt 311942WYWY pt	2095002 pt 2099002 pt	2095002 pt	311999WYWY pt 311999WYWY pt	2032002 pt	2032002 pt 2087002 pt
311920WYWY pt	2099002 pt	2099002 pt	311942WYWY pt	2899002 pt	2899002 pt	311999WYWY pt	2099002 pt	2099002 pt

EC97M-3114C(RV)