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1997 Economic Census

Manufacturing

Geographic Area Series



U.S. CENSUS BUREAU

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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
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	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	301-457-4673
Service Sector Statistics Division	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/econguide. 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:

A	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 revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

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

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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

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, semi-independent 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 for the State: 1997

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
OREGON													
31-33	Manufacturing	-	5 768	1 675	213 111	7 095 286	158 506	316 808	4 545 793	25 077 180	22 770 601	47 665 990	2 715 770
311	Food mfg.....	1	440	159	21 567	546 661	16 760	31 106	359 436	2 036 915	2 627 276	4 662 101	138 198
3111	Animal food mfg.....	1	15	4	275	9 036	158	320	4 205	51 212	74 507	124 997	1 271
31111	Animal food mfg.....	1	15	4	275	9 036	158	320	4 205	51 212	74 507	124 997	1 271
311119	Other animal food mfg.....	1	15	4	275	9 036	158	320	4 205	51 212	74 507	124 997	1 271
3112	Grain & oilseed milling	2	15	7	454	15 851	357	737	11 519	73 647	205 799	279 472	2 851
31121	Flour milling & malt mfg .	-	7	3	146	5 480	104	240	3 466	16 246	100 717	117 509	298
311211	Flour milling.....	-	5	3	c	D	D	D	D	D	D	D	D
31122	Starch & vegetable fats & oils mfg.....	-	5	2	202	5 987	170	312	5 062	20 440	85 336	105 493	235
311225	Fats & oils refining & blending.....	-	3	2	c	D	D	D	D	D	D	D	D
31123	Breakfast cereal mfg....	9	3	2	106	4 384	83	185	2 991	36 961	19 746	56 470	2 318
311230	Breakfast cereal mfg..	9	3	2	106	4 384	83	185	2 991	36 961	19 746	56 470	2 318
3113	Sugar & confectionery product mfg.....	-	40	3	490	12 563	406	808	9 976	43 650	64 190	110 054	993
31131	Sugar mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
311313	Beet sugar mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
31133	Confectionery mfg from purchased chocolate...	5	20	1	112	1 353	79	99	827	2 488	1 995	4 773	162
311330	Confectionery mfg from purchased chocolate.....	5	20	1	112	1 353	79	99	827	2 488	1 995	4 773	162
3114	Fruit & vegetable preserving & specialty food mfg.....	-	74	43	9 295	224 627	8 047	14 877	158 067	911 643	939 681	1 858 387	56 744
31141	Frozen food mfg.....	-	30	26	7 017	168 559	6 107	11 482	123 298	739 345	748 843	1 497 095	44 350
311411	Frozen fruit, juice, & vegetable mfg.....	-	26	24	i	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg.....	-	4	2	e	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying.....	3	44	17	2 278	56 068	1 940	3 395	34 769	172 298	190 838	361 292	12 394
311421	Fruit & vegetable canning.....	3	34	15	1 725	42 364	1 509	2 657	28 438	139 265	152 234	287 547	9 113
311423	Dried & dehydrated food mfg.....	-	7	2	533	13 393	416	719	6 107	31 725	37 310	71 143	D
3115	Dairy product mfg.....	-	31	21	1 879	52 962	1 142	2 273	28 281	181 209	485 441	661 565	22 293
31151	Dairy product (except frozen) mfg.....	-	26	19	1 728	49 688	1 045	2 106	26 529	171 156	466 276	632 565	21 496
311511	Fluid milk mfg.....	-	18	15	1 227	38 023	653	1 282	19 913	125 668	339 295	464 317	17 935
311513	Cheese mfg.....	-	5	2	e	D	D	D	D	D	D	D	D
31152	Ice cream & frozen dessert mfg.....	-	5	2	151	3 274	97	167	1 752	10 053	19 165	29 000	797
311520	Ice cream & frozen dessert mfg.....	-	5	2	151	3 274	97	167	1 752	10 053	19 165	29 000	797
3116	Meat product mfg.....	2	59	17	1 979	43 319	1 613	3 151	30 410	115 739	249 061	363 713	6 236
31161	Animal slaughtering & processing.....	2	59	17	1 979	43 319	1 613	3 151	30 410	115 739	249 061	363 713	6 236
311611	Animal (except poultry) slaughtering.....	1	23	4	378	8 913	330	602	7 055	16 947	85 572	102 925	715
311612	Meat processed from carcasses.....	3	26	11	1 069	24 447	889	1 741	16 421	68 626	119 217	186 994	5 028
311615	Poultry processing....	-	4	1	e	D	D	D	D	D	D	D	134
3117	Seafood product preparation & packaging..	4	27	10	1 074	21 716	948	1 705	16 427	40 398	81 623	122 309	3 343
31171	Seafood product preparation & packaging.....	4	27	10	1 074	21 716	948	1 705	16 427	40 398	81 623	122 309	3 343
311712	Fresh & frozen seafood processing..	4	21	9	1 020	20 620	904	1 628	15 661	37 638	79 034	116 958	3 211
3118	Bakeries & tortilla mfg.....	-	130	38	4 659	132 196	3 101	5 591	82 606	385 348	336 637	721 906	28 342
31181	Bread & bakery product mfg.....	1	101	27	3 198	86 346	1 890	3 263	47 133	233 194	168 406	401 624	14 940
311811	Retail bakeries.....	4	48	4	e	D	D	D	D	D	D	D	D
311812	Commercial bakeries..	-	49	22	2 669	77 820	1 555	2 735	41 967	211 489	150 771	362 313	13 467
311813	Frozen cakes, pies, & other pastries mfg...	9	4	1	c	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg.....	-	21	7	1 097	37 841	929	1 850	29 814	127 547	138 264	265 823	D
311821	Cookie & cracker mfg..	-	10	3	690	28 113	592	1 150	22 781	82 592	62 498	144 854	4 582
311822	Flour mixes & dough mfg from purchased flour.....	-	8	4	401	9 559	332	692	6 904	43 738	74 925	118 908	D
31183	Tortilla mfg.....	1	8	4	364	8 009	282	478	5 659	24 607	29 967	54 459	D
311830	Tortilla mfg.....	1	8	4	364	8 009	282	478	5 659	24 607	29 967	54 459	D

Table 1. Industry Statistics for the State: 1997—Con.

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
311	Food mfg—Con.												
3119	Other food mfg	1	49	16	1 462	34 391	988	1 644	17 945	234 069	190 337	419 698	16 125
31191	Snack food mfg	5	8	4	e	D	D	D	D	D	D	D	5 670
311919	Other snack food mfg	5	6	3	e	D	D	D	D	D	D	D	D
31192	Coffee & tea mfg	—	8	1	111	3 304	78	137	2 017	72 335	50 825	120 995	D
311920	Coffee & tea mfg	—	8	1	111	3 304	78	137	2 017	72 335	50 825	120 995	D
31194	Seasoning & dressing mfg	3	9	4	e	D	D	D	D	D	D	D	D
311941	Mayonnaise, dressing, & other prepared sauce mfg	4	7	3	221	5 078	153	249	2 850	17 772	21 287	38 773	D
31199	All other food mfg	1	22	6	565	9 990	415	781	6 487	47 989	62 945	109 236	2 227
311991	Perishable prepared food mfg	—	13	4	441	7 118	313	615	4 614	40 277	52 646	91 223	1 467
311999	All other miscellaneous food mfg	5	9	2	124	2 872	102	166	1 873	7 712	10 299	18 013	760
312	Beverage & tobacco product mfg	2	96	27	2 268	67 228	1 150	2 039	31 501	259 474	362 818	619 956	18 127
3121	Beverage mfg	2	96	27	2 268	67 228	1 150	2 039	31 501	259 474	362 818	619 956	18 127
31211	Soft drink & ice mfg	2	26	11	1 110	34 393	530	1 005	14 024	128 003	152 810	384 385	9 539
312111	Soft drink mfg	2	9	9	978	31 787	437	856	12 550	120 859	247 593	369 014	8 885
31212	Breweries	1	26	9	789	24 469	468	797	14 194	104 356	79 622	184 106	6 292
312120	Breweries	1	26	9	789	24 469	468	797	14 194	104 356	79 622	184 106	6 292
31213	Wineries	6	42	6	e	D	D	D	D	D	D	D	D
312130	Wineries	6	42	6	e	D	D	D	D	D	D	D	D
313	Textile mills	1	24	4	243	4 769	179	332	3 579	11 681	14 954	27 573	754
3132	Fabric mills	1	11	2	147	2 677	101	184	2 138	6 894	10 060	16 600	374
31321	Broadwoven fabric mills	1	6	2	111	2 181	70	142	1 757	5 958	9 291	14 905	261
313210	Broadwoven fabric mills	1	6	2	111	2 181	70	142	1 757	5 958	9 291	14 905	261
314	Textile product mills	3	97	15	1 161	21 951	906	1 622	14 010	33 104	41 037	74 342	2 139
3141	Textile furnishings mills	2	30	6	458	9 290	366	733	6 206	12 010	19 420	31 517	884
31412	Curtain & linen mills	2	30	6	458	9 290	366	733	6 206	12 010	19 420	31 517	884
314121	Curtain & drapery mills	1	24	4	228	3 827	172	282	2 185	7 080	6 721	13 841	D
314129	Other household textile product mills	3	6	2	230	5 463	194	451	4 021	4 930	12 699	17 676	D
3149	Other textile product mills	3	67	9	703	12 661	540	889	7 804	21 094	21 617	42 825	1 255
31491	Textile bag & canvas mills	3	38	6	448	8 046	350	567	5 024	11 874	14 251	26 413	749
314911	Textile bag mills	5	7	2	197	2 733	168	239	1 681	3 841	7 521	11 617	279
314912	Canvas & related product mills	2	31	4	251	5 313	182	328	3 343	8 033	6 730	14 796	470
31499	All other textile product mills	4	29	3	255	4 615	190	322	2 780	9 220	7 366	16 412	506
314999	All other miscellaneous textile product mills	4	28	3	c	D	D	D	D	D	D	D	D
315	Apparel mfg	2	82	19	1 903	32 532	1 686	3 108	25 376	65 452	41 361	105 281	1 631
3151	Apparel knitting mills	3	3	2	c	D	D	D	D	D	D	D	190
31519	Other apparel knitting mills	3	3	2	c	D	D	D	D	D	D	D	190
315191	Outerwear knitting mills	3	3	2	c	D	D	D	D	D	D	D	190
3152	Cut & sew apparel mfg	2	57	17	1 553	25 182	1 389	2 486	20 132	50 321	27 623	77 401	1 224
31521	Cut & sew apparel contractors	1	28	8	871	13 465	821	1 363	11 795	18 558	2 310	20 589	574
315211	Men's & boys' cut & sew apparel contractors	—	4	2	206	2 920	186	192	2 299	4 591	596	5 073	—
315212	Women's, girls', & infants' cut & sew apparel contractors	1	24	6	665	10 545	635	1 171	9 496	13 967	1 714	15 516	574
31522	Men's & boys' cut & sew apparel mfg	2	13	6	545	9 420	460	938	6 663	26 394	20 569	46 774	564
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg	8	2	2	c	D	D	D	D	D	D	D	D
315224	Men's & boys' cut & sew trouser, slack, & jean mfg	—	1	1	c	D	D	D	D	D	D	D	D
315228	Men's & boys' cut & sew other outerwear mfg	—	7	2	148	3 264	128	228	1 611	6 457	5 028	11 456	62
31523	Women's & girls' cut & sew apparel mfg	3	13	3	110	1 835	84	145	1 278	4 552	4 056	8 534	46
3159	Apparel accessories & other apparel mfg	3	22	—	c	D	D	D	D	D	D	D	217
31599	Apparel accessories & other apparel mfg	3	22	—	c	D	D	D	D	D	D	D	217

Table 1. Industry Statistics for the State: 1997—Con.

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	OREGON—Con.												
	Manufacturing—Con.												
316	Leather & allied product mfg .	1	29	5	457	10 013	366	699	6 456	24 480	15 280	39 648	1 960
3162	Footwear mfg	—	4	2	c	D	D	D	D	D	D	D	D
31621	Footwear mfg	—	4	2	c	D	D	D	D	D	D	D	D
316214	Women's footwear (except athletic) mfg .	—	1	1	c	D	D	D	D	D	D	D	D
3169	Other leather & allied product mfg	1	20	3	194	3 361	158	292	2 147	7 275	7 739	15 027	635
31699	Other leather & allied product mfg	1	20	3	194	3 361	158	292	2 147	7 275	7 739	15 027	635
316999	All other leather good mfg	1	11	1	111	1 990	90	180	1 287	4 287	5 029	9 413	511
321	Wood product mfg	—	600	301	38 088	1 132 361	33 128	68 516	901 621	2 666 869	5 791 914	8 432 222	255 755
3211	Sawmills & wood preservation	—	156	91	11 051	356 242	9 748	19 951	290 960	874 115	2 382 723	3 237 510	124 048
32111	Sawmills & wood preservation	—	156	91	11 051	356 242	9 748	19 951	290 960	874 115	2 382 723	3 237 510	124 048
321113	Sawmills	—	146	83	10 730	345 246	9 512	19 446	283 887	840 920	2 293 665	3 117 015	117 076
321114	Wood preservation	—	10	8	321	10 996	236	505	7 073	33 195	89 058	120 495	6 972
3212	Veneer, plywood, & engineered wood product mfg	1	130	100	14 009	446 539	12 268	26 647	360 649	1 108 228	2 214 087	3 310 945	97 556
32121	Veneer, plywood, & engineered wood product mfg	1	130	100	14 009	446 539	12 268	26 647	360 649	1 108 228	2 214 087	3 310 945	97 556
321211	Hardwood veneer & plywood mfg	2	12	9	1 960	58 747	1 733	3 690	43 826	123 326	287 388	404 362	7 033
321212	Softwood veneer & plywood mfg	1	44	39	7 135	223 959	6 391	14 024	193 223	494 651	1 047 406	1 542 573	49 773
321213	Engineered wood member (except truss) mfg	—	15	15	1 559	47 251	1 397	3 092	39 234	174 171	452 729	619 581	9 726
321214	Truss mfg	2	30	13	686	18 724	528	1 050	11 916	36 148	43 185	79 431	1 431
321219	Reconstituted wood product mfg	—	29	24	2 669	97 858	2 219	4 791	72 450	279 932	383 379	664 998	29 593
3219	Other wood product mfg	—	314	110	13 028	329 580	11 112	21 918	250 012	684 526	1 195 104	1 883 767	34 151
32191	Millwork	1	145	68	8 052	206 285	6 959	14 227	161 057	405 366	847 596	1 256 051	26 135
321911	Wood window & door mfg	—	45	23	3 267	82 913	2 819	5 695	64 887	181 305	284 912	458 881	6 916
321912	Cut stock, resawing lumber, & planing	1	75	32	3 380	88 589	2 946	6 262	70 352	157 977	428 296	595 516	16 181
321918	Other millwork (including flooring)	2	25	13	1 405	34 783	1 194	2 270	25 818	66 084	134 388	201 654	3 038
32192	Wood container & pallet mfg	1	47	10	539	11 118	453	838	7 809	24 170	37 796	61 650	1 544
321920	Wood container & pallet mfg	1	47	10	539	11 118	453	838	7 809	24 170	37 796	61 650	1 544
32199	All other wood product mfg	—	122	32	4 437	112 177	3 700	6 853	81 146	254 990	309 712	566 066	6 472
321991	Manufactured home (mobile home) mfg	—	12	12	3 190	86 838	2 711	5 111	63 139	202 081	255 998	458 995	3 342
321992	Prefabricated wood building mfg	1	25	6	353	8 344	256	440	5 437	16 304	18 017	34 306	876
321999	All other miscellaneous wood product mfg	5	85	14	894	16 995	733	1 302	12 570	36 605	35 697	72 765	2 254
322	Paper mfg	—	60	39	7 854	361 797	6 211	12 526	256 755	1 184 466	1 460 182	2 664 944	116 866
3221	Pulp, paper, & paperboard mills	—	12	12	5 169	265 275	4 156	8 294	194 821	943 240	1 141 018	2 103 366	101 110
32211	Pulp mills	—	1	1	c	D	D	D	D	D	D	D	D
322110	Pulp mills	—	1	1	c	D	D	D	D	D	D	D	D
32212	Paper mills	—	6	6	h	D	D	D	D	D	D	D	67 247
322121	Paper (except newsprint) mills	—	4	4	h	D	D	D	D	D	D	D	D
322122	Newsprint mills	—	2	2	f	D	D	D	D	D	D	D	D
32213	Paperboard mills	—	5	5	1 810	98 535	1 431	2 864	66 477	250 011	526 043	777 001	D
322130	Paperboard mills	—	5	5	1 810	98 535	1 431	2 864	66 477	250 011	526 043	777 001	D
3222	Converted paper product mfg	—	48	27	2 685	96 522	2 055	4 232	61 934	241 226	319 164	561 578	15 756
32221	Paperboard container mfg	—	17	13	1 238	46 767	920	1 869	29 293	112 275	157 218	268 227	6 226
322211	Corrugated & solid fiber box mfg	—	9	7	904	35 116	664	1 326	22 085	84 772	131 367	215 614	3 624
322212	Folding paperboard box mfg	2	7	5	e	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg	—	16	8	851	32 002	675	1 436	22 056	87 918	134 323	225 224	6 785
322221	Coated & laminated packaging paper & plastics film mfg	—	1	1	e	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg	1	8	2	235	9 840	184	393	6 372	25 959	26 352	53 044	3 629
322224	Uncoated paper & multiwall bag mfg	—	5	4	c	D	D	D	D	D	D	D	D
32223	Stationery product mfg	1	9	4	463	13 386	359	739	7 962	32 468	23 450	55 407	2 427
322232	Envelope mfg	1	4	3	351	10 543	271	586	6 154	21 924	19 985	41 471	2 277

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	OREGON—Con.												
	Manufacturing—Con.												
322	Paper mfg—Con.												
3222	Converted paper product mfg—Con.												
32229	Other converted paper product mfg.....	-	6	2	133	4 367	101	188	2 623	8 565	4 173	12 720	318
322299	All other converted paper product mfg ...	-	6	2	133	4 367	101	188	2 623	8 565	4 173	12 720	318
323	Printing & related support activities.....	1	620	99	8 786	268 798	6 414	11 824	171 112	588 236	413 205	999 425	44 878
3231	Printing & related support activities.....	1	620	99	8 786	268 798	6 414	11 824	171 112	588 236	413 205	999 425	44 878
32311	Printing.....	1	548	85	7 830	234 580	5 665	10 355	146 872	526 731	398 015	922 079	40 594
323110	Commercial lithographic printing ..	-	263	44	4 038	131 396	2 872	5 193	82 243	278 749	236 369	513 945	21 215
323112	Commercial flexographic printing .	-	12	8	375	11 770	248	451	5 636	32 905	36 275	68 651	5 142
323113	Commercial screen printing.....	4	61	4	505	10 882	370	635	6 306	24 637	18 453	43 004	1 750
323114	Quick printing.....	1	124	5	736	16 435	576	931	12 068	41 275	15 952	57 195	2 312
323116	Manifold business form printing.....	2	20	14	962	31 295	686	1 400	19 723	78 603	45 926	124 076	4 136
323117	Book printing.....	4	9	4	415	13 537	321	646	9 319	29 950	21 176	51 063	3 552
323118	Blankbook, looseleaf binder, & device mfg .	9	7	3	378	8 558	301	623	5 743	17 654	12 417	29 963	D
323119	Other commercial printing.....	6	43	3	386	9 885	263	438	5 251	21 098	9 605	30 476	1 275
32312	Support activities for printing.....	-	72	14	956	34 218	749	1 469	24 240	61 505	15 190	77 346	4 284
323121	Tradebinding & related work.....	-	28	6	380	11 416	313	650	8 452	18 597	5 714	24 652	804
323122	Prepress services	-	44	8	576	22 802	436	819	15 788	42 908	9 476	52 694	3 480
324	Petroleum & coal products mfg.....	5	22	12	769	32 534	535	1 131	19 994	127 077	216 899	346 384	14 971
3241	Petroleum & coal products mfg.....	5	22	12	769	32 534	535	1 131	19 994	127 077	216 899	346 384	14 971
32412	Asphalt paving, roofing, & saturated materials mfg.....	6	13	10	638	27 609	463	991	17 423	92 982	149 477	244 014	12 505
324121	Asphalt paving mixture & block mfg.....	5	9	6	333	14 555	251	525	9 356	43 415	58 510	102 345	8 695
324122	Asphalt shingle & coating materials mfg.....	6	4	4	305	13 054	212	466	8 067	49 567	90 967	141 669	3 810
325	Chemical mfg.....	1	161	54	3 806	139 044	2 205	4 172	63 360	584 770	569 986	1 154 639	80 135
3251	Basic chemical mfg.....	1	23	8	614	25 917	398	784	14 115	136 928	77 280	211 998	10 996
32513	Dye & pigment mfg.....	-	2	1	c	D	D	D	D	D	D	D	D
325132	Synthetic organic dye & pigment mfg.....	-	1	1	c	D	D	D	D	D	D	D	D
32518	Other basic inorganic chemical mfg.....	1	7	3	234	11 045	138	274	5 815	58 658	48 034	106 340	7 858
325181	Alkalies & chlorine mfg.....	-	1	1	c	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg.....	-	5	3	189	6 543	160	327	4 857	51 878	24 149	74 145	D
325191	Gum & wood chemical mfg.....	-	2	2	c	D	D	D	D	D	D	D	D
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg.....	-	16	8	e	D	D	D	D	D	D	D	12 835
32521	Resin & synthetic rubber mfg.....	-	14	8	e	D	D	D	D	D	D	D	D
325211	Plastics material & resin mfg.....	-	13	8	450	18 750	259	477	9 003	57 241	133 471	192 467	12 646
3253	Pesticide, fertilizer, & other agricultural chemical mfg .	4	10	3	175	6 427	120	266	4 024	38 015	33 407	70 540	2 752
32531	Fertilizer mfg.....	3	6	3	156	5 735	109	247	3 633	28 608	29 838	57 533	2 408
3254	Pharmaceutical & medicine mfg.....	4	26	13	869	25 923	487	820	11 454	75 636	39 514	113 640	10 511
32541	Pharmaceutical & medicine mfg.....	4	26	13	869	25 923	487	820	11 454	75 636	39 514	113 640	10 511
325411	Medicinal & botanical mfg.....	-	6	3	176	5 504	90	165	2 462	16 579	10 478	25 899	D
325412	Pharmaceutical preparation mfg.....	6	10	4	343	8 885	218	338	4 503	33 840	17 852	51 626	2 328
325413	In-vitro diagnostic substance mfg.....	2	5	4	267	9 759	125	220	3 103	19 837	7 288	26 905	1 171
3255	Paint, coating, & adhesive mfg.....	-	23	8	e	D	D	D	D	D	D	D	2 610
32551	Paint & coating mfg.....	-	18	6	400	14 990	183	350	5 320	57 048	65 032	122 140	1 654
325510	Paint & coating mfg...	-	18	6	400	14 990	183	350	5 320	57 048	65 032	122 140	1 654
3256	Soap, cleaning compound, & toilet preparation mfg ..	7	27	3	e	D	D	D	D	D	D	D	2 408
32561	Soap & cleaning compound mfg.....	8	19	3	c	D	D	D	D	D	D	D	2 167
325611	Soap & other detergent mfg.....	9	9	1	135	6 059	44	88	1 243	15 393	9 459	24 808	1 664

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
325	Chemical mfg—Con.												
3259	Other chemical product mfg	1	36	11	892	29 840	528	1 071	12 458	147 422	138 183	288 612	38 023
32591	Printing ink mfg	1	10	5	242	9 132	109	234	3 508	20 502	27 985	47 482	547
325910	Printing ink mfg	1	10	5	242	9 132	109	234	3 508	20 502	27 985	47 482	547
32599	All other chemical product & preparation mfg	2	26	6	650	20 708	419	837	8 950	126 920	110 198	241 130	37 476
325992	Photographic film, paper, plate, & chemical mfg	—	3	1	e	D	D	D	D	D	D	D	D
325998	All other miscellaneous chemical product & preparation mfg	4	17	5	270	13 559	133	285	4 814	62 860	39 156	102 813	D
326	Plastics & rubber products mfg	1	246	80	7 532	199 276	5 762	10 600	123 006	510 172	542 985	1 047 418	38 498
3261	Plastics product mfg	1	192	66	6 437	166 898	4 891	8 857	101 561	421 715	464 256	880 750	31 258
32611	Unsupported plastics film, sheet, & bag mfg ..	—	13	5	586	23 971	463	929	15 274	55 239	49 952	101 688	3 079
326113	Unsupported plastics film & sheet (except packaging) mfg	—	10	5	557	23 393	440	897	14 865	53 758	47 970	98 223	2 900
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	—	25	9	639	17 347	472	921	11 371	44 864	85 790	131 870	6 420
326121	Unsupported plastics profile shape mfg	2	15	4	301	7 568	204	382	4 190	14 516	13 971	29 109	2 580
326122	Plastics pipe & pipe fitting mfg	—	10	5	338	9 779	268	539	7 181	30 348	71 819	102 761	3 840
32614	Polystyrene foam product mfg	2	7	3	173	4 761	127	249	2 840	12 241	15 820	28 291	738
326140	Polystyrene foam product mfg	2	7	3	173	4 761	127	249	2 840	12 241	15 820	28 291	738
32615	Urethane & other foam product (except polystyrene) mfg	1	11	3	200	4 584	158	260	2 674	15 985	22 865	38 274	947
326150	Urethane & other foam product (except polystyrene) mfg	1	11	3	200	4 584	158	260	2 674	15 985	22 865	38 274	947
32619	Other plastics product mfg	1	127	45	4 756	114 104	3 607	6 382	67 967	285 860	282 950	565 700	19 733
326191	Plastics plumbing fixture mfg	1	8	3	e	D	D	D	D	D	D	D	D
326199	All other plastics product mfg	1	117	42	4 442	107 673	3 382	5 935	63 871	261 890	268 296	526 694	19 217
3262	Rubber product mfg	1	54	14	1 095	32 378	871	1 743	21 445	88 457	78 729	166 668	7 240
32621	Tire mfg	—	19	3	e	D	D	D	D	D	D	D	D
326212	Tire retreading	—	14	3	422	11 075	355	742	8 304	25 906	29 377	55 218	D
32629	Other rubber product mfg	1	32	11	589	18 897	454	903	11 789	47 249	40 083	86 861	2 868
326291	Rubber product mfg for mechanical use	1	14	7	277	9 102	224	439	5 893	20 639	15 950	36 633	1 771
326299	All other rubber product mfg	—	18	4	312	9 795	230	464	5 896	26 610	24 133	50 228	1 097
327	Nonmetallic mineral product mfg	2	252	60	4 746	153 874	3 600	7 159	106 777	427 934	349 673	776 835	37 323
3271	Clay product & refractory mfg	4	43	5	303	6 612	248	410	4 162	10 308	4 493	15 608	D
32711	Pottery, ceramics, & plumbing fixture mfg ..	3	32	4	195	3 891	158	276	2 658	6 712	2 531	9 144	D
327112	Vitreous china, fine earthenware, & other pottery product mfg ..	5	29	3	c	D	D	D	D	D	D	D	248
32712	Clay building material & refractories mfg	5	11	1	108	2 721	90	134	1 504	3 596	1 962	6 464	430
3272	Glass & glass product mfg ..	—	55	13	1 191	39 441	907	1 670	28 394	99 736	88 485	188 147	5 137
32721	Glass & glass product mfg	—	55	13	1 191	39 441	907	1 670	28 394	99 736	88 485	188 147	5 137
327211	Flat glass mfg	—	2	2	c	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg	1	22	3	e	D	D	D	D	D	D	D	1 518
327213	Glass container mfg ..	—	1	1	c	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass	1	30	7	580	16 511	424	720	11 334	32 899	50 958	84 524	3 169

Table 1. Industry Statistics for the State: 1997—Con.

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
OREGON—Con.													
31-33	Manufacturing—Con.												
327	Nonmetallic mineral product mfg—Con.												
3273	Cement & concrete product mfg	2	122	34	2 584	84 578	1 921	3 934	56 353	232 214	201 867	434 363	17 855
32731	Cement mfg	—	3	1	c	D	D	D	D	D	D	D	D
327310	Cement mfg	—	3	1	c	D	D	D	D	D	D	D	D
32732	Ready-mix concrete mfg.	2	66	19	1 371	46 114	1 099	2 331	33 999	119 325	118 968	238 013	10 219
327320	Ready-mix concrete mfg	2	66	19	1 371	46 114	1 099	2 331	33 999	119 325	118 968	238 013	10 219
32733	Concrete pipe, brick, & block mfg	2	22	8	f	D	D	D	D	D	D	D	4 193
327331	Concrete block & brick mfg	4	14	3	240	8 014	162	313	4 747	21 804	23 840	45 559	2 624
327332	Concrete pipe mfg	—	8	5	e	D	D	D	D	D	D	D	1 569
32739	Other concrete product mfg	4	31	6	518	15 983	326	643	8 504	44 382	29 590	75 857	D
327390	Other concrete product mfg	4	31	6	518	15 983	326	643	8 504	44 382	29 590	75 857	D
3274	Lime & gypsum product mfg	1	6	3	149	4 737	125	230	3 657	15 940	14 314	30 222	D
3279	Other nonmetallic mineral product mfg	1	26	5	519	18 506	399	915	14 211	69 736	40 514	108 495	10 706
32799	All other nonmetallic mineral product mfg ...	1	22	4	486	17 477	377	873	13 655	67 425	39 599	105 223	10 586
327993	Mineral wool mfg	1	3	2	e	D	D	D	D	D	D	D	D
331	Primary metal mfg	—	81	47	10 902	409 329	8 182	17 159	279 463	1 005 642	1 248 202	2 204 677	102 502
3311	Iron & steel mills & ferroalloy mfg	—	5	2	g	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg	—	5	2	g	D	D	D	D	D	D	D	D
331111	Iron & steel mills	—	5	2	g	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel	2	6	3	e	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel	—	2	1	e	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel	—	2	1	e	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	—	8	7	1 197	47 071	933	1 985	32 160	109 237	407 109	504 241	D
33131	Alumina & aluminum production & processing	—	8	7	1 197	47 071	933	1 985	32 160	109 237	407 109	504 241	D
331312	Primary aluminum production	—	2	2	f	D	D	D	D	D	D	D	D
331316	Aluminum extruded product mfg	—	3	3	e	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing	—	7	6	g	D	D	D	D	D	D	D	D
33141	Nonferrous metal (except aluminum) smelting & refining	—	2	2	e	D	D	D	D	D	D	D	D
331419	Other nonferrous metal primary smelting & refining	—	2	2	e	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	—	5	4	1 829	95 748	1 008	2 447	60 277	256 140	201 318	433 859	7 293
331491	Other nonferrous metal rolling, drawing, & extruding	—	3	3	g	D	D	D	D	D	D	D	D
3315	Foundries	—	55	29	5 968	182 306	4 831	9 714	130 441	481 446	262 621	738 594	22 154
33151	Ferrous metal foundries .	—	19	13	3 849	121 783	3 127	6 516	87 704	312 622	180 142	491 959	13 980
331511	Iron foundries	2	9	4	e	D	D	D	D	D	D	D	D
331512	Steel investment foundries	—	3	3	g	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment)	—	7	6	1 144	41 990	977	1 883	29 554	103 991	108 712	215 554	7 169
33152	Nonferrous metal foundries	—	36	16	2 119	60 523	1 704	3 198	42 737	168 824	82 479	246 635	8 174
331521	Aluminum die-casting foundries	—	5	3	237	7 010	203	392	5 256	18 980	11 948	30 917	D
331522	Nonferrous (except aluminum) die-casting foundries	—	6	3	802	23 793	677	1 259	17 666	59 083	46 614	100 878	4 516
331525	Copper foundries (except die-casting) ..	3	11	5	228	5 784	202	382	4 581	13 533	4 537	16 702	201
331528	Other nonferrous foundries (except die-casting)	—	6	3	f	D	D	D	D	D	D	D	1 397

Table 1. Industry Statistics for the State: 1997—Con.

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
332	Fabricated metal product mfg.....	1	929	240	18 873	598 261	14 249	28 031	385 077	1 371 270	1 100 654	2 448 465	107 862
3321	Forging & stamping.....	3	30	12	748	25 156	553	1 059	14 257	50 696	43 441	93 973	8 821
33211	Forging & stamping.....	3	30	12	748	25 156	553	1 059	14 257	50 696	43 441	93 973	8 821
332111	Iron & steel forging.....	3	8	1	107	3 020	86	164	2 181	7 860	4 055	11 732	180
332116	Metal stamping.....	3	17	9	552	19 351	403	761	10 356	36 881	31 230	68 060	8 308
3322	Cutlery & handtool mfg.....	—	31	10	2 213	74 615	1 627	3 463	45 870	262 706	180 205	432 710	13 255
33221	Cutlery & handtool mfg.....	—	31	10	2 213	74 615	1 627	3 463	45 870	262 706	180 205	432 710	13 255
332211	Cutlery & flatware (except precious) mfg.....	1	4	1	c	D	D	D	D	D	D	D	D
332212	Hand & edge tool mfg.....	—	17	4	f	D	D	D	D	D	D	D	D
332213	Saw blade & handsaw mfg.....	—	10	5	1 138	42 382	816	1 573	23 676	149 027	103 329	251 763	4 253
3323	Architectural & structural metals mfg.....	1	215	75	5 701	182 926	4 162	8 275	113 870	394 174	443 044	826 471	19 053
33231	Plate work & fabricated structural product mfg.....	1	78	25	1 812	67 818	1 242	2 636	40 280	138 360	175 398	306 304	5 867
332311	Prefabricated metal building & component mfg.....	2	7	4	162	5 476	95	205	3 156	12 002	18 537	30 735	479
332312	Fabricated structural metal mfg.....	1	62	20	1 555	59 462	1 076	2 285	35 147	123 537	149 394	265 204	5 281
33232	Ornamental & architectural metal products mfg.....	1	137	50	3 889	115 108	2 920	5 639	73 590	255 814	267 646	520 167	13 186
332321	Metal window & door mfg.....	—	20	12	1 304	34 957	1 011	2 040	22 699	82 352	122 183	203 966	2 508
332322	Sheet metal work mfg.....	—	84	34	2 200	67 006	1 632	3 051	42 657	146 436	120 454	264 427	7 839
332323	Ornamental & architectural metal work mfg.....	4	33	4	385	13 145	277	548	8 234	27 026	25 009	51 774	2 839
3324	Boiler, tank, & shipping container mfg.....	—	26	10	852	32 985	622	1 278	21 517	58 892	89 027	148 270	7 323
33241	Power boiler & heat exchanger mfg.....	—	8	4	364	14 567	233	478	8 323	27 720	23 884	51 720	D
332410	Power boiler & heat exchanger mfg.....	—	8	4	364	14 567	233	478	8 323	27 720	23 884	51 720	D
33242	Metal tank (heavy gauge) mfg.....	—	8	4	290	10 555	221	451	6 404	12 682	19 152	33 012	760
332420	Metal tank (heavy gauge) mfg.....	—	8	4	290	10 555	221	451	6 404	12 682	19 152	33 012	760
33243	Metal can, box, & other metal container (light gauge) mfg.....	—	10	2	198	7 863	168	349	6 790	18 490	45 991	63 538	D
332431	Metal can mfg.....	—	3	1	c	D	D	D	D	D	D	D	D
3325	Hardware mfg.....	—	11	5	572	14 744	464	817	7 468	60 072	44 632	100 898	2 472
33251	Hardware mfg.....	—	11	5	572	14 744	464	817	7 468	60 072	44 632	100 898	2 472
332510	Hardware mfg.....	—	11	5	572	14 744	464	817	7 468	60 072	44 632	100 898	2 472
3326	Spring & wire product mfg.....	1	32	14	1 051	26 670	838	1 590	18 685	53 419	37 216	92 076	3 563
33261	Spring & wire product mfg.....	1	32	14	1 051	26 670	838	1 590	18 685	53 419	37 216	92 076	3 563
332612	Spring (light gauge) mfg.....	1	4	3	169	5 671	126	246	3 748	10 040	5 780	15 511	D
332618	Other fabricated wire product mfg.....	1	25	10	836	19 674	681	1 287	14 128	40 639	28 939	71 422	2 936
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	1	369	62	4 339	140 681	3 360	6 268	95 551	274 612	131 586	405 172	31 284
33271	Machine shops.....	1	339	49	3 553	114 790	2 706	5 015	76 863	224 174	106 412	329 428	24 552
332710	Machine shops.....	1	339	49	3 553	114 790	2 706	5 015	76 863	224 174	106 412	329 428	24 552
33272	Turned product & screw, nut, & bolt mfg.....	2	30	13	786	25 891	654	1 253	18 688	50 438	25 174	75 744	6 732
332721	Precision turned product mfg.....	—	22	9	561	18 739	467	896	13 624	36 977	12 124	49 235	4 551
332722	Bolt, nut, screw, rivet, & washer mfg.....	7	8	4	225	7 152	187	357	5 064	13 461	13 050	26 509	2 181
3328	Coating, engraving, heat treating, & allied activities.....	2	92	26	1 444	39 054	1 171	2 262	27 061	94 208	34 872	129 525	13 916
33281	Coating, engraving, heat treating, & allied activities.....	2	92	26	1 444	39 054	1 171	2 262	27 061	94 208	34 872	129 525	13 916
332811	Metal heat treating.....	—	12	4	185	6 097	133	300	3 964	25 974	7 192	33 442	9 361
332812	Metal coating/engraving (exc jewelry/silverware)/allied services.....	3	37	11	612	15 958	513	968	11 204	37 119	17 181	54 264	2 846
332813	Electroplating, plating, polishing, anodizing, & coloring.....	3	43	11	647	16 999	525	994	11 893	31 115	10 499	41 819	1 709

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NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
OREGON—Con.													
31-33	Manufacturing—Con.												
332	Fabricated metal product mfg—Con.												
3329	Other fabricated metal product mfg	1	123	26	1 953	61 430	1 452	3 019	40 798	122 491	96 631	219 370	8 175
33291	Metal valve mfg	1	10	2	256	7 655	198	449	5 124	21 612	15 786	36 734	1 692
332912	Fluid power valve & hose fitting mfg	—	3	1	c	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg	1	113	24	1 697	53 775	1 254	2 570	35 674	100 879	80 845	182 636	6 483
332996	Fabricated pipe & pipe fitting mfg	—	20	7	683	20 658	469	995	13 779	36 258	46 039	82 969	3 290
332997	Industrial pattern mfg	2	11	3	121	5 420	102	195	4 132	9 072	1 922	10 998	348
332999	All other miscellaneous fabricated metal product mfg	1	71	13	755	23 261	581	1 176	15 252	45 250	29 875	75 664	2 264
333	Machinery mfg	1	437	136	13 860	497 842	8 938	17 814	267 932	1 097 988	992 684	2 083 087	74 002
3331	Agriculture, construction, & mining machinery mfg	1	63	24	2 489	85 648	1 731	3 546	52 922	154 302	225 839	378 232	16 614
33311	Agricultural implement mfg	4	35	11	705	18 902	552	1 115	13 503	36 466	47 375	82 822	4 599
333111	Farm machinery & equipment mfg	4	33	10	f	D	D	D	D	D	D	D	D
33312	Construction machinery mfg	—	24	9	1 103	38 259	745	1 495	23 615	53 037	82 879	137 797	6 872
333120	Construction machinery mfg	—	24	9	1 103	38 259	745	1 495	23 615	53 037	82 879	137 797	6 872
33313	Mining & oil & gas field machinery mfg	—	4	4	681	28 487	434	936	15 804	64 799	95 585	157 613	5 143
333131	Mining machinery & equipment mfg	—	3	3	f	D	D	D	D	D	D	D	D
3332	Industrial machinery mfg	—	97	38	3 243	120 952	1 814	3 579	56 496	332 186	230 643	563 129	19 521
33321	Sawmill & woodworking machinery mfg	—	33	17	g	D	D	D	D	D	D	D	D
333210	Sawmill & woodworking machinery mfg	—	33	17	g	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg	1	62	20	1 785	69 376	897	1 678	30 565	240 859	145 568	384 253	16 405
333291	Paper industry machinery mfg	1	10	6	435	15 470	242	474	7 632	31 288	23 788	54 182	3 191
333294	Food product machinery mfg	5	17	5	e	D	D	D	D	D	D	D	D
333295	Semiconductor machinery mfg	—	4	2	c	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg	—	28	7	752	34 523	339	648	13 062	93 393	68 653	158 777	4 218
3333	Commercial & service industry machinery mfg	—	37	12	1 583	56 194	1 103	2 183	29 612	126 822	102 619	229 544	5 762
33331	Commercial & service industry machinery mfg	—	37	12	1 583	56 194	1 103	2 183	29 612	126 822	102 619	229 544	5 762
333314	Optical instrument & lens mfg	—	11	2	582	23 117	452	867	12 989	43 242	44 322	87 129	2 607
333319	Other commercial & service industry machinery mfg	—	21	9	935	30 483	609	1 245	15 707	77 116	54 984	132 801	2 803
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	—	27	6	1 649	54 504	1 214	2 717	37 324	76 359	135 085	212 475	5 069
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	—	27	6	1 649	54 504	1 214	2 717	37 324	76 359	135 085	212 475	5 069
333411	Air purification equipment mfg	1	8	1	e	D	D	D	D	D	D	D	1 247
333412	Industrial & commercial fan & blower mfg	—	4	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refrig equip mfg	1	8	4	478	14 862	397	741	11 285	25 233	26 423	52 221	D
3335	Metalworking machinery mfg	2	100	18	1 368	47 046	804	1 463	24 474	104 558	56 398	148 682	11 201
33351	Metalworking machinery mfg	2	100	18	1 368	47 046	804	1 463	24 474	104 558	56 398	148 682	11 201
333511	Industrial mold mfg	2	34	6	378	13 810	287	545	9 796	25 075	7 324	32 484	2 233
333512	Machine tool (metal cutting types) mfg	2	7	3	274	9 823	152	346	4 634	25 265	22 888	48 125	1 123
333514	Special die & tool, die set, jig, & fixture mfg	4	38	3	187	6 894	158	254	4 941	11 029	3 361	14 407	1 135
333515	Cutting tool & machine tool accessory mfg	7	14	2	141	3 684	105	156	2 538	6 491	2 818	9 204	D
333518	Other metalworking machinery mfg	—	4	3	338	11 339	63	87	1 541	33 702	18 698	40 393	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
333	Machinery mfg—Con.												
3336	Engine, turbine, & power transmission equipment mfg	2	9	4	304	9 574	238	440	6 519	19 333	9 423	29 182	1 455
33361	Engine, turbine, & power transmission equipment mfg	2	9	4	304	9 574	238	440	6 519	19 333	9 423	29 182	1 455
333613	Mechanical power transmission equipment mfg	—	6	2	c	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg	1	104	34	3 224	123 924	2 034	3 886	60 585	284 428	232 677	521 843	14 380
33391	Pump & compressor mfg	—	9	4	535	20 269	302	644	10 053	65 396	61 004	131 811	1 098
333911	Pump & pumping equipment mfg	—	6	3	491	18 928	274	586	9 278	61 768	56 609	124 218	830
33392	Material handling equipment mfg	—	30	12	1 209	45 488	788	1 421	21 430	104 236	76 857	177 336	7 627
333922	Conveyor & conveying equipment mfg	—	14	8	f	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg	—	14	4	599	25 302	342	657	10 662	57 853	34 249	91 125	D
33399	All other general-purpose machinery mfg	2	65	18	1 480	58 167	944	1 821	29 102	114 796	94 816	212 696	5 655
333991	Power-driven handtool mfg	1	4	2	e	D	D	D	D	D	D	D	898
333994	Industrial process furnace & oven mfg ..	—	5	3	184	11 096	89	194	3 122	11 900	20 953	33 223	290
333995	Fluid power cylinder & actuator mfg	—	9	5	305	11 086	207	449	6 645	28 594	13 026	41 713	1 772
333999	All other miscellaneous general-purpose machinery mfg	4	36	5	518	15 696	338	515	7 666	28 035	26 975	57 765	1 992
334	Computer & electronic product mfg	—	310	121	37 684	1 645 878	23 361	51 089	874 691	10 527 280	4 173 095	14 631 993	1 577 846
3341	Computer & peripheral equipment mfg	—	45	15	11 956	643 125	7 720	19 906	383 915	1 587 411	2 033 879	3 561 250	186 734
33411	Computer & peripheral equipment mfg	—	45	15	11 956	643 125	7 720	19 906	383 915	1 587 411	2 033 879	3 561 250	186 734
334111	Electronic computer mfg	1	12	6	g	D	D	D	D	D	D	D	18 582
334113	Computer terminal mfg	—	6	3	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	—	23	6	9 977	549 598	6 602	17 618	342 269	1 063 085	1 357 495	2 394 178	166 370
3342	Communications equipment mfg	1	32	11	2 268	83 213	1 118	2 147	28 534	242 307	238 578	484 613	22 820
33421	Telephone apparatus mfg	—	8	2	869	32 343	367	556	9 516	127 940	156 342	287 641	D
334210	Telephone apparatus mfg	—	8	2	869	32 343	367	556	9 516	127 940	156 342	287 641	D
33422	Radio & TV broadcasting & wireless communications equipment mfg	4	14	7	776	32 019	398	905	11 220	70 189	46 528	116 946	6 719
334220	Radio & TV broadcasting & wireless communications equipment mfg	4	14	7	776	32 019	398	905	11 220	70 189	46 528	116 946	6 719
33429	Other communications equipment mfg	2	10	2	623	18 851	353	686	7 798	44 178	35 708	80 026	D
334290	Other communications equipment mfg	2	10	2	623	18 851	353	686	7 798	44 178	35 708	80 026	D
3343	Audio & video equipment mfg	5	11	5	362	8 572	266	479	4 626	15 552	22 272	37 621	772
33431	Audio & video equipment mfg	5	11	5	362	8 572	266	479	4 626	15 552	22 272	37 621	772
334310	Audio & video equipment mfg	5	11	5	362	8 572	266	479	4 626	15 552	22 272	37 621	772
3344	Semiconductor & other electronic component mfg	—	118	56	15 182	556 366	10 534	21 060	336 842	7 466 497	1 129 869	8 560 629	1 275 262
33441	Semiconductor & other electronic component mfg	—	118	56	15 182	556 366	10 534	21 060	336 842	7 466 497	1 129 869	8 560 629	1 275 262
334412	Bare printed circuit board mfg	—	28	10	2 518	74 494	2 036	4 363	51 117	138 502	116 242	253 006	27 936
334413	Semiconductor & related device mfg ...	—	28	17	8 330	359 103	5 702	11 171	226 445	7 078 696	812 230	7 859 672	1 232 723
334416	Electronic coil, transformer, & other inductor mfg	2	11	5	627	13 427	468	938	7 565	26 357	10 486	36 523	1 745
334417	Electronic connector mfg	8	3	3	198	5 500	152	281	3 347	13 303	8 061	21 677	D

Table 1. Industry Statistics for the State: 1997—Con.

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
334	Computer & electronic product mfg—Con.												
3344	Semiconductor & other electronic component mfg—Con.												
33441	Semiconductor & other electronic component mfg—Con.												
334418	Printed circuit assembly (electronic assembly) mfg	1	17	11	1 692	53 996	911	1 872	21 324	107 971	121 784	228 723	6 110
334419	Other electronic component mfg	1	28	9	1 736	48 209	1 225	2 360	26 344	97 839	59 817	155 958	5 730
3345	Navigational, measuring, medical, & control instruments mfg	—	85	31	7 583	343 965	3 458	6 947	113 529	1 186 335	721 485	1 930 965	82 049
33451	Navigational, measuring, medical, & control instruments mfg	—	85	31	7 583	343 965	3 458	6 947	113 529	1 186 335	721 485	1 930 965	82 049
334510	Electromedical & electrotherapeutic apparatus mfg	—	9	5	836	36 273	349	708	9 952	85 470	46 706	132 290	2 576
334511	Search, detection, navigation, & guidance instrument mfg	—	11	5	984	39 081	433	779	11 228	143 474	79 303	238 046	9 243
334513	Industrial process control instrument mfg	5	8	2	141	6 640	54	103	1 750	9 686	5 568	14 426	268
334514	Totalizing fluid meter & counting device mfg .	—	4	2	174	4 853	110	246	1 941	10 650	13 877	23 218	215
334515	Electricity measuring & testing instrument mfg	—	22	9	4 784	228 921	2 218	4 420	80 121	872 917	545 498	1 427 553	67 564
334516	Analytical laboratory instrument mfg	—	10	2	266	12 557	123	361	4 648	30 216	8 921	38 994	771
334519	Other measuring & controlling device mfg	—	13	6	354	13 888	156	302	3 558	29 426	18 483	48 699	1 221
3346	Mfg & reproducing magnetic & optical media .	7	19	3	333	10 637	265	550	7 245	29 178	27 012	56 915	10 209
33461	Mfg & reproducing magnetic & optical media	7	19	3	333	10 637	265	550	7 245	29 178	27 012	56 915	10 209
334613	Magnetic & optical recording media mfg .	6	8	2	228	7 342	184	362	5 088	18 729	21 575	41 016	8 379
335	Electrical equipment, appliance, & component mfg	1	72	19	1 730	58 030	1 161	2 338	31 364	183 652	174 735	355 018	6 408
3351	Electric lighting equipment mfg	2	10	2	c	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg	—	2	1	c	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg	—	2	1	c	D	D	D	D	D	D	D	D
3352	Household appliance mfg..	—	3	1	c	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	3	38	8	627	20 109	388	700	9 723	46 845	52 529	99 765	2 439
33531	Electrical equipment mfg	3	38	8	627	20 109	388	700	9 723	46 845	52 529	99 765	2 439
335311	Power, distribution, & specialty transformer mfg	—	3	1	c	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg	2	10	2	137	4 669	103	184	2 961	15 151	15 420	30 617	321
335314	Relay & industrial control mfg	2	20	4	295	9 643	153	256	3 335	16 501	15 999	32 741	1 390
3359	Other electrical equipment & component mfg	—	21	8	823	30 511	560	1 174	16 390	118 576	109 496	224 242	2 995
33591	Battery mfg	—	2	1	c	D	D	D	D	D	D	D	D
335911	Storage battery mfg ...	—	2	1	c	D	D	D	D	D	D	D	D
33592	Communication & energy wire & cable mfg	—	4	3	362	17 711	237	551	8 519	73 537	54 984	126 022	D
335921	Fiber optic cable mfg..	—	1	1	c	D	D	D	D	D	D	D	D
335929	Other communication & energy wire mfg ...	—	3	2	c	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg	2	10	4	c	D	D	D	D	D	D	D	433
335999	All other miscellaneous electrical equipment & component mfg	2	10	4	c	D	D	D	D	D	D	D	433

Table 1. Industry Statistics for the State: 1997—Con.

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
336	Transportation equipment mfg	-	242	86	15 833	521 692	13 092	25 621	402 856	1 544 256	2 000 467	3 538 256	48 908
3361	Motor vehicle mfg	-	9	3	2 353	80 593	2 104	3 830	73 190	581 333	948 193	1 520 939	D
33611	Automobile & light duty motor vehicle mfg	-	5	1	e	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg	-	2	1	e	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg ...	-	4	2	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg .	-	4	2	g	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg	1	59	25	4 157	98 085	3 507	6 932	69 566	209 977	409 341	620 333	6 847
33621	Motor vehicle body & trailer mfg	1	59	25	4 157	98 085	3 507	6 932	69 566	209 977	409 341	620 333	6 847
336211	Motor vehicle body mfg	2	19	4	534	14 836	329	671	7 825	19 784	53 270	74 238	1 668
336212	Truck trailer mfg	1	7	3	197	5 802	161	378	4 316	9 415	20 796	30 365	633
336213	Motor home mfg	-	5	5	1 768	39 374	1 595	3 328	32 045	100 008	205 430	306 395	2 311
336214	Travel trailer & camper mfg	1	28	13	1 658	38 073	1 422	2 555	25 380	80 770	129 845	209 335	2 235
3363	Motor vehicle parts mfg ...	1	67	20	2 615	91 660	1 914	3 389	57 156	227 047	216 977	444 488	15 223
33631	Motor vehicle gasoline engine & engine parts mfg	9	12	2	211	8 657	172	378	5 288	19 621	27 684	47 486	2 606
336312	Gasoline engine & engine parts mfg	9	12	2	211	8 657	172	378	5 288	19 621	27 684	47 486	2 606
33632	Motor vehicle electrical & electronic equipment mfg	1	16	7	587	14 433	418	735	8 123	34 770	20 690	55 675	1 696
336322	Other motor vehicle electrical & electronic equipment mfg	1	15	7	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg	-	9	4	642	23 669	428	809	12 272	54 780	47 717	108 876	5 557
336350	Motor vehicle transmission & power train parts mfg	-	9	4	642	23 669	428	809	12 272	54 780	47 717	108 876	5 557
33639	Other motor vehicle parts mfg	-	21	6	1 044	41 438	791	1 258	29 493	112 009	113 097	218 614	5 170
336399	All other motor vehicle parts mfg	-	21	6	1 044	41 438	791	1 258	29 493	112 009	113 097	218 614	5 170
3364	Aerospace product & parts mfg	-	33	9	2 487	104 252	1 917	3 737	84 046	264 041	109 639	370 459	14 314
33641	Aerospace product & parts mfg	-	33	9	2 487	104 252	1 917	3 737	84 046	264 041	109 639	370 459	14 314
336411	Aircraft mfg	7	6	2	c	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg	-	24	7	g	D	D	D	D	D	D	D	14 061
3365	Railroad rolling stock mfg ..	-	2	1	g	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg	-	2	1	g	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg	-	2	1	g	D	D	D	D	D	D	D	D
3366	Ship & boat building	1	43	16	2 248	86 541	1 957	4 367	71 420	161 308	128 119	286 779	2 862
33661	Ship & boat building	1	43	16	2 248	86 541	1 957	4 367	71 420	161 308	128 119	286 779	2 862
336611	Ship building & repairing	1	22	10	1 581	70 421	1 388	3 257	59 311	128 680	74 879	203 559	2 146
336612	Boat building	1	21	6	667	16 120	569	1 110	12 109	32 628	53 240	83 220	716
3369	Other transportation equipment mfg	-	29	12	f	D	D	D	D	D	D	D	1 336
33699	Other transportation equipment mfg	-	29	12	f	D	D	D	D	D	D	D	1 336
336991	Motorcycle, bicycle, & parts mfg	-	14	5	c	D	D	D	D	D	D	D	735
336999	All other transportation equipment mfg	-	15	7	566	13 620	456	957	9 838	31 502	32 978	63 859	601
337	Furniture & related product mfg	1	376	69	6 081	149 654	4 661	8 886	99 193	298 328	259 821	561 086	12 049
3371	Household & institutional furniture & kitchen cabinet mfg	2	293	46	4 385	97 741	3 570	6 928	69 992	185 362	180 562	370 209	7 360
33711	Wood kitchen cabinet & counter top mfg	1	172	22	2 153	49 826	1 687	3 123	35 257	87 984	81 822	174 330	3 020
337110	Wood kitchen cabinet & counter top mfg ...	1	172	22	2 153	49 826	1 687	3 123	35 257	87 984	81 822	174 330	3 020
33712	Household & institutional furniture mfg	2	121	24	2 232	47 915	1 883	3 805	34 735	97 378	98 740	195 879	4 340
337121	Upholstered household furniture mfg	2	30	5	663	14 314	598	1 209	11 415	28 358	27 816	56 185	891
337122	Nonupholstered wood household furniture mfg	1	72	14	1 311	27 388	1 097	2 242	19 517	57 118	63 733	120 485	3 108
337127	Institutional furniture mfg	4	11	3	190	5 040	144	279	3 121	9 742	5 096	14 979	279

Table 1. Industry Statistics for the State: 1997—Con.

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	OREGON—Con.												
31-33	Manufacturing—Con.												
337	Furniture & related product mfg—Con.												
3372	Office furniture (including fixtures) mfg	2	71	19	1 421	44 071	896	1 571	24 249	92 245	58 552	149 623	4 207
33721	Office furniture (including fixtures) mfg	2	71	19	1 421	44 071	896	1 571	24 249	92 245	58 552	149 623	4 207
337211	Wood office furniture mfg	1	12	2	182	4 022	109	197	2 105	16 684	4 480	21 096	992
337212	Custom architectural woodwork & millwork mfg	—	22	6	302	8 010	220	370	4 887	13 822	12 281	25 822	726
337215	Showcase, partition, shelving, & locker mfg	2	34	11	915	31 456	548	976	16 873	60 525	40 956	100 643	2 394
3379	Other furniture related product mfg	—	12	4	275	7 842	195	387	4 952	20 721	20 707	41 254	482
33791	Mattress mfg	—	8	3	212	6 075	170	346	4 541	19 635	19 623	39 081	445
337910	Mattress mfg	—	8	3	212	6 075	170	346	4 541	19 635	19 623	39 081	445
339	Miscellaneous mfg	2	592	83	8 968	243 762	5 960	11 036	122 234	528 134	373 373	892 640	34 958
3391	Medical equipment & supplies mfg	2	229	27	3 211	101 617	2 192	4 414	50 242	227 980	128 599	354 885	15 144
33911	Medical equipment & supplies mfg	2	229	27	3 211	101 617	2 192	4 414	50 242	227 980	128 599	354 885	15 144
339111	Laboratory apparatus & furniture mfg	1	6	1	178	4 947	143	265	3 125	10 951	7 710	18 663	86
339112	Surgical & medical instrument mfg	4	19	5	303	9 186	176	714	3 533	29 567	9 023	38 727	1 624
339113	Surgical appliance & supplies mfg	4	20	3	215	6 345	124	214	2 667	15 043	9 663	25 125	505
339114	Dental equipment & supplies mfg	1	38	11	1 651	60 658	1 155	2 185	28 388	126 295	80 024	203 824	11 144
339115	Ophthalmic goods mfg	1	9	3	266	5 420	158	329	3 363	13 478	9 825	23 333	733
339116	Dental laboratories ...	5	137	4	598	15 061	436	707	9 166	32 646	12 354	45 213	1 052
3399	Other miscellaneous mfg ..	2	363	56	5 757	142 145	3 768	6 622	71 992	300 154	244 774	537 755	19 814
33991	Jewelry & silverware mfg	5	36	3	207	4 129	136	224	2 201	9 610	6 757	16 203	247
339911	Jewelry (except costume) mfg	5	30	3	200	3 990	130	212	2 123	9 359	6 551	15 750	243
33992	Sporting & athletic goods mfg	1	85	15	1 552	38 092	1 121	1 988	21 980	97 069	67 672	159 804	7 840
339920	Sporting & athletic goods mfg	1	85	15	1 552	38 092	1 121	1 988	21 980	97 069	67 672	159 804	7 840
33993	Doll, toy, & game mfg ...	1	38	7	858	16 833	675	925	9 928	25 625	46 337	72 582	1 239
339932	Game, toy, & children's vehicle mfg	1	31	6	821	16 204	642	863	9 444	24 565	45 744	70 909	D
33994	Office supplies (except paper) mfg	2	20	3	202	5 384	123	208	2 270	10 615	13 464	23 705	591
33995	Sign mfg	3	98	13	1 231	36 329	721	1 378	16 538	73 695	49 660	122 013	4 878
339950	Sign mfg	3	98	13	1 231	36 329	721	1 378	16 538	73 695	49 660	122 013	4 878
33999	All other miscellaneous mfg	3	86	15	1 707	41 378	992	1 899	19 075	83 540	60 884	143 448	5 019
339991	Gasket, packing, & sealing device mfg ...	1	7	3	219	5 584	145	312	2 741	11 383	5 773	17 129	543
339992	Musical instrument mfg	—	14	1	232	7 945	122	280	2 918	13 924	8 072	21 419	382
339994	Broom, brush, & mop mfg	—	4	2	e	D	D	D	D	D	D	D	D
339999	All other miscellaneous mfg	5	59	9	832	18 315	411	696	7 587	39 560	32 870	72 232	3 691

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.

²Industries with 100 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c—100 to 249 employees; e—250 to 499 employees; f—500 to 999 employees; g—1,000 to 2,499 employees; h—2,500 to 4,999 employees; i—5,000 to 9,999 employees; j—10,000 to 24,999 employees; k—25,000 to 49,999 employees; l—50,000 to 99,999 employees; m—100,000 employees or more.

Table 2. Industry Statistics for Metropolitan Areas: 1997

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by *, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	EUGENE-SPRINGFIELD, OR MSA												
	Manufacturing	1	624	172	19 262	589 761	14 171	27 327	383 133	1 674 933	2 225 216	3 881 838	758 149
311	Food mfg.....	2	55	15	1 872	41 345	1 296	2 212	25 611	165 440	155 095	319 794	7 964
3114	Fruit & vegetable preserving & specialty food mfg.....	1	8	2	e	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying.....	1	7	2	298	4 484	293	407	4 350	15 771	15 498	31 233	1 278
311421	Fruit & vegetable canning.....	1	7	2	298	4 484	293	407	4 350	15 771	15 498	31 233	1 278
3116	Meat product mfg.....	-	5	1	e	D	D	D	D	D	D	D	163
31161	Animal slaughtering & processing.....	-	5	1	e	D	D	D	D	D	D	D	163
311615	Poultry processing.....	-	2	1	e	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg.....	-	15	4	605	15 626	320	465	7 116	56 547	29 055	85 620	1 013
31181	Bread & bakery product mfg.....	-	11	4	590	15 240	309	432	6 863	53 625	27 285	80 924	957
311812	Commercial bakeries..	-	6	4	f	D	D	D	D	D	D	D	D
321	Wood product mfg.....	2	80	46	5 765	179 667	4 946	10 740	141 114	487 065	1 068 926	1 540 448	74 339
3211	Sawmills & wood preservation.....	-	19	14	1 765	64 132	1 485	3 204	48 159	180 940	455 320	626 717	46 057
32111	Sawmills & wood preservation.....	-	19	14	1 765	64 132	1 485	3 204	48 159	180 940	455 320	626 717	46 057
321113	Sawmills.....	-	17	12	g	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg.....	3	23	22	3 427	101 601	3 010	6 611	83 144	278 115	572 908	845 145	26 761
32121	Veneer, plywood, & engineered wood product mfg.....	3	23	22	3 427	101 601	3 010	6 611	83 144	278 115	572 908	845 145	26 761
321211	Hardwood veneer & plywood mfg.....	5	5	5	896	26 493	771	1 686	20 098	50 549	118 049	164 192	4 396
321212	Softwood veneer & plywood mfg.....	6	8	7	1 430	37 425	1 251	2 711	31 786	93 923	207 000	301 556	6 826
321213	Engineered wood member (except truss) mfg.....	-	6	6	804	25 877	746	1 686	22 565	114 200	208 852	320 859	D
321219	Reconstituted wood product mfg.....	-	3	3	e	D	D	D	D	D	D	D	D
3219	Other wood product mfg....	3	38	10	573	13 934	451	925	9 811	28 010	40 698	68 586	1 521
32191	Millwork.....	-	15	5	256	6 427	209	425	4 680	14 315	20 734	34 854	348
32199	All other wood product mfg.....	6	20	5	306	7 383	232	483	5 033	13 417	19 702	33 195	1 140
322	Paper mfg.....	-	5	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills.....	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills.....	-	1	1	f	D	D	D	D	D	D	D	D
322130	Paperboard mills.....	-	1	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities.....	-	52	8	696	19 710	465	760	10 333	37 891	20 750	58 436	D
3231	Printing & related support activities.....	-	52	8	696	19 710	465	760	10 333	37 891	20 750	58 436	D
32311	Printing.....	-	49	8	690	19 559	460	753	10 223	37 593	20 680	58 068	D
323110	Commercial lithographic printing..	-	19	5	357	10 631	234	333	4 752	19 240	8 396	27 531	D
325	Chemical mfg.....	-	19	9	667	25 450	355	657	12 658	112 929	137 091	249 024	D
326	Plastics & rubber products mfg.....	-	24	7	403	11 017	314	584	7 262	24 664	42 046	66 716	D
3261	Plastics product mfg.....	-	18	4	276	7 725	212	376	4 842	15 786	29 442	45 191	D
327	Nonmetallic mineral product mfg.....	9	31	3	376	10 104	290	559	6 783	28 888	30 760	59 421	D
3273	Cement & concrete product mfg.....	9	12	2	314	8 807	239	489	5 870	25 337	27 750	52 819	D
332	Fabricated metal product mfg.....	2	90	20	1 301	41 370	933	1 805	25 214	79 380	84 855	164 044	12 073
3323	Architectural & structural metals mfg.....	4	24	6	366	14 836	277	545	9 222	28 780	31 593	60 853	3 533
33232	Ornamental & architectural metal products mfg.....	6	18	5	288	11 322	221	425	7 604	22 483	21 714	44 327	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	-	30	4	303	10 169	221	392	5 350	24 294	17 137	41 569	6 692
33271	Machine shops.....	-	30	4	303	10 169	221	392	5 350	24 294	17 137	41 569	6 692
332710	Machine shops.....	-	30	4	303	10 169	221	392	5 350	24 294	17 137	41 569	6 692
3329	Other fabricated metal product mfg.....	1	17	4	349	8 715	209	471	5 482	11 983	26 174	37 379	D
33299	All other fabricated metal product mfg.....	1	16	4	e	D	D	D	D	D	D	D	708

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	EUGENE-SPRINGFIELD, OR MSA—Con.												
	Manufacturing—Con.												
333	Machinery mfg	1	49	18	1 511	50 993	961	1 922	26 175	98 785	89 130	185 313	6 763
3331	Agriculture, construction, & mining machinery mfg....	1	9	6	498	14 731	344	699	9 479	29 188	42 681	70 029	3 157
3332	Industrial machinery mfg ..	—	10	4	421	15 697	220	446	5 197	28 916	17 900	46 665	715
33321	Sawmill & woodworking machinery mfg	—	5	3	371	14 234	187	389	4 527	27 453	15 608	42 831	421
333210	Sawmill & woodworking machinery mfg	—	5	3	371	14 234	187	389	4 527	27 453	15 608	42 831	421
3339	Other general-purpose machinery mfg	—	11	5	357	13 370	221	479	7 062	25 262	16 772	41 475	1 956
334	Computer & electronic product mfg.....	2	17	8	1 610	64 573	1 079	1 159	36 229	110 947	78 317	191 973	D
3341	Computer & peripheral equipment mfg	—	2	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	—	2	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	—	1	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	2	4	2	637	31 142	554	209	25 926	4 408	5 472	12 290	D
33441	Semiconductor & other electronic component mfg	2	4	2	637	31 142	554	209	25 926	4 408	5 472	12 290	D
334413	Semiconductor & related device mfg ...	9	2	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg	—	32	12	2 119	53 111	1 585	3 072	36 916	272 538	253 436	527 911	4 723
3361	Motor vehicle mfg	—	3	1	e	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg	—	3	1	e	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg	—	1	1	e	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg	1	12	8	g	D	D	D	D	D	D	D	2 809
33621	Motor vehicle body & trailer mfg	1	12	8	g	D	D	D	D	D	D	D	2 809
336211	Motor vehicle body mfg	—	2	1	e	D	D	D	D	D	D	D	D
336213	Motor home mfg.....	—	2	2	f	D	D	D	D	D	D	D	D
336214	Travel trailer & camper mfg	3	6	4	263	6 549	205	379	4 029	12 963	18 131	31 110	657
337	Furniture & related product mfg	1	50	12	1 099	29 101	845	1 796	17 149	57 064	54 905	112 623	D
3371	Household & institutional furniture & kitchen cabinet mfg	1	39	7	793	20 111	639	1 461	12 713	37 322	42 791	80 920	D
33711	Wood kitchen cabinet & counter top mfg	1	21	4	266	7 729	212	432	4 384	13 781	10 482	24 262	D
337110	Wood kitchen cabinet & counter top mfg ...	1	21	4	266	7 729	212	432	4 384	13 781	10 482	24 262	D
33712	Household & institutional furniture mfg	1	18	3	527	12 382	427	1 029	8 329	23 541	32 309	56 658	D
337122	Nonupholstered wood household furniture mfg	1	14	3	518	12 259	419	1 017	8 228	23 312	32 028	56 162	D
3372	Office furniture (including fixtures) mfg	—	11	5	306	8 990	206	335	4 436	19 742	12 114	31 703	D
33721	Office furniture (including fixtures) mfg	—	11	5	306	8 990	206	335	4 436	19 742	12 114	31 703	D
339	Miscellaneous mfg.....	6	74	6	748	15 616	344	582	6 854	29 205	24 166	51 983	D
3399	Other miscellaneous mfg ..	6	46	5	633	13 105	267	459	5 519	23 443	21 009	43 166	D
33999	All other miscellaneous mfg	7	13	2	321	5 144	88	166	1 731	9 338	11 207	19 947	D
339999	All other miscellaneous mfg	7	8	2	305	4 853	75	144	1 510	8 708	10 848	18 916	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
MEDFORD—ASHLAND, OR MSA													
31-33	Manufacturing	1	301	70	7 428	201 656	5 740	11 493	141 146	512 491	913 317	1 424 011	68 709
311	Food mfg	1	22	7	409	10 710	271	453	4 726	28 728	50 391	79 130	5 151
321	Wood product mfg	—	48	25	3 077	91 701	2 705	5 721	77 622	203 051	610 939	808 914	11 360
3211	Sawmills & wood preservation	—	6	5	325	11 164	275	604	8 797	20 806	96 351	117 886	1 869
32111	Sawmills & wood preservation	—	6	5	325	11 164	275	604	8 797	20 806	96 351	117 886	1 869
321113	Sawmills	—	5	4	e	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg	—	16	12	1 848	60 107	1 665	3 589	51 869	152 374	429 087	577 877	8 743
32121	Veneer, plywood, & engineered wood product mfg	—	16	12	1 848	60 107	1 665	3 589	51 869	152 374	429 087	577 877	8 743
321211	Hardwood veneer & plywood mfg	—	1	1	e	D	D	D	D	D	D	D	D
321212	Softwood veneer & plywood mfg	—	8	7	1 113	36 067	1 051	2 329	33 243	70 072	234 395	300 520	4 512
321219	Reconstituted wood product mfg	—	4	3	257	9 082	198	379	6 192	29 805	40 415	71 411	D
3219	Other wood product mfg	—	26	8	904	20 430	765	1 528	16 956	29 871	85 501	113 151	748
32191	Millwork	—	11	5	739	17 444	629	1 330	14 940	23 518	77 501	98 808	399
321911	Wood window & door mfg	—	3	1	e	D	D	D	D	D	D	D	D
323	Printing & related support activities	5	36	5	589	14 691	436	753	9 454	27 592	19 790	47 296	3 955
3231	Printing & related support activities	5	36	5	589	14 691	436	753	9 454	27 592	19 790	47 296	3 955
32311	Printing	5	34	5	f	D	D	D	D	D	D	D	D
325	Chemical mfg	—	9	4	483	10 378	357	701	6 651	78 661	92 253	173 223	D
3259	Other chemical product mfg	—	2	1	e	D	D	D	D	D	D	D	D
32599	All other chemical product & preparation mfg	—	2	1	e	D	D	D	D	D	D	D	D
325992	Photographic film, paper, plate, & chemical mfg	—	1	1	e	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	3	34	2	291	6 786	214	349	4 516	13 393	8 226	21 743	1 859
333	Machinery mfg	1	19	4	371	11 762	264	567	6 937	30 448	17 238	48 852	1 168
334	Computer & electronic product mfg	2	9	7	925	25 858	565	1 302	12 803	59 291	38 233	97 493	7 405
3344	Semiconductor & other electronic component mfg	—	3	3	571	9 771	413	962	8 437	22 122	14 398	36 242	D
33441	Semiconductor & other electronic component mfg	—	3	3	571	9 771	413	962	8 437	22 122	14 398	36 242	D
334412	Bare printed circuit board mfg	—	2	2	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg	5	32	4	297	6 924	218	372	4 372	13 977	5 770	19 666	696
PORTLAND—SALEM, OR—WA CMSA													
31-33	Manufacturing	—	3 828	1 170	149 132	5 101 996	107 876	213 841	3 120 336	20 335 240	15 291 633	35 464 372	2 016 207
	Portland—Salem, OR—WA CMSA (OR Part)	—	3 407	1 039	129 595	4 386 764	92 560	183 708	2 630 978	18 349 799	13 385 498	31 610 060	1 501 888
	Portland—Salem, OR—WA CMSA (WA Part)	—	421	131	19 537	715 232	15 316	30 133	489 358	1 985 441	1 906 135	3 854 312	514 319
311	Food mfg	1	244	107	12 295	353 235	9 086	17 599	219 058	1 240 619	1 778 639	3 016 301	92 405
312	Beverage & tobacco product mfg	1	55	16	1 562	48 081	763	1 392	22 598	176 277	265 102	439 487	D
313	Textile mills	—	19	5	f	D	D	D	D	D	D	D	D
314	Textile product mills	3	58	13	964	18 506	757	1 395	11 907	25 660	35 100	61 069	D
315	Apparel mfg	—	57	21	g	D	D	D	D	D	D	D	D
316	Leather & allied product mfg	1	22	5	453	9 997	362	698	6 453	24 391	15 036	39 301	D
321	Wood product mfg	—	238	98	8 923	243 127	7 534	14 829	178 779	564 198	1 250 612	1 814 835	38 654
322	Paper mfg	—	58	40	i	D	D	D	D	D	D	D	D
323	Printing & related support activities	1	452	80	6 910	225 235	5 072	9 771	145 199	495 891	377 496	868 843	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	PORTLAND-SALEM, OR-WA CMSA—Con. Manufacturing—Con.												
324	Petroleum & coal products mfg.....	5	17	9	f	D	D	D	D	D	D	D	D
325	Chemical mfg.....	2	130	45	2 885	116 588	1 585	3 035	47 406	428 890	353 217	780 773	D
326	Plastics & rubber products mfg.....	1	183	70	6 748	177 873	5 099	9 716	109 625	430 174	456 972	885 641	D
327	Nonmetallic mineral product mfg.....	—	144	41	3 472	119 229	2 689	5 597	85 151	342 917	273 094	612 735	D
331	Primary metal mfg.....	—	58	35	i	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	1	699	210	17 005	545 931	12 860	25 578	352 473	1 275 386	1 009 001	2 260 083	92 992
333	Machinery mfg.....	—	316	101	11 264	419 441	7 190	14 435	224 568	907 962	868 122	1 783 878	61 377
334	Computer & electronic product mfg.....	—	246	102	34 951	1 412 942	22 292	45 765	737 756	10 469 852	4 278 269	14 645 263	D
335	Electrical equipment, appliance, & component mfg.....	1	58	19	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	—	140	52	j	D	D	D	D	D	D	D	D
337	Furniture & related product mfg.....	2	254	44	4 033	103 741	3 061	5 868	70 017	207 590	173 787	383 835	D
339	Miscellaneous mfg.....	1	380	57	6 622	192 011	4 509	8 501	95 521	427 182	300 406	719 649	27 701
31-33	Portland-Vancouver, OR-WA PMSA Manufacturing	—	3 363	1 025	134 123	4 684 217	96 066	190 898	2 851 556	19 245 780	13 780 856	32 874 201	1 902 986
	Portland-Vancouver, OR-WA PMSA (OR Part)	—	2 942	894	114 586	3 968 985	80 750	160 765	2 362 198	17 260 339	11 874 721	29 019 889	1 388 667
	Portland-Vancouver, OR-WA PMSA (WA Part)	—	421	131	19 537	715 232	15 316	30 133	489 358	1 985 441	1 906 135	3 854 312	514 319
311	Food mfg.....	—	201	83	8 563	261 857	6 035	11 786	154 842	994 995	1 241 953	2 234 222	75 331
3112	Grain & oilseed milling	—	8	4	e	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	—	28	15	1 456	45 513	1 113	2 249	21 903	144 179	122 812	270 763	4 256
31141	Frozen food mfg.....	—	11	8	757	25 534	550	1 169	11 177	86 028	73 830	164 562	2 690
311411	Frozen fruit, juice, & vegetable mfg.....	—	9	6	e	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg.....	—	2	2	e	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying.....	—	17	7	699	19 979	563	1 080	10 726	58 151	48 982	106 201	1 566
311421	Fruit & vegetable canning.....	—	15	7	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg.....	—	13	12	847	26 475	528	1 075	15 170	109 563	278 495	387 310	15 092
31151	Dairy product (except frozen) mfg.....	—	12	11	f	D	D	D	D	D	D	D	15 092
311511	Fluid milk mfg.....	—	10	9	f	D	D	D	D	D	D	D	D
3116	Meat product mfg.....	3	27	10	674	15 717	543	989	10 514	43 752	119 493	162 986	2 589
31161	Animal slaughtering & processing.....	3	27	10	674	15 717	543	989	10 514	43 752	119 493	162 986	2 589
311612	Meat processed from carcasses.....	5	18	7	f	D	D	D	D	D	D	D	2 407
3118	Bakeries & tortilla mfg.....	—	72	26	3 387	104 060	2 284	4 290	67 580	282 751	244 209	526 805	25 434
31181	Bread & bakery product mfg.....	1	58	21	2 436	69 288	1 472	2 689	39 366	174 918	138 127	313 055	D
311811	Retail bakeries.....	3	22	3	e	D	D	D	D	D	D	D	D
311812	Commercial bakeries.....	—	33	17	2 024	62 139	1 216	2 240	34 882	156 350	122 456	278 846	12 448
31182	Cookie, cracker, & pasta mfg.....	—	12	4	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg.....	—	8	3	683	28 124	587	1 149	22 787	82 623	62 523	144 912	D
3119	Other food mfg.....	1	27	12	1 600	48 649	1 170	2 411	27 799	326 769	274 423	596 548	19 691
31191	Snack food mfg.....	1	3	2	f	D	D	D	D	D	D	D	D
311919	Other snack food mfg.....	1	2	2	f	D	D	D	D	D	D	D	D
31199	All other food mfg.....	—	11	5	447	7 732	322	638	5 082	41 440	57 756	97 387	1 493
311991	Perishable prepared food mfg.....	—	8	4	e	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	PORTLAND-SALEM, OR-WA CMSA—Con.												
	Portland-Vancouver, OR-WA PMSA—Con.												
31-33	Manufacturing—Con.												
312	Beverage & tobacco product mfg	—	42	13	1 413	44 019	684	1 264	20 680	158 369	239 319	396 092	10 104
3121	Beverage mfg	—	42	13	1 413	44 019	684	1 264	20 680	158 369	239 319	396 092	10 104
31211	Soft drink & ice mfg	—	8	5	658	20 970	320	604	8 652	61 752	171 074	233 340	D
312111	Soft drink mfg	—	4	4	607	19 864	283	549	8 073	58 396	166 470	225 370	4 944
31212	Breweries	—	11	4	534	18 525	287	561	10 542	80 943	56 624	137 743	D
312120	Breweries	—	11	4	534	18 525	287	561	10 542	80 943	56 624	137 743	D
313	Textile mills	—	17	4	510	15 483	387	642	11 210	30 045	55 825	86 333	D
3132	Fabric mills	—	10	3	e	D	D	D	D	D	D	D	D
31321	Broadwoven fabric mills	—	6	2	e	D	D	D	D	D	D	D	D
313210	Broadwoven fabric mills	—	6	2	e	D	D	D	D	D	D	D	D
314	Textile product mills	3	50	10	830	15 774	650	1 201	10 109	21 810	31 518	53 674	1 510
3141	Textile furnishings mills	2	19	4	382	7 929	311	635	5 446	9 041	16 457	25 635	805
31412	Curtain & linen mills	2	19	4	382	7 929	311	635	5 446	9 041	16 457	25 635	805
3149	Other textile product mills	4	31	6	448	7 845	339	566	4 663	12 769	15 061	28 039	705
31491	Textile bag & canvas mills	4	18	4	e	D	D	D	D	D	D	D	409
315	Apparel mfg	—	48	17	1 903	33 693	1 682	3 446	26 742	79 432	83 245	162 069	D
3152	Cut & sew apparel mfg	—	35	15	g	D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors	1	18	8	f	D	D	D	D	D	D	D	D
315212	Women's, girls', & infants' cut & sew apparel contractors	1	14	6	672	10 227	629	1 145	9 182	13 205	1 298	14 411	D
31522	Men's & boys' cut & sew apparel mfg	—	7	4	e	D	D	D	D	D	D	D	D
31523	Women's & girls' cut & sew apparel mfg	—	7	3	f	D	D	D	D	D	D	D	D
315239	Women's & girls' cut & sew other outerwear mfg	—	4	3	e	D	D	D	D	D	D	D	D
316	Leather & allied product mfg	—	16	5	413	9 167	328	641	5 868	22 534	13 190	35 590	D
321	Wood product mfg	—	189	72	5 952	161 443	5 015	9 603	119 318	389 887	864 847	1 256 602	26 246
3211	Sawmills & wood preservation	—	40	19	2 272	69 370	1 993	4 076	56 645	189 584	591 209	782 692	15 448
32111	Sawmills & wood preservation	—	40	19	2 272	69 370	1 993	4 076	56 645	189 584	591 209	782 692	15 448
321113	Sawmills	—	35	15	2 062	62 102	1 847	3 772	52 388	166 931	526 525	693 690	14 538
3212	Veneer, plywood, & engineered wood product mfg	2	29	16	940	26 428	747	1 513	17 754	56 485	87 415	144 003	2 400
32121	Veneer, plywood, & engineered wood product mfg	2	29	16	940	26 428	747	1 513	17 754	56 485	87 415	144 003	2 400
321214	Truss mfg	3	16	11	524	15 158	386	755	8 540	32 279	32 539	64 991	1 119
3219	Other wood product mfg	1	120	37	2 740	65 645	2 275	4 014	44 919	143 818	186 223	329 907	8 398
32191	Millwork	1	54	22	1 445	39 331	1 216	2 275	26 780	84 790	109 029	193 502	6 145
321911	Wood window & door mfg	1	20	8	612	17 709	509	957	11 579	42 091	41 322	83 708	1 621
321912	Cut stock, resawing lumber, & planing	—	22	9	517	13 757	452	856	10 272	26 496	39 588	65 308	4 000
321918	Other millwork (including flooring)	—	12	5	316	7 865	255	462	4 929	16 203	28 119	44 486	524
32192	Wood container & pallet mfg	—	23	8	418	8 766	353	631	6 066	17 522	32 244	49 680	1 277
321920	Wood container & pallet mfg	—	23	8	418	8 766	353	631	6 066	17 522	32 244	49 680	1 277
32199	All other wood product mfg	1	43	7	877	17 548	706	1 108	12 073	41 506	44 950	86 725	976
321991	Manufactured home (mobile home) mfg	—	2	2	e	D	D	D	D	D	D	D	D
321999	All other miscellaneous wood product mfg	6	33	4	337	5 126	277	419	3 830	10 681	8 553	19 476	639

Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by *, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	PORTLAND-SALEM, OR-WA CMSA—Con. Portland-Vancouver, OR-WA PMSA—Con. Manufacturing—Con.												
322	Paper mfg	—	55	38	7 466	301 557	6 075	11 968	220 025	1 135 865	1 163 372	2 311 160	D
3221	Pulp, paper, & paperboard mills	—	6	6	4 113	184 440	3 433	6 789	142 605	775 319	748 489	1 535 651	D
32212	Paper mills	—	6	6	4 113	184 440	3 433	6 789	142 605	775 319	748 489	1 535 651	D
322121	Paper (except newsprint) mills	—	4	4	h	D	D	D	D	D	D	D	D
322122	Newsprint mills	—	2	2	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg	—	49	32	3 353	117 117	2 642	5 179	77 420	360 546	414 883	775 509	D
32221	Paperboard container mfg	—	17	13	1 248	46 454	957	1 834	30 678	110 794	170 660	280 583	D
322211	Corrugated & solid fiber box mfg	—	8	6	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg	—	16	11	1 306	47 442	1 050	2 171	32 995	127 855	171 092	301 201	D
322221	Coated & laminated packaging paper & plastics film mfg	—	1	1	e	D	D	D	D	D	D	D	D
322224	Uncoated paper & multiwall bag mfg	—	6	6	663	22 045	544	1 052	15 764	53 352	63 989	117 344	D
32223	Stationery product mfg ..	1	9	5	f	D	D	D	D	D	D	D	D
322232	Envelope mfg	1	5	4	e	D	D	D	D	D	D	D	D
32229	Other converted paper product mfg	—	7	3	e	D	D	D	D	D	D	D	D
323	Printing & related support activities	1	417	76	6 502	213 655	4 763	9 138	137 484	464 175	361 950	820 976	34 530
3231	Printing & related support activities	1	417	76	6 502	213 655	4 763	9 138	137 484	464 175	361 950	820 976	34 530
32311	Printing	1	359	63	5 609	180 919	4 064	7 739	114 259	405 234	347 421	746 851	30 365
323110	Commercial lithographic printing ..	—	161	30	2 924	107 327	2 084	4 025	68 460	219 327	229 298	444 843	15 325
323112	Commercial flexographic printing ..	—	9	8	336	10 870	212	407	5 113	31 260	34 400	65 162	D
323113	Commercial screen printing	4	36	4	412	9 470	301	536	5 482	21 125	14 309	35 333	1 448
323114	Quick printing	1	87	4	544	13 355	418	735	9 940	34 658	12 346	46 961	2 351
323116	Manifold business form printing	—	14	8	463	16 414	357	753	10 634	47 152	20 579	67 422	2 799
323118	Blankbook, looseleaf binder, & device mfg ..	9	5	3	e	D	D	D	D	D	D	D	D
323119	Other commercial printing	5	36	4	369	9 742	251	434	5 142	23 322	15 508	38 018	1 194
32312	Support activities for printing	—	58	13	893	32 736	699	1 399	23 225	58 941	14 529	74 125	4 165
323121	Tradebinding & related work	—	24	6	373	11 309	307	642	8 368	18 328	5 653	24 321	796
323122	Prepress services	—	34	7	520	21 427	392	757	14 857	40 613	8 876	49 804	3 369
324	Petroleum & coal products mfg	4	14	6	429	16 961	290	623	10 558	77 567	143 905	223 382	5 562
3241	Petroleum & coal products mfg	4	14	6	429	16 961	290	623	10 558	77 567	143 905	223 382	5 562
32412	Asphalt paving, roofing, & saturated materials mfg	4	6	4	e	D	D	D	D	D	D	D	D
324122	Asphalt shingle & coating materials mfg	5	3	3	e	D	D	D	D	D	D	D	D
325	Chemical mfg	2	118	38	2 578	102 885	1 402	2 643	42 874	380 688	300 148	679 936	47 733
3251	Basic chemical mfg	1	19	5	369	16 741	217	433	8 522	90 324	61 901	152 259	19 195
3254	Pharmaceutical & medicine mfg	5	18	11	703	21 802	396	598	9 145	61 129	33 925	94 678	5 585
32541	Pharmaceutical & medicine mfg	5	18	11	703	21 802	396	598	9 145	61 129	33 925	94 678	5 585
325413	In-vitro diagnostic substance mfg	3	5	5	e	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg	—	19	4	393	17 157	213	451	6 401	62 885	64 628	127 146	D
3259	Other chemical product mfg	2	32	12	616	27 285	292	624	9 880	103 366	86 963	189 245	D
32599	All other chemical product & preparation mfg	3	22	7	374	18 153	183	390	6 372	82 864	58 978	141 763	D
325998	All other miscellaneous chemical product & preparation mfg	3	14	7	313	16 461	142	319	5 461	78 020	53 532	131 335	6 679

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	PORTLAND-SALEM, OR-WA CMSA—Con.												
	Portland-Vancouver, OR-WA PMSA—Con.												
31-33	Manufacturing—Con.												
326	Plastics & rubber products mfg	1	158	66	6 286	166 815	4 710	8 956	101 507	402 481	428 323	829 259	35 239
3261	Plastics product mfg	1	128	55	5 392	139 662	3 994	7 511	83 518	328 917	366 518	694 458	28 536
32611	Unsupported plastics film, sheet, & bag mfg ..	1	9	3	e	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	1	20	8	618	16 825	432	854	10 426	32 550	57 736	93 414	9 481
326121	Unsupported plastics profile shape mfg	1	12	3	278	7 199	190	374	4 041	14 770	12 592	27 962	D
326122	Plastics pipe & pipe fitting mfg	1	8	5	340	9 626	242	480	6 385	17 780	45 144	65 452	D
32619	Other plastics product mfg	1	81	37	4 071	104 437	3 009	5 520	61 745	247 063	242 671	485 969	16 284
326199	All other plastics product mfg	1	79	37	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg	-	30	11	894	27 153	716	1 445	17 989	73 564	61 805	134 801	6 703
32621	Tire mfg	-	7	2	371	9 662	313	641	7 256	22 256	24 448	46 595	D
326212	Tire retreading	-	7	2	371	9 662	313	641	7 256	22 256	24 448	46 595	D
32629	Other rubber product mfg	-	20	9	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg	-	124	37	3 254	112 855	2 525	5 295	80 623	324 713	262 642	584 360	D
3272	Glass & glass product mfg .	-	35	13	1 091	35 640	813	1 556	24 787	101 694	91 599	193 103	D
32721	Glass & glass product mfg	-	35	13	1 091	35 640	813	1 556	24 787	101 694	91 599	193 103	D
327215	Glass product mfg made of purchased glass	-	23	7	552	16 139	382	677	10 594	32 936	50 932	84 640	D
3273	Cement & concrete product mfg	-	47	15	g	D	D	D	D	D	D	D	10 882
32732	Ready-mix concrete mfg .	-	20	9	778	33 161	658	1 548	25 791	86 039	77 500	163 857	6 673
327320	Ready-mix concrete mfg	-	20	9	778	33 161	658	1 548	25 791	86 039	77 500	163 857	6 673
32733	Concrete pipe, brick, & block mfg	1	12	4	347	10 722	245	520	6 334	29 086	24 467	51 836	2 675
327332	Concrete pipe mfg	-	7	4	e	D	D	D	D	D	D	D	1 402
3279	Other nonmetallic mineral product mfg	1	19	4	e	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg ...	1	16	3	439	15 850	341	814	12 404	61 317	38 399	97 735	D
327993	Mineral wool mfg	1	2	2	e	D	D	D	D	D	D	D	D
331	Primary metal mfg	-	50	30	7 697	271 684	6 074	12 487	187 957	650 669	783 726	1 408 067	93 325
3311	Iron & steel mills & ferroalloy mfg	-	3	2	g	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg	-	3	2	g	D	D	D	D	D	D	D	D
331111	Iron & steel mills	-	3	2	g	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel	-	5	2	e	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel	-	2	1	e	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel	-	2	1	e	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	10	9	g	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing	-	10	9	g	D	D	D	D	D	D	D	D
331312	Primary aluminum production	-	2	2	f	D	D	D	D	D	D	D	D
331316	Aluminum extruded product mfg	-	3	3	e	D	D	D	D	D	D	D	D
3315	Foundries	-	29	16	4 746	147 243	3 805	7 757	105 396	395 795	204 436	601 151	D
33151	Ferrous metal foundries .	-	13	9	3 737	118 927	3 030	6 312	85 664	309 616	175 036	483 762	D
331512	Steel investment foundries	-	3	3	g	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment)	-	4	4	1 112	41 193	948	1 807	29 172	105 940	106 713	215 390	D
33152	Nonferrous metal foundries	-	16	7	1 009	28 316	775	1 445	19 732	86 179	29 400	117 389	D
331528	Other nonferrous foundries (except die-casting)	-	1	1	f	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	PORTLAND-SALEM, OR-WA CMSA—Con. Portland-Vancouver, OR-WA PMSA—Con. Manufacturing—Con.												
332	Fabricated metal product mfg	1	625	183	15 146	493 384	11 442	22 932	320 248	1 125 746	844 544	1 953 603	83 066
3321	Forging & stamping	3	22	9	609	21 407	448	884	11 726	43 430	36 113	79 452	7 339
33211	Forging & stamping	3	22	9	609	21 407	448	884	11 726	43 430	36 113	79 452	7 339
332116	Metal stamping	3	11	6	e	D	D	D	D	D	D	D	D
3322	Cutlery & handtool mfg	—	20	9	2 238	74 615	1 662	3 609	46 301	261 230	179 544	430 659	13 037
33221	Cutlery & handtool mfg	—	20	9	2 238	74 615	1 662	3 609	46 301	261 230	179 544	430 659	13 037
332212	Hand & edge tool mfg	—	12	5	g	D	D	D	D	D	D	D	D
332213	Saw blade & handsaw mfg	—	7	3	g	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg	—	148	55	4 294	140 773	3 130	6 191	87 846	290 435	287 455	570 258	10 402
33231	Plate work & fabricated structural product mfg	1	57	20	1 197	46 753	870	1 802	29 176	84 197	110 213	187 901	2 988
332312	Fabricated structural metal mfg	1	47	17	1 095	43 900	789	1 674	27 314	79 833	106 827	180 225	2 843
33232	Ornamental & architectural metal products mfg	—	91	35	3 097	94 020	2 260	4 389	58 670	206 238	177 242	382 357	7 414
332321	Metal window & door mfg	—	10	6	1 019	28 648	782	1 568	18 478	72 780	83 309	156 948	1 921
332322	Sheet metal work mfg	—	56	28	1 838	59 136	1 313	2 510	36 795	115 948	83 219	197 933	4 970
3324	Boiler, tank, & shipping container mfg	—	17	10	866	33 721	625	1 311	22 212	62 018	96 882	159 289	7 757
33241	Power boiler & heat exchanger mfg	—	6	4	e	D	D	D	D	D	D	D	D
332410	Power boiler & heat exchanger mfg	—	6	4	e	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg	—	5	3	e	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg	—	5	3	e	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg	—	6	3	e	D	D	D	D	D	D	D	D
3325	Hardware mfg	—	8	4	401	9 148	332	685	6 374	26 071	16 913	42 716	1 514
33251	Hardware mfg	—	8	4	401	9 148	332	685	6 374	26 071	16 913	42 716	1 514
332510	Hardware mfg	—	8	4	401	9 148	332	685	6 374	26 071	16 913	42 716	1 514
3326	Spring & wire product mfg	1	24	11	893	24 629	709	1 411	17 290	49 973	34 189	85 637	3 253
33261	Spring & wire product mfg	1	24	11	893	24 629	709	1 411	17 290	49 973	34 189	85 637	3 253
332618	Other fabricated wire product mfg	1	17	7	678	17 633	552	1 108	12 733	37 193	25 912	64 983	2 626
3327	Machine shops, turned product, & screw, nut, & bolt mfg	1	251	43	3 307	109 133	2 528	4 769	73 833	209 264	92 823	300 396	21 340
33271	Machine shops	1	228	35	2 761	90 096	2 095	3 939	61 022	174 053	75 995	248 290	15 771
332710	Machine shops	1	228	35	2 761	90 096	2 095	3 939	61 022	174 053	75 995	248 290	15 771
33272	Turned product & screw, nut, & bolt mfg	2	23	8	546	19 037	433	830	12 811	35 211	16 828	52 106	5 569
332721	Precision turned product mfg	—	18	6	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, & allied activities	2	62	21	1 088	30 287	881	1 720	21 189	77 867	29 467	107 585	11 865
33281	Coating, engraving, heat treating, & allied activities	2	62	21	1 088	30 287	881	1 720	21 189	77 867	29 467	107 585	11 865
332812	Metal coating/engraving (exc jewelry/silverware)/allied services	3	24	9	502	13 172	414	775	9 264	29 841	15 157	44 929	1 757
332813	Electroplating, plating, polishing, anodizing, & coloring	3	29	8	414	11 376	339	655	8 122	22 747	7 573	30 440	D
3329	Other fabricated metal product mfg	—	73	21	1 450	49 671	1 127	2 352	33 477	105 458	71 158	177 611	6 559
33291	Metal valve mfg	—	6	3	333	11 669	251	568	7 493	29 888	22 581	51 596	D
33299	All other fabricated metal product mfg	1	67	18	1 117	38 002	876	1 784	25 984	75 570	48 577	126 015	D
332996	Fabricated pipe & pipe fitting mfg	—	14	4	429	14 954	340	696	10 404	30 192	28 663	59 940	3 093
332999	All other miscellaneous fabricated metal product mfg	1	41	11	543	16 881	419	859	11 010	33 984	17 460	52 197	1 206

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	PORTLAND-SALEM, OR-WA CMSA—Con. Portland-Vancouver, OR-WA PMSA—Con. Manufacturing—Con.												
333	Machinery mfg	-	270	87	10 376	392 323	6 582	13 242	207 612	858 453	812 880	1 679 119	57 280
3331	Agriculture, construction, & mining machinery mfg	-	18	8	1 292	51 270	870	1 838	30 319	93 312	148 767	240 484	11 293
33312	Construction machinery mfg	-	7	3	503	19 798	325	642	12 160	23 032	44 985	68 075	D
333120	Construction machinery mfg	-	7	3	503	19 798	325	642	12 160	23 032	44 985	68 075	D
33313	Mining & oil & gas field machinery mfg	-	2	2	f	D	D	D	D	D	D	D	D
333131	Mining machinery & equipment mfg	-	2	2	f	D	D	D	D	D	D	D	D
3332	Industrial machinery mfg	-	64	28	2 693	104 683	1 441	2 800	48 926	271 829	225 915	498 201	16 658
33321	Sawmill & woodworking machinery mfg	-	19	10	f	D	D	D	D	D	D	D	D
333210	Sawmill & woodworking machinery mfg	-	19	10	f	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg	-	43	18	1 950	79 757	940	1 750	34 797	239 463	175 747	414 837	D
333291	Paper industry machinery mfg	-	13	9	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg	-	20	7	1 057	47 328	515	913	19 808	96 483	104 503	199 237	D
3333	Commercial & service industry machinery mfg	-	28	9	1 377	48 748	914	1 788	24 756	109 644	85 381	197 197	5 184
33331	Commercial & service industry machinery mfg	-	28	9	1 377	48 748	914	1 788	24 756	109 644	85 381	197 197	5 184
333314	Optical instrument & lens mfg	-	8	2	560	22 068	441	852	12 599	39 490	43 357	82 534	2 549
333319	Other commercial & service industry machinery mfg	-	16	6	731	23 936	456	904	11 726	71 081	38 800	110 297	2 528
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	-	17	6	1 658	55 932	1 207	2 740	37 066	91 871	130 122	222 574	7 290
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	-	17	6	1 658	55 932	1 207	2 740	37 066	91 871	130 122	222 574	7 290
333412	Industrial & commercial fan & blower mfg	-	3	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refig equip mfg	-	6	3	e	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg	3	67	9	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg	3	67	9	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg	1	70	24	2 536	102 217	1 567	2 999	47 273	238 895	194 243	438 886	12 630
33391	Pump & compressor mfg	-	6	5	633	24 569	345	723	11 081	76 880	64 678	147 487	D
333911	Pump & pumping equipment mfg	-	4	4	f	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg	-	18	8	960	36 269	624	1 048	16 292	77 097	56 903	130 455	7 418
333922	Conveyor & conveying equipment mfg	-	6	4	e	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg	1	11	4	656	26 833	380	710	11 612	53 846	39 200	92 382	D
33399	All other general-purpose machinery mfg	2	46	11	943	41 379	598	1 228	19 900	84 918	72 662	160 944	D
333991	Power-driven handtool mfg	1	3	2	e	D	D	D	D	D	D	D	D
333999	All other miscellaneous general-purpose machinery mfg	6	25	2	253	9 947	158	299	4 368	17 906	16 645	37 538	1 361
334	Computer & electronic product mfg	-	230	96	32 924	1 345 018	20 764	42 754	702 616	10 262 041	4 181 252	14 340 382	1 179 208
3341	Computer & peripheral equipment mfg	-	32	14	8 922	397 371	5 980	12 156	227 007	1 373 151	1 799 461	3 097 327	134 556
33411	Computer & peripheral equipment mfg	-	32	14	8 922	397 371	5 980	12 156	227 007	1 373 151	1 799 461	3 097 327	134 556
334111	Electronic computer mfg	1	9	6	g	D	D	D	D	D	D	D	D
334113	Computer terminal mfg	-	4	3	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	16	5	i	D	D	D	D	D	D	D	114 328

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	PORTLAND-SALEM, OR-WA CMSA—Con.												
	Portland-Vancouver, OR-WA PMSA—Con.												
31-33	Manufacturing—Con.												
334	Computer & electronic product mfg—Con.												
3342	Communications equipment mfg	-	21	7	1 712	62 802	807	1 419	20 355	205 161	202 997	410 577	D
33421	Telephone apparatus mfg	-	7	2	f	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg	-	7	2	f	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg	-	7	4	359	14 884	150	302	4 148	36 985	22 182	58 205	D
334220	Radio & TV broadcasting & wireless communications equipment mfg	-	7	4	359	14 884	150	302	4 148	36 985	22 182	58 205	D
33429	Other communications equipment mfg	-	7	1	e	D	D	D	D	D	D	D	1 161
334290	Other communications equipment mfg	-	7	1	e	D	D	D	D	D	D	D	1 161
3343	Audio & video equipment mfg	1	8	4	500	13 232	353	836	6 301	37 853	139 502	179 327	D
33431	Audio & video equipment mfg	1	8	4	500	13 232	353	836	6 301	37 853	139 502	179 327	D
334310	Audio & video equipment mfg	1	8	4	500	13 232	353	836	6 301	37 853	139 502	179 327	D
3344	Semiconductor & other electronic component mfg	-	94	51	15 208	568 691	10 634	22 291	346 097	7 581 138	1 380 938	8 913 955	940 635
33441	Semiconductor & other electronic component mfg	-	94	51	15 208	568 691	10 634	22 291	346 097	7 581 138	1 380 938	8 913 955	940 635
334412	Bare printed circuit board mfg	-	21	7	g	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg ...	-	25	18	8 814	371 315	6 190	13 423	246 125	7 155 236	1 057 978	8 168 363	897 566
334414	Electronic capacitor mfg	-	1	1	f	D	D	D	D	D	D	D	D
334416	Electronic coil, transformer, & other inductor mfg	2	9	5	f	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) mfg	-	9	7	1 287	45 310	708	1 408	16 769	91 084	96 449	187 138	4 981
334419	Other electronic component mfg	1	24	10	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg	-	60	18	6 395	296 641	2 842	5 717	98 630	1 046 673	644 140	1 706 615	D
33451	Navigational, measuring, medical, & control instruments mfg	-	60	18	6 395	296 641	2 842	5 717	98 630	1 046 673	644 140	1 706 615	D
334510	Electromedical & electrotherapeutic apparatus mfg	-	6	4	f	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, & guidance instrument mfg	-	6	3	f	D	D	D	D	D	D	D	D
334515	Electricity measuring & testing instrument mfg	-	18	7	4 656	222 762	2 154	4 303	78 304	845 212	532 612	1 387 035	67 107
335	Electrical equipment, appliance, & component mfg	1	55	19	1 580	53 172	1 033	2 046	27 113	162 640	131 234	289 591	D
3353	Electrical equipment mfg ..	3	31	9	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg	3	31	9	f	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg	1	18	6	e	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg	-	13	7	687	25 376	442	899	12 322	99 948	77 687	173 901	1 892
33599	All other electrical equipment & component mfg	3	8	4	e	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg	3	8	4	e	D	D	D	D	D	D	D	D

Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by *, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	PORTLAND-SALEM, OR-WA CMSA—Con.												
	Portland-Vancouver, OR-WA PMSA—Con.												
31-33	Manufacturing—Con.												
336	Transportation equipment mfg	—	128	50	10 446	395 182	8 650	16 913	310 376	1 105 248	1 388 819	2 488 502	39 230
3361	Motor vehicle mfg	—	4	1	g	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg ...	—	3	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg .	—	3	1	g	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg	2	24	7	f	D	D	D	D	D	D	D	1 436
33621	Motor vehicle body & trailer mfg	2	24	7	f	D	D	D	D	D	D	D	1 436
336214	Travel trailer & camper mfg	2	10	4	e	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	1	39	17	g	D	D	D	D	D	D	D	14 203
33632	Motor vehicle electrical & electronic equipment mfg	—	5	3	320	10 494	213	450	5 782	27 068	14 616	41 852	D
336322	Other motor vehicle electrical & electronic equipment mfg	—	4	3	e	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg	—	7	4	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg	—	7	4	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg	—	14	7	g	D	D	D	D	D	D	D	4 989
336399	All other motor vehicle parts mfg	—	14	7	g	D	D	D	D	D	D	D	4 989
3364	Aerospace product & parts mfg	—	21	6	2 261	98 939	1 771	3 427	81 261	245 720	95 864	336 397	13 124
33641	Aerospace product & parts mfg	—	21	6	2 261	98 939	1 771	3 427	81 261	245 720	95 864	336 397	13 124
336413	Other aircraft part & auxiliary equipment mfg	—	17	5	2 214	96 679	1 749	3 377	80 361	244 370	93 294	331 604	13 029
3365	Railroad rolling stock mfg ..	—	1	1	g	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg	—	1	1	g	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg	—	1	1	g	D	D	D	D	D	D	D	D
3366	Ship & boat building	1	23	11	1 606	70 405	1 384	3 243	58 039	139 613	69 131	207 303	2 130
33661	Ship & boat building	1	23	11	1 606	70 405	1 384	3 243	58 039	139 613	69 131	207 303	2 130
336611	Ship building & repairing	1	14	9	1 514	68 478	1 302	3 135	56 605	134 668	65 843	200 511	2 046
3369	Other transportation equipment mfg	—	16	7	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg	—	16	7	f	D	D	D	D	D	D	D	D
336999	All other transportation equipment mfg	—	10	4	e	D	D	D	D	D	D	D	D
337	Furniture & related product mfg	1	217	43	3 752	98 335	2 841	5 509	65 988	197 788	164 695	364 923	7 304
3371	Household & institutional furniture & kitchen cabinet mfg	1	161	28	2 570	59 999	2 106	4 115	43 989	112 878	105 424	221 649	D
33711	Wood kitchen cabinet & counter top mfg	1	97	12	1 378	34 121	1 055	2 023	23 949	61 592	54 715	119 497	1 805
337110	Wood kitchen cabinet & counter top mfg ...	1	97	12	1 378	34 121	1 055	2 023	23 949	61 592	54 715	119 497	1 805
33712	Household & institutional furniture mfg	2	64	16	1 192	25 878	1 051	2 092	20 040	51 286	50 709	102 152	D
337121	Upholstered household furniture mfg	2	21	5	610	13 458	552	1 139	10 727	26 835	25 951	52 796	D
337122	Nonupholstered wood household furniture mfg	2	29	5	380	8 055	339	670	6 328	16 372	18 469	34 886	490
3372	Office furniture (including fixtures) mfg	2	44	11	f	D	D	D	D	D	D	D	3 377
33721	Office furniture (including fixtures) mfg	2	44	11	f	D	D	D	D	D	D	D	3 377
337215	Showcase, partition, shelving, & locker mfg	3	26	8	628	23 207	360	685	12 945	41 888	29 557	70 768	2 105
3379	Other furniture related product mfg	—	12	4	e	D	D	D	D	D	D	D	D

Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by *, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	PORTLAND-SALEM, OR-WA CMSA—Con.												
	Portland-Vancouver, OR-WA PMSA—Con.												
	Manufacturing—Con.												
339	Miscellaneous mfg	1	339	52	6 103	178 955	4 134	7 809	87 806	400 634	283 469	676 359	23 507
3391	Medical equipment & supplies mfg	2	134	20	2 441	81 754	1 668	3 466	39 729	191 536	99 229	288 832	13 125
33911	Medical equipment & supplies mfg	2	134	20	2 441	81 754	1 668	3 466	39 729	191 536	99 229	288 832	13 125
339114	Dental equipment & supplies mfg	—	26	8	1 277	49 673	875	1 639	22 669	108 143	57 532	163 216	9 974
339116	Dental laboratories	4	73	3	385	10 078	291	504	6 687	22 096	7 585	29 905	D
3399	Other miscellaneous mfg	1	205	32	3 662	97 201	2 466	4 343	48 077	209 098	184 240	387 527	10 382
33992	Sporting & athletic goods mfg	1	47	9	830	23 041	594	1 088	12 357	67 574	50 218	113 030	3 593
339920	Sporting & athletic goods mfg	1	47	9	830	23 041	594	1 088	12 357	67 574	50 218	113 030	3 593
33993	Doll, toy, & game mfg	—	12	3	614	11 593	471	532	6 290	14 749	42 416	57 816	D
339932	Game, toy, & children's vehicle mfg	—	9	2	f	D	D	D	D	D	D	D	D
33995	Sign mfg	2	62	6	809	25 305	476	963	11 578	50 956	33 474	83 957	D
339950	Sign mfg	2	62	6	809	25 305	476	963	11 578	50 956	33 474	83 957	D
33999	All other miscellaneous mfg	1	52	12	1 221	31 613	806	1 563	15 620	64 380	43 083	106 610	D
339994	Broom, brush, & mop mfg	—	3	2	e	D	D	D	D	D	D	D	D
339999	All other miscellaneous mfg	4	36	6	385	9 401	259	423	4 752	22 210	15 841	37 865	D
	Salem, OR PMSA												
31-33	Manufacturing	1	465	145	15 009	417 779	11 810	22 943	268 780	1 089 460	1 510 777	2 590 171	113 221
311	Food mfg	1	43	24	3 732	91 378	3 051	5 813	64 216	245 624	536 686	782 079	17 074
3114	Fruit & vegetable preserving & specialty food mfg	2	14	13	2 813	70 644	2 375	4 746	51 692	194 692	435 974	630 963	11 341
31141	Frozen food mfg	—	9	9	2 276	53 263	1 924	3 847	40 181	142 064	370 713	516 058	9 041
311411	Frozen fruit, juice, & vegetable mfg	—	9	9	2 276	53 263	1 924	3 847	40 181	142 064	370 713	516 058	9 041
31142	Fruit & vegetable canning, pickling, & drying	8	5	4	537	17 381	451	899	11 511	52 628	65 261	114 905	2 300
311421	Fruit & vegetable canning	8	4	4	f	D	D	D	D	D	D	D	D
315	Apparel mfg	—	9	4	e	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg	—	7	4	e	D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors	—	3	2	e	D	D	D	D	D	D	D	D
321	Wood product mfg	—	49	26	2 971	81 684	2 519	5 226	59 461	174 311	385 765	558 233	12 408
3211	Sawmills & wood preservation	—	7	3	377	10 675	343	792	9 101	25 689	70 722	95 391	D
32111	Sawmills & wood preservation	—	7	3	377	10 675	343	792	9 101	25 689	70 722	95 391	D
321113	Sawmills	—	6	3	e	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg	—	9	8	511	15 493	427	962	12 092	30 763	145 171	173 534	5 651
32121	Veneer, plywood, & engineered wood product mfg	—	9	8	511	15 493	427	962	12 092	30 763	145 171	173 534	5 651
3219	Other wood product mfg	—	33	15	2 083	55 516	1 749	3 472	38 268	117 859	169 872	289 308	D
32191	Millwork	1	12	5	443	11 032	365	827	8 163	22 171	50 690	74 465	1 637
321911	Wood window & door mfg	1	3	3	275	6 994	222	569	5 238	14 537	12 359	26 995	750
32199	All other wood product mfg	—	12	8	1 556	42 870	1 314	2 508	28 941	93 169	117 124	210 250	2 482
321991	Manufactured home (mobile home) mfg	—	6	6	1 447	39 832	1 235	2 327	26 613	85 914	109 804	195 753	2 084
323	Printing & related support activities	2	35	4	408	11 580	309	633	7 715	31 716	15 546	47 867	D
3231	Printing & related support activities	2	35	4	408	11 580	309	633	7 715	31 716	15 546	47 867	D
32311	Printing	2	32	4	402	11 464	303	626	7 626	31 497	15 496	47 597	D
323110	Commercial lithographic printing	3	19	3	265	7 468	197	425	5 126	20 368	9 136	29 996	D
325	Chemical mfg	1	12	7	307	13 703	183	392	4 532	48 202	53 069	100 837	D

Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by *, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	PORTLAND-SALEM, OR-WA CMSA—Con.												
	Salem, OR PMSA—Con.												
31-33	Manufacturing—Con.												
326	Plastics & rubber products mfg	3	25	4	462	11 058	389	760	8 118	27 693	28 649	56 382	D
3261	Plastics product mfg	2	21	4	429	9 999	365	714	7 631	24 454	26 271	50 774	D
32619	Other plastics product mfg	2	14	3	381	8 813	327	648	6 773	19 543	22 096	41 645	D
326199	All other plastics product mfg	1	11	1	e	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	—	74	27	1 859	52 547	1 418	2 646	32 225	149 640	164 457	306 480	9 926
3323	Architectural & structural metals mfg	—	28	17	1 066	30 054	782	1 544	18 563	85 622	116 691	198 151	5 641
33231	Plate work & fabricated structural product mfg ..	—	10	6	441	14 130	275	568	7 671	43 483	48 239	90 078	2 152
332312	Fabricated structural metal mfg	—	7	3	335	10 219	201	416	5 408	35 070	34 245	67 494	D
33232	Ornamental & architectural metal products mfg	—	18	11	625	15 924	507	976	10 892	42 139	68 452	108 073	3 489
332322	Sheet metal work mfg ..	—	10	6	408	10 952	334	613	7 620	32 374	42 715	73 726	2 828
3327	Machine shops, turned product, & screw, nut, & bolt mfg	3	28	6	e	D	D	D	D	D	D	D	D
33271	Machine shops	1	25	4	315	9 755	243	463	7 305	17 348	7 718	25 254	1 811
332710	Machine shops	1	25	4	315	9 755	243	463	7 305	17 348	7 718	25 254	1 811
333	Machinery mfg	2	46	14	888	27 118	608	1 193	16 956	49 509	55 242	104 759	4 097
3331	Agriculture, construction, & mining machinery mfg	1	14	5	328	9 724	234	473	6 498	12 446	19 932	32 862	1 209
3332	Industrial machinery mfg ..	3	10	5	370	12 295	245	468	7 319	26 188	20 101	46 056	2 332
334	Computer & electronic product mfg	—	16	6	2 027	67 924	1 528	3 011	35 140	207 811	97 017	304 881	D
3344	Semiconductor & other electronic component mfg	—	10	4	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	—	10	4	g	D	D	D	D	D	D	D	D
334412	Bare printed circuit board mfg	—	2	1	f	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg ...	—	5	2	g	D	D	D	D	D	D	D	D
337	Furniture & related product mfg	6	37	1	281	5 406	220	359	4 029	9 802	9 092	18 912	D
339	Miscellaneous mfg	1	41	5	519	13 056	375	692	7 715	26 548	16 937	43 290	4 194
3399	Other miscellaneous mfg ..	1	26	3	386	9 552	284	520	5 724	19 900	12 991	32 559	3 570
33992	Sporting & athletic goods mfg	—	5	1	276	6 919	211	388	4 292	13 940	9 434	23 002	D
339920	Sporting & athletic goods mfg	—	5	1	276	6 919	211	388	4 292	13 940	9 434	23 002	D

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.

²Industries with 250 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 250 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c—100 to 249 employees; e—250 to 499 employees; f—500 to 999 employees; g—1,000 to 2,499 employees, h—2,500 to 4,999 employees; i—5,000 to 9,999 employees; j—10,000 to 24,999 employees; k—25,000 to 49,999 employees; l—50,000 to 99,999 employees; m—100,000 employees or more.

Table 3. Industry Statistics for Counties: 1997

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
BENTON COUNTY, OR													
31-33	Manufacturing	-	106	30	8 547	494 513	6 417	16 572	359 546	736 220	671 989	1 391 885	122 316
321	Wood product mfg	-	10	9	g	D	D	D	D	D	D	D	D
3219	Other wood product mfg . . .	-	3	3	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg	-	15	3	i	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg	-	3	1	i	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	-	3	1	i	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	2	1	i	D	D	D	D	D	D	D	D
CLACKAMAS COUNTY, OR													
31-33	Manufacturing	-	589	150	18 655	632 164	12 495	24 579	333 555	1 723 547	1 968 018	3 667 422	147 613
311	Food mfg	-	31	9	825	22 906	690	1 256	17 987	76 610	147 442	224 309	D
321	Wood product mfg	-	40	13	1 344	35 323	1 166	2 248	26 564	80 924	191 804	273 076	D
3211	Sawmills & wood preservation	-	11	5	717	17 969	654	1 264	15 153	46 559	156 213	203 162	D
32111	Sawmills & wood preservation	-	11	5	717	17 969	654	1 264	15 153	46 559	156 213	203 162	D
321113	Sawmills	-	11	5	717	17 969	654	1 264	15 153	46 559	156 213	203 162	D
322	Paper mfg	-	10	4	843	31 579	674	1 326	22 445	76 066	142 059	214 403	13 367
331	Primary metal mfg	-	10	7	g	D	D	D	D	D	D	D	D
3315	Foundries	-	8	6	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries	-	3	3	f	D	D	D	D	D	D	D	D
331512	Steel investment foundries	-	2	2	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries	-	5	3	814	22 898	608	1 123	15 573	76 064	24 009	101 940	D
331528	Other nonferrous foundries (except die-casting)	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	-	154	38	3 804	125 762	2 782	5 518	76 268	324 648	213 170	538 190	22 299
3322	Cutlery & handtool mfg	-	7	3	g	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg	-	7	3	g	D	D	D	D	D	D	D	D
332213	Saw blade & handsaw mfg	-	5	2	g	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg	-	34	10	858	26 945	601	1 260	16 185	56 576	47 336	104 007	D
33232	Ornamental & architectural metal products mfg	-	23	6	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg	1	56	5	532	16 837	405	715	11 362	31 459	13 728	45 168	D
333	Machinery mfg	1	60	19	2 285	84 955	1 497	3 332	47 481	143 220	179 531	324 388	7 362
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	-	5	2	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg	-	5	2	f	D	D	D	D	D	D	D	D
333412	Industrial & commercial fan & blower mfg	-	1	1	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg	1	17	10	794	34 375	485	1 035	16 527	74 725	67 785	143 495	2 692
33399	All other general-purpose machinery mfg	2	12	6	568	25 142	366	786	12 953	51 128	42 245	96 973	D
334	Computer & electronic product mfg	-	30	13	h	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg	-	4	2	g	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	-	4	2	g	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	4	2	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	1	14	7	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	1	14	7	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg	1	29	9	1 241	39 925	868	1 572	20 792	108 943	89 900	200 189	D
3363	Motor vehicle parts mfg	-	11	5	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	CLACKAMAS COUNTY, OR—Con.												
339	Manufacturing—Con. Miscellaneous mfg.....	2	54	8	f	D	D	D	D	D	D	D	D
31-33	CLATSOP COUNTY, OR												
	Manufacturing	2	49	12	858	21 181	707	1 234	14 531	50 910	91 992	142 407	2 765
31-33	COLUMBIA COUNTY, OR												
	Manufacturing	—	57	18	3 079	128 360	2 563	5 135	98 571	523 317	468 866	1 008 528	53 393
321	Wood product mfg.....	—	9	6	f	D	D	D	D	D	D	D	3 150
322	Paper mfg.....	—	3	2	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills.....	—	2	2	g	D	D	D	D	D	D	D	D
32212	Paper mills.....	—	2	2	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills.....	—	2	2	g	D	D	D	D	D	D	D	D
31-33	COOS COUNTY, OR												
	Manufacturing	1	104	17	1 937	57 607	1 627	3 157	44 759	114 109	277 307	391 192	10 155
321	Wood product mfg.....	—	29	7	897	27 623	785	1 577	22 846	66 264	183 954	249 733	D
31-33	CROOK COUNTY, OR												
	Manufacturing	2	21	8	1 506	39 416	1 324	2 578	31 175	76 056	145 550	225 283	6 485
321	Wood product mfg.....	2	8	7	g	D	D	D	D	D	D	D	6 095
3219	Other wood product mfg....	—	5	4	g	D	D	D	D	D	D	D	D
32191	Millwork.....	—	4	4	g	D	D	D	D	D	D	D	D
31-33	CURRY COUNTY, OR												
	Manufacturing	1	32	4	727	26 201	618	1 326	21 141	39 932	79 832	116 178	D
321	Wood product mfg.....	—	7	3	f	D	D	D	D	D	D	D	D
31-33	DESCHUTES COUNTY, OR												
	Manufacturing	1	202	43	4 884	129 526	3 868	7 378	84 063	328 630	375 108	698 602	18 103
321	Wood product mfg.....	1	28	15	1 985	50 560	1 676	3 385	38 103	119 465	195 330	312 417	6 117
3219	Other wood product mfg....	1	22	11	1 538	38 326	1 310	2 624	28 908	93 127	150 916	241 991	5 167
32191	Millwork.....	1	16	9	g	D	D	D	D	D	D	D	4 592
321911	Wood window & door mfg.....	—	8	4	838	20 465	726	1 456	15 657	58 797	79 529	134 100	1 857
336	Transportation equipment mfg.....	1	12	4	611	12 783	519	1 116	8 860	39 426	71 887	109 201	D
339	Miscellaneous mfg.....	2	32	4	560	15 400	371	660	7 064	27 236	27 486	55 150	1 285
31-33	DOUGLAS COUNTY, OR												
	Manufacturing	—	157	51	7 141	226 417	6 043	11 899	177 947	533 864	944 784	1 494 702	50 376
321	Wood product mfg.....	—	43	26	4 660	149 245	4 227	8 386	127 788	366 782	652 984	1 022 272	40 508
3211	Sawmills & wood preservation.....	—	19	13	2 045	66 065	1 831	3 336	54 547	130 448	373 098	497 452	27 527
32111	Sawmills & wood preservation.....	—	19	13	2 045	66 065	1 831	3 336	54 547	130 448	373 098	497 452	27 527
321113	Sawmills.....	—	19	13	2 045	66 065	1 831	3 336	54 547	130 448	373 098	497 452	27 527
3212	Veneer, plywood, & engineered wood product mfg.....	—	11	10	2 362	77 945	2 182	4 627	69 234	227 361	259 739	495 741	11 464
32121	Veneer, plywood, & engineered wood product mfg.....	—	11	10	2 362	77 945	2 182	4 627	69 234	227 361	259 739	495 741	11 464
321212	Softwood veneer & plywood mfg.....	—	5	5	g	D	D	D	D	D	D	D	D
31-33	HOOD RIVER COUNTY, OR												
	Manufacturing	2	58	15	1 128	27 164	886	1 597	18 611	67 747	88 882	157 457	3 406

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
JACKSON COUNTY, OR													
31-33	Manufacturing	1	301	70	7 428	201 656	5 740	11 493	141 146	512 491	913 317	1 424 011	68 709
321	Wood product mfg	-	48	25	3 077	91 701	2 705	5 721	77 622	203 051	610 939	808 914	11 360
3212	Veneer, plywood, & engineered wood product mfg	-	16	12	1 848	60 107	1 665	3 589	51 869	152 374	429 087	577 877	8 743
32121	Veneer, plywood, & engineered wood product mfg	-	16	12	1 848	60 107	1 665	3 589	51 869	152 374	429 087	577 877	8 743
321212	Softwood veneer & plywood mfg	-	8	7	1 113	36 067	1 051	2 329	33 243	70 072	234 395	300 520	4 512
3219	Other wood product mfg ...	-	26	8	904	20 430	765	1 528	16 956	29 871	85 501	113 151	748
32191	Millwork	-	11	5	739	17 444	629	1 330	14 940	23 518	77 501	98 808	399
323	Printing & related support activities	5	36	5	589	14 691	436	753	9 454	27 592	19 790	47 296	3 955
3231	Printing & related support activities	5	36	5	589	14 691	436	753	9 454	27 592	19 790	47 296	3 955
32311	Printing	5	34	5	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg	2	9	7	925	25 858	565	1 302	12 803	59 291	38 233	97 493	7 405
3344	Semiconductor & other electronic component mfg	-	3	3	571	9 771	413	962	8 437	22 122	14 398	36 242	D
33441	Semiconductor & other electronic component mfg	-	3	3	571	9 771	413	962	8 437	22 122	14 398	36 242	D
JEFFERSON COUNTY, OR													
31-33	Manufacturing	-	21	8	1 793	52 203	1 530	3 383	41 401	77 215	269 868	351 261	8 621
321	Wood product mfg	-	6	2	g	D	D	D	D	D	D	D	D
3219	Other wood product mfg ...	-	4	1	g	D	D	D	D	D	D	D	D
32191	Millwork	-	2	1	g	D	D	D	D	D	D	D	D
321912	Cut stock, resawing lumber, & planing	-	1	1	g	D	D	D	D	D	D	D	D
JOSEPHINE COUNTY, OR													
31-33	Manufacturing	-	117	29	2 812	76 804	2 163	4 439	51 990	192 104	238 069	439 641	5 963
321	Wood product mfg	-	20	8	1 063	29 012	948	2 070	24 704	59 399	140 457	199 566	1 494
334	Computer & electronic product mfg	-	9	5	598	20 037	376	872	9 600	73 711	40 058	120 966	D
KLAMATH COUNTY, OR													
31-33	Manufacturing	1	72	26	3 013	86 079	2 500	4 787	60 690	218 312	346 449	562 564	11 703
321	Wood product mfg	1	16	12	1 930	64 026	1 694	3 367	45 727	160 523	267 023	425 514	9 337
3212	Veneer, plywood, & engineered wood product mfg	-	7	7	g	D	D	D	D	D	D	D	D
32121	Veneer, plywood, & engineered wood product mfg	-	7	7	g	D	D	D	D	D	D	D	D
3219	Other wood product mfg ...	-	6	3	f	D	D	D	D	D	D	D	D
32191	Millwork	-	5	3	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
LANE COUNTY, OR													
31-33	Manufacturing	1	624	172	19 262	589 761	14 171	27 327	383 133	1 674 933	2 225 216	3 881 838	758 149
311	Food mfg	2	55	15	1 872	41 345	1 296	2 212	25 611	165 440	155 095	319 794	7 964
3118	Bakeries & tortilla mfg	-	15	4	605	15 626	320	465	7 116	56 547	29 055	85 620	1 013
31181	Bread & bakery product mfg	-	11	4	590	15 240	309	432	6 863	53 625	27 285	80 924	957
311812	Commercial bakeries	-	6	4	f	D	D	D	D	D	D	D	D
321	Wood product mfg	2	80	46	5 765	179 667	4 946	10 740	141 114	487 065	1 068 926	1 540 448	74 339
3211	Sawmills & wood preservation	-	19	14	1 765	64 132	1 485	3 204	48 159	180 940	455 320	626 717	46 057
32111	Sawmills & wood preservation	-	19	14	1 765	64 132	1 485	3 204	48 159	180 940	455 320	626 717	46 057
321113	Sawmills	-	17	12	g	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg	3	23	22	3 427	101 601	3 010	6 611	83 144	278 115	572 908	845 145	26 761
32121	Veneer, plywood, & engineered wood product mfg	3	23	22	3 427	101 601	3 010	6 611	83 144	278 115	572 908	845 145	26 761
321211	Hardwood veneer & plywood mfg	5	5	5	896	26 493	771	1 686	20 098	50 549	118 049	164 192	4 396
321212	Softwood veneer & plywood mfg	6	8	7	1 430	37 425	1 251	2 711	31 786	93 923	207 000	301 556	6 826
321213	Engineered wood member (except truss) mfg	-	6	6	804	25 877	746	1 686	22 565	114 200	208 852	320 859	D
3219	Other wood product mfg	3	38	10	573	13 934	451	925	9 811	28 010	40 698	68 586	1 521
322	Paper mfg	-	5	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
322130	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities	-	52	8	696	19 710	465	760	10 333	37 891	20 750	58 436	D
3231	Printing & related support activities	-	52	8	696	19 710	465	760	10 333	37 891	20 750	58 436	D
32311	Printing	-	49	8	690	19 559	460	753	10 223	37 593	20 680	58 068	D
325	Chemical mfg	-	19	9	667	25 450	355	657	12 658	112 929	137 091	249 024	D
332	Fabricated metal product mfg	2	90	20	1 301	41 370	933	1 805	25 214	79 380	84 855	164 044	12 073
333	Machinery mfg	1	49	18	1 511	50 993	961	1 922	26 175	98 785	89 130	185 313	6 763
334	Computer & electronic product mfg	2	17	8	1 610	64 573	1 079	1 159	36 229	110 947	78 317	191 973	D
3341	Computer & peripheral equipment mfg	-	2	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	-	2	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	1	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	2	4	2	637	31 142	554	209	25 926	4 408	5 472	12 290	D
33441	Semiconductor & other electronic component mfg	2	4	2	637	31 142	554	209	25 926	4 408	5 472	12 290	D
336	Transportation equipment mfg	-	32	12	2 119	53 111	1 585	3 072	36 916	272 538	253 436	527 911	4 723
3362	Motor vehicle body & trailer mfg	1	12	8	g	D	D	D	D	D	D	D	2 809
33621	Motor vehicle body & trailer mfg	1	12	8	g	D	D	D	D	D	D	D	2 809
336213	Motor home mfg	-	2	2	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg	1	50	12	1 099	29 101	845	1 796	17 149	57 064	54 905	112 623	D
3371	Household & institutional furniture & kitchen cabinet mfg	1	39	7	793	20 111	639	1 461	12 713	37 322	42 791	80 920	D
33712	Household & institutional furniture mfg	1	18	3	527	12 382	427	1 029	8 329	23 541	32 309	56 658	D
337122	Nonupholstered wood household furniture mfg	1	14	3	518	12 259	419	1 017	8 228	23 312	32 028	56 162	D
339	Miscellaneous mfg	6	74	6	748	15 616	344	582	6 854	29 205	24 166	51 983	D
3399	Other miscellaneous mfg	6	46	5	633	13 105	267	459	5 519	23 443	21 009	43 166	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
LINCOLN COUNTY, OR													
31-33	Manufacturing	-	59	6	1 060	34 407	843	1 460	17 834	72 985	181 688	255 211	12 469
322	Paper mfg	-	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
322130	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
LINN COUNTY, OR													
31-33	Manufacturing	-	184	72	9 794	347 805	7 366	15 445	235 499	933 718	1 005 905	1 918 832	53 756
311	Food mfg	-	10	3	953	21 371	773	1 532	12 812	63 398	43 645	107 398	3 721
3114	Fruit & vegetable preserving & specialty food mfg	-	2	2	f	D	D	D	D	D	D	D	D
321	Wood product mfg	-	36	22	2 339	75 456	1 953	4 419	55 716	175 628	345 532	523 584	18 593
3211	Sawmills & wood preservation	-	10	5	535	17 578	477	1 104	14 294	31 723	108 374	141 375	710
32111	Sawmills & wood preservation	-	10	5	535	17 578	477	1 104	14 294	31 723	108 374	141 375	710
321113	Sawmills	-	10	5	535	17 578	477	1 104	14 294	31 723	108 374	141 375	710
3212	Veneer, plywood, & engineered wood product mfg	-	16	13	1 348	44 756	1 072	2 489	32 225	107 876	198 492	305 070	17 524
32121	Veneer, plywood, & engineered wood product mfg	-	16	13	1 348	44 756	1 072	2 489	32 225	107 876	198 492	305 070	17 524
321212	Softwood veneer & plywood mfg	-	6	5	f	D	D	D	D	D	D	D	9 953
321219	Reconstituted wood product mfg	-	6	6	593	21 625	484	1 128	16 257	64 461	78 927	143 811	7 478
322	Paper mfg	-	2	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills	-	2	2	f	D	D	D	D	D	D	D	D
32212	Paper mills	-	1	1	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills	-	1	1	f	D	D	D	D	D	D	D	D
331	Primary metal mfg	-	11	7	2 652	120 314	1 699	3 747	78 285	315 767	249 604	537 097	D
3314	Nonferrous metal (except aluminum) production & processing	-	3	3	g	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	-	3	3	g	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding	-	3	3	g	D	D	D	D	D	D	D	D
3315	Foundries	-	7	4	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries	-	7	4	f	D	D	D	D	D	D	D	D
331522	Nonferrous (except aluminum) die-casting foundries	-	4	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	1	38	10	544	17 650	441	823	12 366	30 983	18 732	49 616	1 815
336	Transportation equipment mfg	-	10	3	f	D	D	D	D	D	D	D	827
3362	Motor vehicle body & trailer mfg	-	3	1	f	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg	-	3	1	f	D	D	D	D	D	D	D	D
336213	Motor home mfg	-	1	1	f	D	D	D	D	D	D	D	D
MALHEUR COUNTY, OR													
31-33	Manufacturing	-	28	4	g	D	D	D	D	D	D	D	D
311	Food mfg	-	6	3	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg	-	2	2	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg	-	1	1	f	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg	-	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
MARION COUNTY, OR													
31-33	Manufacturing	1	402	124	12 651	354 386	9 815	18 747	219 154	942 572	1 297 919	2 232 772	D
311	Food mfg	1	41	22	h	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg	2	12	11	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg	—	8	8	g	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg	—	8	8	g	D	D	D	D	D	D	D	D
321	Wood product mfg	—	39	19	2 409	64 945	2 019	4 098	45 326	136 796	265 034	400 898	D
3219	Other wood product mfg	—	28	13	g	D	D	D	D	D	D	D	D
32199	All other wood product mfg	—	10	7	g	D	D	D	D	D	D	D	D
321991	Manufactured home (mobile home) mfg	—	6	6	1 447	39 832	1 235	2 327	26 613	85 914	109 804	195 753	2 084
332	Fabricated metal product mfg	—	62	25	1 677	47 097	1 267	2 327	27 811	141 855	153 255	287 450	D
3323	Architectural & structural metals mfg	—	23	16	g	D	D	D	D	D	D	D	D
33232	Ornamental & architectural metal products mfg	—	17	11	f	D	D	D	D	D	D	D	3 489
333	Machinery mfg	3	40	10	597	17 756	411	800	11 141	34 187	37 899	72 138	D
334	Computer & electronic product mfg	—	14	5	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	—	8	3	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	—	8	3	g	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg	—	5	2	g	D	D	D	D	D	D	D	D
339	Miscellaneous mfg	1	36	5	514	12 920	370	684	7 636	26 232	16 653	42 692	D
MORROW COUNTY, OR													
31-33	Manufacturing	—	10	4	741	20 875	662	1 423	17 207	85 340	100 527	183 396	4 666
311	Food mfg	—	3	2	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg	—	3	2	f	D	D	D	D	D	D	D	D
MULTNOMAH COUNTY, OR													
31-33	Manufacturing	—	1 309	399	47 763	1 600 386	35 901	71 781	1 085 297	4 195 494	4 565 939	8 715 415	323 031
311	Food mfg	—	92	48	4 565	138 942	2 977	5 665	78 506	533 297	596 381	1 125 794	40 095
3114	Fruit & vegetable preserving & specialty food mfg	—	7	6	727	19 716	536	1 083	9 069	78 897	53 653	132 877	2 844
3115	Dairy product mfg	—	6	6	571	19 325	324	656	10 324	77 873	127 264	204 157	12 955
31151	Dairy product (except frozen) mfg	—	6	6	571	19 325	324	656	10 324	77 873	127 264	204 157	12 955
311511	Fluid milk mfg	—	5	5	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg	—	39	18	2 058	64 388	1 303	2 428	39 495	147 683	122 584	270 331	12 822
31181	Bread & bakery product mfg	—	33	16	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries	—	24	14	1 450	41 355	757	1 405	18 928	98 451	55 749	154 241	9 273
31182	Cookie, cracker, & pasta mfg	—	5	2	f	D	D	D	D	D	D	D	D
3119	Other food mfg	2	13	7	580	16 987	340	597	7 407	157 034	99 750	254 322	9 480
312	Beverage & tobacco product mfg	—	13	6	g	D	D	D	D	D	D	D	D
3121	Beverage mfg	—	13	6	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg	—	4	3	f	D	D	D	D	D	D	D	D
31212	Breweries	—	7	3	f	D	D	D	D	D	D	D	D
312120	Breweries	—	7	3	f	D	D	D	D	D	D	D	D
314	Textile product mills	3	29	7	f	D	D	D	D	D	D	D	D
315	Apparel mfg	1	27	10	g	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg	1	18	8	f	D	D	D	D	D	D	D	D
321	Wood product mfg	1	49	13	f	D	D	D	D	D	D	D	D
3219	Other wood product mfg	1	38	10	625	13 492	514	953	9 387	25 891	32 330	58 395	D

Table 3. Industry Statistics for Counties: 1997—Con.

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	MULTNOMAH COUNTY, OR—Con.												
	Manufacturing—Con.												
322	Paper mfg	—	19	16	1 433	53 974	1 097	2 249	35 171	138 091	189 479	329 324	9 623
3222	Converted paper product mfg	—	19	16	1 433	53 974	1 097	2 249	35 171	138 091	189 479	329 324	9 623
32221	Paperboard container mfg	—	8	7	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg	—	5	5	617	24 549	488	1 085	16 784	71 696	101 803	176 148	5 905
323	Printing & related support activities	1	238	48	4 228	145 205	3 186	6 275	97 006	310 623	229 498	538 438	19 396
3231	Printing & related support activities	1	238	48	4 228	145 205	3 186	6 275	97 006	310 623	229 498	538 438	19 396
32311	Printing	1	194	36	3 425	115 404	2 553	5 004	75 701	256 808	216 083	470 553	15 738
323110	Commercial lithographic printing	—	95	17	1 999	77 471	1 457	2 876	50 806	170 671	162 045	330 907	9 874
32312	Support activities for printing	—	44	12	803	29 801	633	1 271	21 305	53 815	13 415	67 885	3 658
325	Chemical mfg	2	51	15	1 166	43 740	664	1 239	19 746	160 227	152 650	313 117	14 678
326	Plastics & rubber products mfg	1	51	19	1 591	45 185	1 244	2 519	28 263	105 433	100 696	204 650	D
3261	Plastics product mfg	2	36	11	912	24 680	686	1 389	14 406	57 995	51 153	108 072	D
3262	Rubber product mfg	—	15	8	679	20 505	558	1 130	13 857	47 438	49 543	96 578	D
327	Nonmetallic mineral product mfg	1	45	16	1 371	49 080	1 089	2 281	35 299	130 307	87 858	218 398	D
3273	Cement & concrete product mfg	1	14	6	651	25 650	505	1 164	17 784	66 414	54 069	119 622	D
331	Primary metal mfg	—	22	14	4 303	152 426	3 424	7 209	107 028	305 442	477 462	757 733	D
3311	Iron & steel mills & ferroalloy mfg	—	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg	—	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills	—	1	1	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing	—	7	6	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing	—	7	6	f	D	D	D	D	D	D	D	D
3315	Foundries	—	13	6	2 689	82 675	2 256	4 761	63 460	232 541	140 277	371 670	D
33151	Ferrous metal foundries	—	6	4	h	D	D	D	D	D	D	D	D
331512	Steel investment foundries	—	1	1	g	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment)	—	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	1	227	79	5 675	186 473	4 428	9 007	128 048	446 334	346 154	787 293	26 935
3322	Cutlery & handtool mfg	—	9	4	f	D	D	D	D	D	D	D	5 637
33221	Cutlery & handtool mfg	—	9	4	f	D	D	D	D	D	D	D	5 637
332212	Hand & edge tool mfg	—	7	3	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg	1	46	18	1 367	45 618	1 002	2 064	28 928	110 076	102 247	212 609	3 443
33232	Ornamental & architectural metal products mfg	—	28	12	1 042	31 748	767	1 519	20 401	74 043	72 057	146 606	2 074
332321	Metal window & door mfg	—	4	3	628	18 063	480	939	11 361	47 113	58 995	106 911	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg	1	78	20	1 253	43 920	1 004	1 954	31 062	90 002	45 401	134 746	D
33271	Machine shops	1	72	18	1 113	39 353	891	1 762	28 279	80 611	39 445	119 324	6 444
332710	Machine shops	1	72	18	1 113	39 353	891	1 762	28 279	80 611	39 445	119 324	6 444
3328	Coating, engraving, heat treating, & allied activities	4	34	14	698	20 071	570	1 110	14 191	46 209	19 017	65 195	4 052
33281	Coating, engraving, heat treating, & allied activities	4	34	14	698	20 071	570	1 110	14 191	46 209	19 017	65 195	4 052
3329	Other fabricated metal product mfg	1	27	9	663	23 895	528	1 074	16 312	50 459	34 474	86 131	3 820
33299	All other fabricated metal product mfg	1	26	8	f	D	D	D	D	D	D	D	D
333	Machinery mfg	1	83	26	3 212	121 449	2 139	4 387	68 906	290 667	251 597	547 155	17 146
3331	Agriculture, construction, & mining machinery mfg	—	6	4	745	29 726	521	1 119	17 836	64 111	96 305	159 502	D
33313	Mining & oil & gas field machinery mfg	—	1	1	f	D	D	D	D	D	D	D	D
333131	Mining machinery & equipment mfg	—	1	1	f	D	D	D	D	D	D	D	D
3332	Industrial machinery mfg	1	24	10	574	19 102	367	791	10 889	33 989	34 620	67 709	1 106
3339	Other general-purpose machinery mfg	—	18	4	928	39 246	531	1 073	18 052	108 474	72 820	186 672	D

Table 3. Industry Statistics for Counties: 1997—Con.

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NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
MULTNOMAH COUNTY, OR—Con.														
31-33	Manufacturing—Con.													
334	Computer & electronic product mfg.....	-	40	8	h	D	D	D	D	D	D	D	D	
3344	Semiconductor & other electronic component mfg.....	-	14	5	h	D	D	D	D	D	D	D	D	
33441	Semiconductor & other electronic component mfg.....	-	14	5	h	D	D	D	D	D	D	D	D	
334413	Semiconductor & related device mfg...	-	5	3	h	D	D	D	D	D	D	D	D	
334419	Other electronic component mfg.....	-	5	1	f	D	D	D	D	D	D	D	D	
336	Transportation equipment mfg.....	-	52	25		8 124	320 191	6 974	13 851	269 080	911 494	1 211 548	2 116 794	27 713
3361	Motor vehicle mfg.....	-	3	1	g	D	D	D	D	D	D	D	D	
33612	Heavy duty truck mfg...	-	2	1	g	D	D	D	D	D	D	D	D	
336120	Heavy duty truck mfg..	-	2	1	g	D	D	D	D	D	D	D	D	
3363	Motor vehicle parts mfg...	-	17	7	g	D	D	D	D	D	D	D	5 204	
33639	Other motor vehicle parts mfg.....	-	4	3	f	D	D	D	D	D	D	D	D	
336399	All other motor vehicle parts mfg.....	-	4	3	f	D	D	D	D	D	D	D	D	
3364	Aerospace product & parts mfg.....	-	6	3	g	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg.....	-	6	3	g	D	D	D	D	D	D	D	D	
336413	Other aircraft part & auxiliary equipment mfg.....	-	4	3	g	D	D	D	D	D	D	D	D	
3365	Railroad rolling stock mfg..	-	1	1	g	D	D	D	D	D	D	D	D	
33651	Railroad rolling stock mfg.....	-	1	1	g	D	D	D	D	D	D	D	D	
336510	Railroad rolling stock mfg.....	-	1	1	g	D	D	D	D	D	D	D	D	
3366	Ship & boat building.....	1	16	8	g	D	D	D	D	D	D	D	1 931	
33661	Ship & boat building....	1	16	8	g	D	D	D	D	D	D	D	1 931	
336611	Ship building & repairing.....	1	12	7	g	D	D	D	D	D	D	D	D	
337	Furniture & related product mfg.....	2	88	20		1 406	40 677	958	1 787	25 290	79 411	60 083	138 833	D
3371	Household & institutional furniture & kitchen cabinet mfg.....	4	56	10	f	D	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg.....	1	24	7		602	20 819	344	636	11 573	36 356	23 871	59 660	D
33721	Office furniture (including fixtures) mfg.....	1	24	7		602	20 819	344	636	11 573	36 356	23 871	59 660	D
339	Miscellaneous mfg.....	3	141	16		1 901	45 797	1 309	2 389	26 085	98 887	66 701	161 219	D
3399	Other miscellaneous mfg..	3	95	12		1 436	34 275	997	1 788	18 762	72 273	53 259	121 032	D
33999	All other miscellaneous mfg.....	1	26	6		690	15 809	489	914	9 270	33 937	24 924	58 398	D
POLK COUNTY, OR														
31-33	Manufacturing....	-	63	21		2 358	63 393	1 995	4 196	49 626	146 888	212 858	357 399	D
321	Wood product mfg.....	-	10	7		562	16 739	500	1 128	14 135	37 515	120 731	157 335	D
334	Computer & electronic product mfg.....	-	2	1	f	D	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg.....	-	2	1	f	D	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg.....	-	2	1	f	D	D	D	D	D	D	D	D	D
334412	Bare printed circuit board mfg.....	-	1	1	f	D	D	D	D	D	D	D	D	D
TILLAMOOK COUNTY, OR														
31-33	Manufacturing....	-	31	10		1 227	32 536	1 052	2 103	23 946	100 214	222 280	317 821	8 204
311	Food mfg.....	-	8	4	f	D	D	D	D	D	D	D	D	3 619

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
UMATILLA COUNTY, OR													
31-33	Manufacturing	-	75	24	4 623	107 216	4 047	7 301	83 714	369 047	421 605	790 586	23 181
311	Food mfg.....	-	21	10	2 914	63 707	2 625	4 711	50 275	248 709	270 474	521 125	16 752
3114	Fruit & vegetable preserving & specialty food mfg.....	-	8	6	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg.....	-	5	5	2 294	48 305	2 110	3 761	39 601	196 080	134 388	330 730	14 571
311411	Frozen fruit, juice, & vegetable mfg.....	-	5	5	2 294	48 305	2 110	3 761	39 601	196 080	134 388	330 730	14 571
321	Wood product mfg.....	-	9	4	854	23 919	718	1 391	19 695	61 610	71 149	132 552	3 970
UNION COUNTY, OR													
31-33	Manufacturing	-	28	8	1 250	37 170	1 107	2 261	29 363	86 245	186 165	273 921	6 776
321	Wood product mfg.....	-	7	5	f	D	D	D	D	D	D	D	D
WASCO COUNTY, OR													
31-33	Manufacturing	-	26	6	751	28 117	600	1 246	20 491	103 750	283 774	374 728	4 455
331	Primary metal mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing..	-	1	1	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing.....	-	1	1	f	D	D	D	D	D	D	D	D
331312	Primary aluminum production.....	-	1	1	f	D	D	D	D	D	D	D	D
WASHINGTON COUNTY, OR													
31-33	Manufacturing	-	828	279	38 997	1 413 208	25 297	50 407	722 135	10 277 614	4 139 522	14 360 234	759 164
311	Food mfg.....	1	37	11	1 441	38 442	978	1 917	21 003	167 606	172 053	342 950	5 502
321	Wood product mfg.....	1	36	19	1 361	38 800	1 151	2 149	28 904	97 709	162 018	260 481	9 174
3219	Other wood product mfg...	2	26	12	726	18 492	609	1 056	12 674	40 614	52 840	93 518	D
322	Paper mfg.....	-	10	5	569	20 350	422	835	12 313	48 781	77 222	126 299	D
3222	Converted paper product mfg.....	-	10	5	569	20 350	422	835	12 313	48 781	77 222	126 299	D
323	Printing & related support activities.....	1	91	20	1 458	45 472	1 036	1 982	26 921	111 534	70 893	181 404	D
3231	Printing & related support activities.....	1	91	20	1 458	45 472	1 036	1 982	26 921	111 534	70 893	181 404	D
32311	Printing.....	1	84	19	1 382	42 758	982	1 872	25 175	106 842	69 877	175 697	D
325	Chemical mfg.....	5	26	9	589	23 031	293	549	8 540	90 573	39 794	130 900	D
326	Plastics & rubber products mfg.....	2	45	19	2 673	66 823	2 093	3 641	41 007	167 404	202 329	366 296	13 941
3261	Plastics product mfg.....	2	38	18	2 606	64 897	2 044	3 538	39 854	163 150	198 936	358 602	13 366
32619	Other plastics product mfg.....	2	28	15	2 296	56 945	1 803	3 090	34 665	142 553	161 098	300 208	11 272
326199	All other plastics product mfg.....	2	27	15	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg.....	1	31	9	790	26 121	562	1 150	17 691	68 882	95 128	162 304	11 374
332	Fabricated metal product mfg.....	1	142	44	3 933	128 849	2 903	5 936	80 088	254 949	209 532	453 459	27 041
3323	Architectural & structural metals mfg.....	-	38	15	1 444	47 119	1 054	1 981	28 343	84 393	106 087	183 105	2 711
33232	Ornamental & architectural metal products mfg.....	-	24	11	g	D	D	D	D	D	D	D	1 784
332322	Sheet metal work mfg.	-	19	10	873	25 855	646	1 146	15 555	53 904	43 200	96 404	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	1	63	14	924	32 293	668	1 364	20 651	58 845	20 824	78 588	6 473
33271	Machine shops.....	1	55	13	840	29 206	596	1 209	18 549	53 476	18 789	71 198	5 216
332710	Machine shops.....	1	55	13	840	29 206	596	1 209	18 549	53 476	18 789	71 198	5 216

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			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	WASHINGTON COUNTY, OR—Con. Manufacturing—Con.												
333	Machinery mfg	-	68	25	3 205	127 337	1 938	3 814	63 864	312 045	280 737	590 736	24 462
3331	Agriculture, construction, & mining machinery mfg	-	5	4	527	21 123	334	692	12 167	28 410	51 697	79 452	D
3332	Industrial machinery mfg	-	18	10	1 246	52 806	611	1 215	22 522	194 002	126 910	320 889	12 450
33329	Other industrial machinery mfg	-	16	8	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg	-	6	3	f	D	D	D	D	D	D	D	D
3333	Commercial & service industry machinery mfg	-	9	3	805	29 858	596	1 166	16 330	45 698	60 934	106 686	3 229
33331	Commercial & service industry machinery mfg	-	9	3	805	29 858	596	1 166	16 330	45 698	60 934	106 686	3 229
333314	Optical instrument & lens mfg	-	4	2	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg	-	119	60	17 940	756 349	10 378	21 509	345 935	8 646 135	2 536 539	11 137 604	629 442
3341	Computer & peripheral equipment mfg	1	20	11	h	D	D	D	D	D	D	D	36 468
33411	Computer & peripheral equipment mfg	1	20	11	h	D	D	D	D	D	D	D	36 468
334111	Electronic computer mfg	1	8	6	g	D	D	D	D	D	D	D	D
334113	Computer terminal mfg	-	3	3	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	8	2	g	D	D	D	D	D	D	D	D
3342	Communications equipment mfg	-	12	6	g	D	D	D	D	D	D	D	16 229
33421	Telephone apparatus mfg	-	6	2	f	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg	-	6	2	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	-	49	29	i	D	D	D	D	D	D	D	498 839
33441	Semiconductor & other electronic component mfg	-	49	29	i	D	D	D	D	D	D	D	498 839
334412	Bare printed circuit board mfg	-	14	4	g	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg	-	11	9	h	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) mfg	-	5	4	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg	-	28	12	i	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg	-	28	12	i	D	D	D	D	D	D	D	D
334515	Electricity measuring & testing instrument mfg	-	13	7	h	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg	2	19	9	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg	5	28	9	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg	1	51	15	1 484	35 489	1 169	2 386	25 424	76 689	66 493	145 794	D
3371	Household & institutional furniture & kitchen cabinet mfg	1	42	11	1 202	27 212	996	2 050	20 859	53 596	51 630	108 076	D
33711	Wood kitchen cabinet & counter top mfg	-	23	4	578	13 208	435	877	9 887	25 702	26 070	54 691	D
337110	Wood kitchen cabinet & counter top mfg	-	23	4	578	13 208	435	877	9 887	25 702	26 070	54 691	D
33712	Household & institutional furniture mfg	1	19	7	624	14 004	561	1 173	10 972	27 894	25 560	53 385	D
339	Miscellaneous mfg	1	84	18	1 896	54 404	1 230	2 474	23 678	120 386	110 544	230 812	D
3391	Medical equipment & supplies mfg	2	38	7	537	16 108	381	1 132	8 080	43 386	24 160	67 079	1 772
33911	Medical equipment & supplies mfg	2	38	7	537	16 108	381	1 132	8 080	43 386	24 160	67 079	1 772
3399	Other miscellaneous mfg	-	46	11	1 359	38 296	849	1 342	15 598	77 000	86 384	163 733	D
33993	Doll, toy, & game mfg	-	6	1	f	D	D	D	D	D	D	D	D
339932	Game, toy, & children's vehicle mfg	-	5	1	f	D	D	D	D	D	D	D	D

Table 3. Industry Statistics for Counties: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	YAMHILL COUNTY, OR												
31-33	Manufacturing	-	159	48	6 092	194 867	4 494	8 863	122 640	540 367	732 376	1 268 290	105 466
311	Food mfg.....	1	17	7	633	17 986	488	983	11 798	51 004	128 238	177 746	8 517
321	Wood product mfg.....	-	19	7	956	29 282	797	1 580	21 995	81 117	223 628	303 606	2 589
3219	Other wood product mfg...	-	11	3	f	D	D	D	D	D	D	D	434
331	Primary metal mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills.....	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg.....	-	14	6	g	D	D	D	D	D	D	D	D
3391	Medical equipment & supplies mfg.....	-	8	3	g	D	D	D	D	D	D	D	D
33911	Medical equipment & supplies mfg.....	-	8	3	g	D	D	D	D	D	D	D	D
339114	Dental equipment & supplies mfg.....	-	4	3	g	D	D	D	D	D	D	D	D

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.

²Industries with 500 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 500 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c—100 to 249 employees; e—250 to 499 employees; f—500 to 999 employees; g—1,000 to 2,499 employees; h—2,500 to 4,999 employees; i—5,000 to 9,999 employees; j—10,000 to 24,999 employees; k—25,000 to 49,999 employees; l—50,000 to 99,999 employees; m—100,000 employees or more.

Table 4. Industry Statistics for Places: 1997

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	ALBANY, OR *												
31-33	Manufacturing	-	68	23	3 538	124 181	2 691	5 529	79 099	345 138	294 008	630 696	23 698
311	Food mfg.....	-	8	3	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
321	Wood product mfg.....	-	4	3	745	25 685	622	1 461	20 310	76 036	100 130	177 137	D
331	Primary metal mfg.....	-	4	3	g	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing.....	-	2	2	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	-	2	2	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding.....	-	2	2	f	D	D	D	D	D	D	D	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
BEAVERTON, OR													
31-33	Manufacturing	-	135	45	9 717	383 371	5 200	9 883	148 852	1 336 393	965 574	2 310 131	91 999
311	Food mfg	-	10	7	934	22 086	585	1 157	13 017	111 765	106 719	216 752	3 641
334	Computer & electronic product mfg	-	31	15	6 301	286 530	2 994	6 029	96 527	985 197	670 541	1 665 851	73 106
3344	Semiconductor & other electronic component mfg	-	9	6	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	-	9	6	f	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) mfg	-	3	3	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg	-	10	7	4 909	236 789	2 232	4 504	80 883	870 970	555 506	1 435 012	D
33451	Navigational, measuring, medical, & control instruments mfg	-	10	7	4 909	236 789	2 232	4 504	80 883	870 970	555 506	1 435 012	D
334515	Electricity measuring & testing instrument mfg	-	7	5	h	D	D	D	D	D	D	D	D
339	Miscellaneous mfg	-	20	3	798	20 122	551	746	9 392	38 346	54 123	92 839	D
3399	Other miscellaneous mfg ..	-	11	2	743	18 044	527	709	8 703	30 911	51 866	83 133	D
33993	Doll, toy, & game mfg ...	-	3	1	f	D	D	D	D	D	D	D	D
339932	Game, toy, & children's vehicle mfg	-	2	1	f	D	D	D	D	D	D	D	D
BEND, OR													
31-33	Manufacturing	-	119	27	3 422	87 421	2 776	5 279	58 868	225 835	273 669	496 272	11 504
321	Wood product mfg	-	16	10	1 381	35 733	1 164	2 368	26 821	92 910	144 082	234 572	3 077
3219	Other wood product mfg ...	-	13	7	g	D	D	D	D	D	D	D	D
32191	Millwork	-	11	6	925	22 602	807	1 607	17 471	59 232	91 577	148 617	D
321911	Wood window & door mfg	-	7	4	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg	-	7	2	f	D	D	D	D	D	D	D	D
BROOKINGS, OR													
31-33	Manufacturing	-	8	2	f	D	D	D	D	D	D	D	D
CANBY, OR													
31-33	Manufacturing	-	25	8	755	24 449	590	1 119	16 288	67 452	79 112	145 024	D
COOS BAY, OR													
31-33	Manufacturing	1	29	5	622	16 315	508	956	12 412	16 077	65 305	84 369	1 599
CORVALLIS, OR													
31-33	Manufacturing	-	51	11	6 510	420 490	4 738	13 258	302 265	553 900	357 295	895 767	D
334	Computer & electronic product mfg	-	10	3	i	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg	-	3	1	i	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	-	3	1	i	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	2	1	i	D	D	D	D	D	D	D	D
DALLAS, OR													
31-33	Manufacturing	-	8	5	1 100	29 428	982	2 272	24 908	52 829	84 376	136 456	D
334	Computer & electronic product mfg	-	1	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	-	1	1	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	-	1	1	f	D	D	D	D	D	D	D	D
334412	Bare printed circuit board mfg	-	1	1	f	D	D	D	D	D	D	D	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
EUGENE, OR													
31-33	Manufacturing	2	340	90	9 524	277 085	6 647	11 820	162 598	614 945	712 334	1 330 294	D
311	Food mfg	1	35	10	1 184	27 605	783	1 191	15 433	97 901	89 874	187 319	5 947
3118	Bakeries & tortilla mfg	—	11	3	f	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg	—	8	3	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries	—	5	3	f	D	D	D	D	D	D	D	D
321	Wood product mfg	2	30	18	1 708	46 932	1 484	3 177	37 335	119 014	269 803	390 838	9 577
3212	Veneer, plywood, & engineered wood product mfg	2	9	9	1 269	35 039	1 138	2 455	29 020	88 599	215 523	305 462	4 199
32121	Veneer, plywood, & engineered wood product mfg	2	9	9	1 269	35 039	1 138	2 455	29 020	88 599	215 523	305 462	4 199
321212	Softwood veneer & plywood mfg	6	2	2	f	D	D	D	D	D	D	D	D
323	Printing & related support activities	—	38	6	532	15 891	362	563	8 099	29 292	14 709	43 846	D
3231	Printing & related support activities	—	38	6	532	15 891	362	563	8 099	29 292	14 709	43 846	D
32311	Printing	—	36	6	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	1	43	9	705	19 223	488	928	11 419	31 280	37 506	68 004	D
333	Machinery mfg	1	29	13	1 043	35 371	657	1 298	16 788	71 202	63 063	132 553	4 073
334	Computer & electronic product mfg	2	13	6	1 546	62 430	1 037	1 101	35 157	107 915	75 923	186 620	D
3341	Computer & peripheral equipment mfg	—	1	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	—	1	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	—	1	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	2	3	2	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	2	3	2	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg	—	25	8	796	20 534	632	1 388	12 881	38 309	41 669	80 741	D
3371	Household & institutional furniture & kitchen cabinet mfg	1	19	5	f	D	D	D	D	D	D	D	D
33712	Household & institutional furniture mfg	1	12	3	512	12 143	414	1 007	8 136	23 092	31 862	55 777	D
337122	Nonupholstered wood household furniture mfg	1	11	3	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg	6	56	5	669	14 189	294	499	6 097	26 132	22 590	47 473	D
3399	Other miscellaneous mfg	6	33	5	591	12 449	235	413	5 109	22 237	20 177	41 093	D
FOREST GROVE, OR													
31-33	Manufacturing	1	37	15	1 925	70 613	1 418	2 756	38 439	141 089	126 640	271 625	18 551
334	Computer & electronic product mfg	—	4	3	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	—	4	3	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	—	4	3	g	D	D	D	D	D	D	D	D
334412	Bare printed circuit board mfg	—	2	2	g	D	D	D	D	D	D	D	D
GRANTS PASS, OR													
31-33	Manufacturing	—	58	20	1 816	45 966	1 457	3 019	33 434	125 680	161 203	295 291	3 647
321	Wood product mfg	1	8	4	635	16 952	563	1 330	14 315	33 889	86 232	118 907	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
GRESHAM, OR													
31-33	Manufacturing	-	82	25	5 338	183 203	4 026	7 833	143 239	476 797	334 733	795 574	33 880
332	Fabricated metal product mfg	1	13	3	612	17 356	483	938	11 089	38 742	36 600	75 533	D
3323	Architectural & structural metals mfg	1	5	3	f	D	D	D	D	D	D	D	1 243
33232	Ornamental & architectural metal products mfg	-	4	3	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg	1	5	3	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	2	3	2	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	2	3	2	g	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg	2	2	2	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg	-	4	1	g	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg	-	1	1	g	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg	-	1	1	g	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg	-	1	1	g	D	D	D	D	D	D	D	D
HERMISTON, OR													
31-33	Manufacturing	-	15	5	1 320	31 279	1 172	2 091	26 605	96 964	110 854	208 519	8 405
311	Food mfg	-	3	2	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg	-	2	2	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg	-	2	2	f	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg	-	2	2	f	D	D	D	D	D	D	D	D
HILLSBORO, OR													
31-33	Manufacturing	1	173	55	8 734	339 364	5 874	12 128	178 697	788 238	1 199 267	1 977 296	383 320
332	Fabricated metal product mfg	-	34	7	708	24 660	523	1 101	15 219	50 190	33 963	83 472	8 638
334	Computer & electronic product mfg	-	31	19	5 405	235 493	3 595	7 748	125 078	550 529	984 292	1 525 709	347 839
3341	Computer & peripheral equipment mfg	-	7	6	2 920	99 630	2 254	5 092	57 213	195 503	731 124	924 866	26 700
33411	Computer & peripheral equipment mfg	-	7	6	2 920	99 630	2 254	5 092	57 213	195 503	731 124	924 866	26 700
334111	Electronic computer mfg	2	3	3	f	D	D	D	D	D	D	D	D
334113	Computer terminal mfg	-	2	2	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	2	1	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	1	16	10	g	D	D	D	D	D	D	D	316 848
33441	Semiconductor & other electronic component mfg	1	16	10	g	D	D	D	D	D	D	D	316 848
334413	Semiconductor & related device mfg	-	5	5	g	D	D	D	D	D	D	D	315 375
HOOD RIVER, OR													
31-33	Manufacturing	1	31	6	638	14 062	479	817	8 955	38 303	29 737	68 285	D
JUNCTION CITY, OR													
31-33	Manufacturing	-	12	4	f	D	D	D	D	D	D	D	1 661
336	Transportation equipment mfg	-	1	1	f	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg	-	1	1	f	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg	-	1	1	f	D	D	D	D	D	D	D	D
336213	Motor home mfg	-	1	1	f	D	D	D	D	D	D	D	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
KLAMATH FALLS, OR													
31-33	Manufacturing	-	37	15	1 685	44 225	1 373	2 567	30 117	123 925	153 688	275 570	6 518
321	Wood product mfg	-	6	5	f	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg	-	2	2	f	D	D	D	D	D	D	D	D
32121	Veneer, plywood, & engineered wood product mfg	-	2	2	f	D	D	D	D	D	D	D	D
LAKE OSWEGO, OR *													
31-33	Manufacturing	2	54	13	1 083	36 291	651	1 397	16 598	70 004	58 615	127 751	3 626
LEBANON, OR													
31-33	Manufacturing	-	22	8	909	33 440	732	1 560	23 506	88 171	105 065	193 206	D
MCMINNVILLE, OR													
31-33	Manufacturing	-	51	20	2 318	66 919	1 782	3 719	45 135	193 283	295 879	491 426	77 367
331	Primary metal mfg	-	1	1	f	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg	-	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg	-	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills	-	1	1	f	D	D	D	D	D	D	D	D
MEDFORD, OR													
31-33	Manufacturing	-	74	15	2 007	61 921	1 489	2 961	40 160	132 508	211 365	344 759	13 022
321	Wood product mfg	-	7	4	f	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg	-	2	2	f	D	D	D	D	D	D	D	D
32121	Veneer, plywood, & engineered wood product mfg	-	2	2	f	D	D	D	D	D	D	D	D
MILWAUKIE, OR *													
31-33	Manufacturing	-	58	24	4 353	146 684	3 040	6 465	84 267	365 995	314 188	679 121	16 766
331	Primary metal mfg	-	2	1	f	D	D	D	D	D	D	D	D
3315	Foundries	-	2	1	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries	-	2	1	f	D	D	D	D	D	D	D	D
331528	Other nonferrous foundries (except die-casting)	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	-	20	9	1 407	51 012	1 013	1 979	28 984	164 891	111 230	275 332	6 008
3322	Cutlery & handtool mfg	-	3	2	g	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg ..	-	3	2	g	D	D	D	D	D	D	D	D
332213	Saw blade & handsaw mfg	-	3	2	g	D	D	D	D	D	D	D	D
333	Machinery mfg	-	8	6	1 259	46 277	834	2 022	27 047	66 808	125 842	192 577	4 442
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg	-	1	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
333412	Industrial & commercial fan & blower mfg	-	1	1	f	D	D	D	D	D	D	D	D
NEWBERG, OR													
31-33	Manufacturing	-	42	12	2 497	92 900	1 750	3 353	52 814	250 454	199 618	448 416	23 759
339	Miscellaneous mfg	-	6	3	g	D	D	D	D	D	D	D	D
3391	Medical equipment & supplies mfg	-	4	2	f	D	D	D	D	D	D	D	D
33911	Medical equipment & supplies mfg	-	4	2	f	D	D	D	D	D	D	D	D
339114	Dental equipment & supplies mfg	-	2	2	f	D	D	D	D	D	D	D	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
ONTARIO, OR													
31-33	Manufacturing	-	14	2	f	D	D	D	D	D	D	D	D
311	Food mfg.....	-	2	1	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
OREGON CITY, OR													
31-33	Manufacturing	-	31	11	964	36 784	671	1 242	22 446	90 863	110 872	200 193	8 787
PENDLETON, OR													
31-33	Manufacturing	-	17	7	731	18 622	591	1 021	12 121	69 300	151 439	219 294	2 154
PORTLAND, OR *													
31-33	Manufacturing	-	1 144	345	39 059	1 310 563	29 273	58 564	873 618	3 465 307	3 947 480	7 385 072	D
311	Food mfg.....	-	82	44	4 322	132 644	2 772	5 281	74 232	456 477	535 277	989 714	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	6	5	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg.....	-	6	6	571	19 325	324	656	10 324	77 873	127 264	204 157	12 955
31151	Dairy product (except frozen) mfg.....	-	6	6	571	19 325	324	656	10 324	77 873	127 264	204 157	12 955
311511	Fluid milk mfg.....	-	5	5	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg.....	-	36	18	2 053	64 311	1 299	2 424	39 457	147 474	122 453	269 991	D
31181	Bread & bakery product mfg.....	-	30	16	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries .	-	22	14	g	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg.....	-	5	2	f	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg.....	-	11	6	g	D	D	D	D	D	D	D	D
3121	Beverage mfg.....	-	11	6	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg.....	-	4	3	f	D	D	D	D	D	D	D	D
314	Textile product mills.....	3	24	6	f	D	D	D	D	D	D	D	D
315	Apparel mfg.....	1	27	10	g	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg....	1	18	8	f	D	D	D	D	D	D	D	D
321	Wood product mfg.....	1	43	10	755	15 913	630	1 174	11 642	29 642	48 065	77 918	D
3219	Other wood product mfg...	1	34	9	f	D	D	D	D	D	D	D	D
322	Paper mfg.....	-	18	15	g	D	D	D	D	D	D	D	D
3222	Converted paper product mfg.....	-	18	15	g	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg.....	-	5	5	617	24 549	488	1 085	16 784	71 696	101 803	176 148	5 905
323	Printing & related support activities.....	-	214	41	3 459	122 259	2 570	4 901	81 161	248 947	169 715	418 713	15 760
3231	Printing & related support activities.....	-	214	41	3 459	122 259	2 570	4 901	81 161	248 947	169 715	418 713	15 760
32311	Printing.....	-	172	29	h	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing..	-	89	16	g	D	D	D	D	D	D	D	9 546
32312	Support activities for printing.....	-	42	12	f	D	D	D	D	D	D	D	D
325	Chemical mfg.....	2	45	13	1 023	39 288	549	1 025	16 838	149 965	145 378	295 519	13 847
326	Plastics & rubber products mfg.....	1	40	11	764	22 774	579	1 052	13 288	56 408	54 054	109 801	D
327	Nonmetallic mineral product mfg.....	1	38	14	1 043	35 831	803	1 692	24 428	89 827	67 653	157 323	D
3273	Cement & concrete product mfg.....	-	11	5	f	D	D	D	D	D	D	D	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	PORTLAND, OR *—Con. Manufacturing—Con.												
331	Primary metal mfg	—	20	13	h	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg	—	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg	—	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills	—	1	1	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing	—	6	5	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing	—	6	5	f	D	D	D	D	D	D	D	D
3315	Foundries	—	12	6	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries	—	5	4	h	D	D	D	D	D	D	D	D
331512	Steel investment foundries	—	1	1	g	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment)	—	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	1	199	69	4 522	154 195	3 492	7 073	105 547	359 577	275 260	629 962	20 772
3322	Cutlery & handtool mfg	—	8	4	f	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg	—	8	4	f	D	D	D	D	D	D	D	D
332212	Hand & edge tool mfg	—	6	3	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg	1	39	15	818	30 622	570	1 211	19 452	75 870	68 043	144 027	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg	2	66	18	g	D	D	D	D	D	D	D	D
33271	Machine shops	1	61	16	884	30 139	699	1 333	20 981	54 873	20 579	74 875	D
332710	Machine shops	1	61	16	884	30 139	699	1 333	20 981	54 873	20 579	74 875	D
3328	Coating, engraving, heat treating, & allied activities	4	33	13	f	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities	4	33	13	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg	1	25	8	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg	1	25	8	f	D	D	D	D	D	D	D	D
333	Machinery mfg	1	74	24	h	D	D	D	D	D	D	D	D
3331	Agriculture, construction, & mining machinery mfg	—	6	4	745	29 726	521	1 119	17 836	64 111	96 305	159 502	D
33313	Mining & oil & gas field machinery mfg	—	1	1	f	D	D	D	D	D	D	D	D
333131	Mining machinery & equipment mfg	—	1	1	f	D	D	D	D	D	D	D	D
3332	Industrial machinery mfg	2	23	9	f	D	D	D	D	D	D	D	1 106
3339	Other general-purpose machinery mfg	—	16	4	634	23 617	432	874	13 349	77 304	53 908	137 149	D
334	Computer & electronic product mfg	—	34	5	2 886	98 073	2 158	4 756	63 734	274 223	265 538	537 648	D
3344	Semiconductor & other electronic component mfg	—	10	3	h	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	—	10	3	h	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg	—	2	1	g	D	D	D	D	D	D	D	D
334419	Other electronic component mfg	—	4	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg	—	42	22	i	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg	—	2	1	g	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg	—	2	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg	—	2	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg	—	15	7	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg	—	4	3	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg	—	4	3	f	D	D	D	D	D	D	D	D
3365	Railroad rolling stock mfg	—	1	1	g	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg	—	1	1	g	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg	—	1	1	g	D	D	D	D	D	D	D	D
3366	Ship & boat building	1	14	7	g	D	D	D	D	D	D	D	D
33661	Ship & boat building	1	14	7	g	D	D	D	D	D	D	D	D
336611	Ship building & repairing	1	10	6	g	D	D	D	D	D	D	D	D

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	PORTLAND, OR *—Con.												
31-33	Manufacturing—Con.												
337	Furniture & related product mfg	2	73	18	1 271	36 731	858	1 608	22 761	72 277	54 766	126 358	D
3371	Household & institutional furniture & kitchen cabinet mfg	4	46	9	f	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg	1	19	6	525	17 965	294	544	9 867	31 079	20 124	50 628	D
33721	Office furniture (including fixtures) mfg	1	19	6	525	17 965	294	544	9 867	31 079	20 124	50 628	D
339	Miscellaneous mfg	4	118	11	1 118	29 434	740	1 314	15 832	60 704	40 846	101 148	2 967
3399	Other miscellaneous mfg ..	4	83	8	f	D	D	D	D	D	D	D	D
	PRINEVILLE, OR												
31-33	Manufacturing	2	14	5	f	D	D	D	D	D	D	D	3 815
321	Wood product mfg	2	5	4	f	D	D	D	D	D	D	D	D
3219	Other wood product mfg ...	—	4	3	f	D	D	D	D	D	D	D	D
32191	Millwork	—	3	3	f	D	D	D	D	D	D	D	D
	REDMOND, OR												
31-33	Manufacturing	3	39	13	1 196	34 305	899	1 715	20 645	88 579	90 457	177 450	5 876
321	Wood product mfg	5	8	4	562	13 543	479	948	10 452	25 077	49 354	74 461	D
	ROSEBURG, OR												
31-33	Manufacturing	5	38	9	811	22 162	573	1 044	13 173	54 371	66 162	122 187	3 802
	ST. HELENS, OR												
31-33	Manufacturing	—	9	3	f	D	D	D	D	D	D	D	D
322	Paper mfg	—	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills	—	1	1	f	D	D	D	D	D	D	D	D
32212	Paper mills	—	1	1	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills	—	1	1	f	D	D	D	D	D	D	D	D
	SALEM, OR *												
31-33	Manufacturing	2	224	76	7 085	211 359	5 331	10 075	122 142	644 920	592 125	1 226 047	D
311	Food mfg	2	25	16	1 721	44 252	1 434	2 597	30 610	158 773	181 101	336 477	9 055
3114	Fruit & vegetable preserving & specialty food mfg	4	8	7	960	26 788	863	1 690	19 959	114 075	97 438	208 459	D
332	Fabricated metal product mfg	—	36	19	1 452	41 705	1 109	2 041	25 106	127 602	135 304	254 833	D
3323	Architectural & structural metals mfg	—	15	12	841	23 922	612	1 197	14 768	72 065	91 699	159 335	5 077
334	Computer & electronic product mfg	—	11	5	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg	—	5	3	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg	—	5	3	g	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg ...	—	3	2	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg	1	30	5	501	12 709	360	673	7 530	25 723	16 390	41 913	4 156

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	All establishments			All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E ¹	Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
SPRINGFIELD, OR													
31-33	Manufacturing	2	87	27	3 334	123 265	2 624	5 390	88 414	373 038	547 815	915 305	D
321	Wood product mfg	3	12	7	1 497	50 435	1 253	2 711	39 725	116 799	249 580	362 393	16 250
3211	Sawmills & wood preservation	-	3	2	f	D	D	D	D	D	D	D	D
32111	Sawmills & wood preservation	-	3	2	f	D	D	D	D	D	D	D	D
321113	Sawmills	-	3	2	f	D	D	D	D	D	D	D	D
3212	Veneer, plywood, & engineered wood product mfg	6	4	4	f	D	D	D	D	D	D	D	D
32121	Veneer, plywood, & engineered wood product mfg	6	4	4	f	D	D	D	D	D	D	D	D
321212	Softwood veneer & plywood mfg	8	3	3	f	D	D	D	D	D	D	D	D
322	Paper mfg	-	2	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
322130	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
STAYTON, OR													
31-33	Manufacturing	-	19	9	1 443	36 909	1 117	2 395	24 586	107 883	313 813	422 599	3 822
311	Food mfg	-	2	1	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg	-	1	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg	-	1	1	f	D	D	D	D	D	D	D	D
311411	Frozen fruit, juice, & vegetable mfg	-	1	1	f	D	D	D	D	D	D	D	D
TIGARD, OR													
31-33	Manufacturing	2	110	37	3 706	125 496	2 421	5 029	65 109	290 001	276 645	566 387	25 624
332	Fabricated metal product mfg	2	20	8	976	27 278	760	1 706	18 235	54 285	73 125	118 109	4 425
333	Machinery mfg	-	10	5	770	25 110	481	943	13 257	34 457	57 085	93 126	2 316
334	Computer & electronic product mfg	2	13	9	857	37 081	365	700	13 060	109 877	60 635	178 636	10 624
3345	Navigational, measuring, medical, & control instruments mfg	-	5	3	549	24 736	204	375	7 267	85 873	41 417	134 728	D
33451	Navigational, measuring, medical, & control instruments mfg	-	5	3	549	24 736	204	375	7 267	85 873	41 417	134 728	D
TILLAMOOK, OR													
31-33	Manufacturing	-	10	3	627	18 568	540	1 182	13 696	60 629	169 935	226 196	3 229
TOLEDO, OR													
31-33	Manufacturing	-	8	2	f	D	D	D	D	D	D	D	D
322	Paper mfg	-	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
32213	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
322130	Paperboard mills	-	1	1	f	D	D	D	D	D	D	D	D
TROUTDALE, OR													
31-33	Manufacturing	-	18	7	545	20 945	441	885	14 405	36 628	119 715	155 702	5 172

Table 4. Industry Statistics for Places: 1997—Con.

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by * and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E ¹	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number ²	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	TUALATIN, OR *												
31-33	Manufacturing	2	125	65	5 023	151 818	3 572	6 688	87 617	364 262	316 673	681 956	29 436
326	Plastics & rubber products mfg	6	13	7	775	21 357	572	830	13 495	49 576	50 941	100 408	5 551
3261	Plastics product mfg	6	10	7	756	20 689	560	804	13 210	48 031	50 075	97 978	D
32619	Other plastics product mfg	9	6	5	610	16 767	457	623	11 042	36 815	32 432	69 018	4 841
326199	All other plastics product mfg	9	5	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg	1	38	17	1 260	40 533	922	1 819	25 150	75 293	54 866	129 887	3 595
3323	Architectural & structural metals mfg	-	15	9	f	D	D	D	D	D	D	D	1 157
33232	Ornamental & architectural metal products mfg	-	10	6	693	19 460	514	971	11 651	39 035	37 060	75 226	933
332322	Sheet metal work mfg ..	-	8	5	f	D	D	D	D	D	D	D	D
	WILSONVILLE, OR *												
31-33	Manufacturing	-	53	28	4 066	153 240	2 010	4 120	46 920	579 201	760 436	1 319 656	66 467
334	Computer & electronic product mfg	-	10	7	h	D	D	D	D	D	D	D	59 639
3341	Computer & peripheral equipment mfg	-	2	2	g	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg	-	2	2	g	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg	-	2	2	g	D	D	D	D	D	D	D	D
	WOODBURN, OR												
31-33	Manufacturing	1	26	12	1 852	49 317	1 488	2 781	31 079	92 964	196 024	288 325	7 996
321	Wood product mfg	-	6	6	1 073	26 985	938	1 664	18 760	56 144	118 902	173 873	1 841
3219	Other wood product mfg ...	-	4	4	f	D	D	D	D	D	D	D	D
32199	All other wood product mfg	-	2	2	f	D	D	D	D	D	D	D	D
321991	Manufactured home (mobile home) mfg ..	-	2	2	f	D	D	D	D	D	D	D	D

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.

²Industries with 500 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 500 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: c-100 to 249 employees; e-250 to 499 employees; f-500 to 999 employees; g-1,000 to 2,499 employees, h-2,500 to 4,999 employees; i-5,000 to 9,999 employees; j-10,000 to 24,999 employees; k-25,000 to 49,999 employees; l-50,000 to 99,999 employees; m-100,000 employees or more.

Table 5. Detailed Statistics for the State: 1997

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

Item	Value	Item	Value
OREGON		OREGON—Con.	
Companies ¹	number.. 5 428	Quantity of electricity purchased for heat and power	1,000 kWh.. 15 278 998
		Quantity of electricity generated less sold for heat and power	1,000 kWh.. 681 514
All establishments	number.. 5 768	Total value of shipments	\$1,000.. 47 665 990
Establishments with 1 to 19 employees	number.. 4 093	Value of resales	\$1,000.. 1 658 664
Establishments with 20 to 99 employees	number.. 1 204	Value added	\$1,000.. 25 077 180
Establishments with 100 employees or more	number.. 471	Total inventories, beginning of year	\$1,000.. 5 124 342
All employees	number.. 213 111	Finished goods inventories, beginning of year	\$1,000.. 1 829 981
Total compensation ²	\$1,000.. 8 891 591	Work-in-process inventories, beginning of year	\$1,000.. 1 364 488
Annual payroll	\$1,000.. 7 095 286	Materials and supplies inventories, beginning of year	\$1,000.. 1 929 873
Total fringe benefits	\$1,000.. 1 796 305	Total inventories, end of year	\$1,000.. 5 398 261
Production workers, average for year	number.. 158 506	Finished goods inventories, end of year	\$1,000.. 1 897 536
Production workers on March 12	number.. 153 945	Work-in-process inventories, end of year	\$1,000.. 1 398 994
Production workers on May 12	number.. 156 685	Materials and supplies inventories, end of year	\$1,000.. 2 101 731
Production workers on August 12	number.. 164 317	Gross book value of total assets at beginning of year	\$1,000.. 22 006 876
Production workers on November 12	number.. 159 077	Total capital expenditures (new and used)	\$1,000.. 2 715 770
Production-worker hours	1,000.. 316 808	Capital expenditures for buildings and other structures (new and used)	\$1,000.. 623 652
Production-worker wages	\$1,000.. 4 545 793	Capital expenditures for machinery and equipment (new and used)	\$1,000.. 2 092 118
Total cost of materials	\$1,000.. 22 770 601	Total retirements ²	\$1,000.. 869 955
Cost of materials, parts, containers, etc., consumed	\$1,000.. 19 948 345	Gross book value of total assets at end of year	\$1,000.. 23 852 691
Cost of resales	\$1,000.. 1 387 786	Total depreciation during year ²	\$1,000.. 1 670 460
Cost of fuels	\$1,000.. 257 879	Total rental payments ²	\$1,000.. 406 686
Cost of purchased electricity	\$1,000.. 547 579	Buildings and other structures rental payments ²	\$1,000.. 203 457
Cost of contract work	\$1,000.. 629 012	Machinery and equipment rental payments ²	\$1,000.. 203 229

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²These items are collected in the ASM and estimated for the remaining establishments.

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:

1. 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.
2. Cost of products bought and sold in the same condition.

3. 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.

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 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.

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 company-operated 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).

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 company-owned 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.

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.

Appendix B.

NAICS Codes, Titles, and Descriptions

SECTOR 31-33 MANUFACTURING

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership.

The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working

machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the Manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are considered manufacturing in NAICS: milk bottling and pasteurizing; water bottling and processing; fresh fish packaging (oyster shucking, fish filleting); apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations) as well as contracting on materials owned by others; printing and related activities; ready-mixed concrete production; leather converting; grinding of lenses to prescription; wood preserving; electroplating, plating, metal heat treating, and polishing for the trade; lapidary work for the trade; fabricating signs and advertising displays; rebuilding or remanufacturing machinery (i.e., automotive parts); ship repair and renovation; machine shops; and tire retreading.

Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing). They include:

1. Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting, is considered a harvesting operation;
2. The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining;

3. The construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction;
4. Establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and
5. Publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

311 Food Manufacturing

Industries in the Food Manufacturing subsector transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products.

The food products manufactured in these establishments are typically sold to wholesalers or retailers for distribution to consumers, but establishments primarily engaged in retailing bakery and candy products made on the premises not for immediate consumption are included.

Establishments primarily engaged in manufacturing beverages are classified in Subsector 312, Beverage and Tobacco Product Manufacturing.

3111 Animal Food Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 31111, Animal Food Manufacturing.

31111 Animal Food Manufacturing

This industry comprises establishments primarily engaged in manufacturing food and feed for animals from ingredients, such as grains, oilseed mill products, and meat products.

311111 Dog and Cat Food Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing dog and cat food from ingredients, such as grains, oilseed mill products, and meat products.

The data published with NAICS code 311111 include the following SIC industry:

2047 Dog and cat food

311119 Other Animal Food Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing animal food (except dog and cat) from ingredients, such as grains, oilseed mill products, and meat products.

The data published with NAICS code 311119 include the following SIC industry:

2048 Prepared feeds and feed ingredients for animals and fowls, except dogs and cats (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311119 do not include establishments primarily engaged in the custom grinding of grain. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3112 Grain and Oilseed Milling

This NAICS industry group includes establishments classified in the following NAICS Industries: 31121, Flour Milling and Malt Manufacturing; 31122, Starch and Vegetable Fats and Oils Manufacturing; and 31123, Breakfast Cereal Manufacturing.

31121 Flour Milling and Malt Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) milling flour or meal from grains or vegetables; (2) preparing flour mixes or doughs from flour milled in the same establishment; (3) milling, cleaning, and polishing rice; and (4) manufacturing malt from barley, rye, or other grains.

311211 Flour Milling

This U.S. industry comprises establishments primarily engaged in (1) milling flour or meal from grains (except rice) or vegetables and/or (2) milling flour and preparing flour mixes or doughs.

The data published with NAICS code 311211 include the following SIC industries:

2034 Dehydrated fruits, vegetables, and soup mixes (pt)

2041 Flour and other grain mill products

311212 Rice Milling

This U.S. industry comprises establishments primarily engaged in one of the following: (1) milling rice; (2) cleaning and polishing rice; or (3) milling, cleaning, and polishing rice. The establishments in this industry may package the rice they mill with other ingredients.

The data published with NAICS code 311212 include the following SIC industry:

2044 Rice milling

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311212 do not include rice mills primarily engaged in packaging uncooked rice with other ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

311213 Malt Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing malt from barley, rye, or other grains.

The data published with NAICS code 311213 include the following SIC industry:

2083 Malt

31122 Starch and Vegetable Fats and Oils Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) wet milling corn and vegetables; (2) crushing oilseeds and tree nuts; (3) refining and/or blending vegetable oils; (4) manufacturing shortening and margarine; and (5) blending purchased animal fats with vegetable fats.

311221 Wet Corn Milling

This U.S. industry comprises establishments primarily engaged in wet milling corn and other vegetables (except to make ethyl alcohol). Examples of products made in these establishments are corn sweeteners, such as glucose, dextrose, and fructose; corn oil; and starches (except laundry).

The data published with NAICS code 311221 include the following SIC industry:

2046 Wet corn milling

311222 Soybean Processing

This U.S. industry comprises establishments engaged in crushing soybeans. Examples of products produced in these establishments are soybean oil, soybean cake and meal, and soybean protein isolates and concentrates.

The data published with NAICS code 311222 include the following SIC industry:

2075 Soybean oil mills (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311222 do not include establishments primarily engaged in the processing of

soybean oil from soybeans crushed in the same establishment. The NAICS definitions will be fully implemented with the 2002 Economic Census.

311223 Other Oilseed Processing

This U.S. industry comprises establishments engaged in crushing oilseeds (except soybeans) and tree nuts, such as cottonseeds, linseeds, peanuts, and sunflower seeds.

The data published with NAICS code 311223 include the following SIC industries:

2074 Cottonseed oil mills (pt)

2076 Vegetable oil mills, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311223 do not include establishments primarily engaged in the processing of vegetable oils, except soybean oil, from oilseeds crushed in the same establishment. The NAICS definitions will be fully implemented with the 2002 Economic Census.

311225 Fats and Oils Refining and Blending

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing shortening and margarine from purchased fats and oils; (2) refining and/or blending vegetable, oilseed, and tree nut oils from purchased oils; and (3) blending purchased animal fats with purchased vegetable fats.

The data published with NAICS code 311225 include the following SIC industries:

2074 Cottonseed oil mills (pt)

2075 Soybean oil mills (pt)

2076 Vegetable oil mills, n.e.c. (pt)

2077 Animal and marine fats and oil (pt)

2079 Shortening and cooking oils

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311225 do not include establishments primarily engaged in refining and/or blending corn oil from purchased oil. The data include establishments primarily engaged in the manufacture of vegetable oil foots. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31123 Breakfast Cereal Manufacturing

This industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.

311230 Breakfast Cereal Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.

The data published with NAICS code 311230 include the following SIC industry:

2043 Cereal breakfast foods (pt)

3113 Sugar and Confectionery Product Manufacturing

This industry group comprises (1) establishments that process agricultural inputs, such as sugarcane, beet, and cacao, to give rise to a new product (sugar or chocolate) and (2) those that begin with sugar and chocolate and process these further.

31131 Sugar Manufacturing

This industry comprises establishments primarily engaged in manufacturing raw sugar, liquid sugar, and refined sugar from sugarcane, raw cane sugar and sugarbeets.

311311 Sugarcane Mills

This U.S. industry comprises establishments primarily engaged in processing sugarcane.

The data published with NAICS code 311312 include the following SIC industry:

2061 Raw cane sugar

311312 Cane Sugar Refining

This U.S. industry comprises establishments primarily engaged in refining cane sugar from raw cane sugar.

The data published with NAICS code 311312 include the following SIC industry:

2062 Cane sugar refining

311313 Beet Sugar Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing refined beet sugar from sugarbeets

The data published with NAICS code 311313 include the following SIC industry:

2063 Beet sugar

31132 Chocolate and Confectionery Manufacturing From Cacao Beans

This industry comprises establishments primarily engaged in shelling, roasting, and grinding cacao beans and making chocolate cacao products and chocolate confectioneries.

311320 Chocolate and Confectionery Manufacturing From Cacao Beans

This U.S. industry comprises establishments primarily engaged in shelling, roasting, and grinding cacao beans and making chocolate cacao products and chocolate confectioneries.

The data published with NAICS code 311320 include the following SIC industries:

2066 Chocolate and cocoa products

31133 Confectionery Manufacturing From Purchased Chocolate

This industry comprises establishments primarily engaged in manufacturing chocolate confectioneries from chocolate produced elsewhere. Included in this industry are establishments primarily engaged in retailing chocolate confectionery products not for immediate consumption made on the premises from chocolate made elsewhere.

311330 Confectionery Manufacturing From Purchased Chocolate

This U.S. industry comprises establishments primarily engaged in manufacturing chocolate confectioneries from chocolate produced elsewhere. Included in this industry are establishments primarily engaged in retailing chocolate confectionery products not for immediate consumption made on the premises from chocolate made elsewhere.

The data published with NAICS code 311330 include the following SIC industries:

2064 Candy and other confectionery products and chewing gum (pt)

5441 Candy, nut, and confectionery stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311330 do not include establishments primarily engaged in the manufacture of chocolate products made from purchased chocolate. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3113301 Chocolate and Chocolate-type Confectionery Retail – Manufacturer

Establishments primarily engaged in the manufacture of consumer-type chocolate and chocolate-type confectionery products not for immediate consumption made on the premises from chocolate produced elsewhere.

3113302 Chocolate and Chocolate-type Confectionery – Manufacturer

Establishments primarily engaged in the manufacture of consumer-type chocolate and chocolate-type confectionery products from chocolate produced elsewhere.

31134 Nonchocolate Confectionery Manufacturing

This industry comprises establishments primarily engaged in manufacturing nonchocolate confectioneries. Included in this industry are establishments primary engaged in retailing nonchocolate confectionery products not for immediate consumption made on the premises.

311340 Nonchocolate Confectionery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonchocolate confectioneries. Included in this industry are establishments primary engaged in retailing nonchocolate confectionery products not for immediate consumption made on the premises.

The data published with NAICS code 311340 include the following SIC industries:

2064 Candy and other confectionery products and chewing gum (pt)

2099 Food preparations, n.e.c. (pt)

5441 Candy, nut, and confectionery stores (pt)

3113401 Nonchocolate-Type Confectionery Products Retail – Manufacturer

Establishments primarily engaged in the manufacture of consumer-type nonchocolate confectionery products, excluding cough drops, medicated candy, roasted peanuts, unsweetened popcorn and fountain syrup, not for immediate consumption made on the premises.

3113402 Nonchocolate-Type Confectionery Products – Manufacturer

Establishments primarily engaged in the manufacture of consumer-type nonchocolate confectionery products, excluding cough drops, medicated candy, roasted peanuts, unsweetened popcorn and fountain syrup.

3114 Fruit and Vegetable Preserving and Specialty Food Manufacturing

This industry group includes (1) establishments that freeze food and (2) those that use preservation processes, such as pickling, canning, and dehydrating. Both types begin their production process with inputs of vegetable or animal origin.

31141 Frozen Food Manufacturing

This industry comprises establishments primarily engaged in manufacturing frozen fruit, frozen juices, frozen vegetables, and frozen specialty foods (except seafood), such as frozen dinners, entrees, and side dishes; frozen pizza; frozen whipped toppings; and frozen waffles, pancakes, and french toast.

311411 Frozen Fruit, Juice, and Vegetable Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing frozen fruits; frozen vegetables; and frozen fruit juices, –ades, drinks, cocktail mixes and concentrates.

The data published with NAICS code 311411 include the following SIC industry:

2037 Frozen fruits and vegetables

311412 Frozen Specialty Food Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing frozen specialty foods (except seafood), such as frozen dinners, entrees, and side dishes; frozen pizza; frozen whipped topping; and frozen waffles, pancakes, and french toast.

The data published with NAICS code 311412 include the following SIC industry:

2038 Frozen specialties, n.e.c.

31142 Fruit and Vegetable Canning, Pickling, and Drying

This industry comprises establishments primarily engaged in manufacturing canned, pickled, and dried fruits, vegetables, and specialty foods. Establishments in this industry may package the dried or dehydrated ingredients they make with other purchased ingredients. Examples of products made by these establishments are canned juices; canned baby foods; canned soups (except seafood); canned dry beans; canned tomato-based sauces, such as catsup, salsa, chili, spaghetti, barbeque, and tomato paste, pickles, relishes, jams and jellies, dried soup mixes and bullions, and sauerkraut.

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)

311422 Specialty Canning

This U.S. industry comprises establishments primarily engaged in manufacturing canned specialty foods. Examples of products made in these establishments are canned baby food, canned baked beans, canned soups (except seafood), canned spaghetti, and other canned nationality foods.

The data published with NAICS code 311422 include the following SIC industry:

2032 Canned specialties (pt)

311423 Dried and Dehydrated Food Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) drying (including freeze-dried) and/or dehydrating fruits, vegetables, and soup mixes and bouillon and/or (2) drying and/or dehydrating ingredients and packaging them with other purchased ingredients, such as rice and dry pasta.

The data published with NAICS code 311423 include the following SIC industries:

2034 Dehydrated fruits, vegetables, and soups (pt)

2099 Food preparations, n.e.c. (pt)

3115 Dairy Product Manufacturing

This industry group comprises establishments that manufacture dairy products from raw milk, processed milk, and dairy substitutes.

31151 Dairy Product (Except Frozen) Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dairy products (except frozen) from raw milk and/or processed milk products; (2) manufacturing dairy substitutes (except frozen) from soybeans and other nondairy substances; and (3) manufacturing dry, condensed, concentrated, and evaporated dairy and dairy substitute products.

311511 Fluid Milk Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing processed milk products, such as pasteurized milk or cream and sour cream and/or (2) manufacturing fluid milk dairy substitutes from soybeans and other nondairy substances.

The data published with NAICS code 311511 include the following SIC industry:

2026 Fluid milk

311512 Creamery Butter Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing creamery butter from milk and/or processed milk products.

The data published with NAICS code 311512 include the following SIC industry:

2021 Creamery butter

311513 Cheese Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing cheese products (except cottage cheese) from raw milk and/or processed milk products and/or (2) manufacturing cheese substitutes from soybean and other nondairy substances.

The data published with NAICS code 311513 include the following SIC industry:

2022 Cheese, natural and processed

311514 Dry, Condensed, and Evaporated Dairy Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing dry, condensed, and evaporated milk and dairy substitute products.

The data published with NAICS code 311514 include the following SIC industry:

2023 Dry, condensed and evaporated milk

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311514 do not include establishments primarily engaged in the manufacture of fluid milk processed with ultra-high temperature. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31152 Ice Cream and Frozen Dessert Manufacturing

This industry comprises establishments primarily engaged in manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products).

311520 Ice Cream and Frozen Dessert Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products).

The data published with NAICS code 311520 include the following SIC industry:

2024 Ice cream and frozen desserts

3116 Meat Product Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 31161, Animal Slaughtering and Processing.

31161 Animal Slaughtering and Processing

This industry comprises establishments primarily engaged in one or more of the following: (1) slaughtering animals; (2) preparing processed meats and meat byproducts; and (3) rendering and/or refining animal fat, bones, and meat scraps. This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased carcasses.

311611 Animal (Except Poultry) Slaughtering

This U.S. industry comprises establishments primary engaged in slaughtering animals (except poultry and small game). Establishments that slaughter and prepare meats are included in this industry.

The data published with NAICS code 311611 include the following SIC industries:

2011 Meat packing plants

2048 Prepared feeds, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311611 do not include establishments primarily engaged in custom slaughtering. The NAICS definitions will be fully implemented with the 2002 Economic Census.

311612 Meat Processed From Carcasses

This U.S. industry comprises establishments primarily engaged in processing or preserving meat and meat byproducts (except poultry and small game) from purchased meats. This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased meats.

The data published with NAICS code 311612 include the following SIC industries:

2013 Sausages and other prepared meats

5147 Meat and meat products (pt)

311613 Rendering and Meat Byproduct Processing

This U.S. industry comprises establishments primarily engaged in rendering animal fat, bones, and meat scraps.

The data published with NAICS code 311613 include the following SIC industry:

2077 Animal and marine fats and oil (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311613 do not include establishments primarily engaged in manufacturing lard from purchased materials. The NAICS definitions will be fully implemented with the 2002 Economic Census.

311615 Poultry Processing

This U.S. industry comprises establishments primarily engaged in (1) slaughtering poultry and small game and/or (2) preparing processed poultry and small game meat and meat byproducts.

The data published with NAICS code 311615 include the following SIC industry:

2015 Poultry and egg processing (pt)

3117 Seafood Product Preparation and Packaging

This NAICS industry group includes establishments classified in NAICS Industry 31171, Seafood Product Preparation and Packaging.

31171 Seafood Product Preparation and Packaging

This industry comprises establishments primarily engaged in one or more of the following: (1) canning seafood (including soup); (2) smoking, salting, and drying seafoods; (3) eviscerating fresh fish by removing heads, fins, scales, bones, and entrails; (4) shucking and packing fresh shellfish; (5) processing marine fats and oils; and (6) freezing seafood. Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are included in this industry.

311711 Seafood Canning

This U.S. industry comprises establishments primarily engaged in (1) canning seafood (including soup) and marine fats and oils and/or (2) smoking, salting, and drying seafoods. Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are included in this industry.

The data published with NAICS code 311711 include the following SIC industries:

2077 Animal and marine fats and oil (pt)

2091 Canned and cured seafood

311712 Fresh and Frozen Seafood Processing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) eviscerating fresh fish by removing heads, fins, scales, bones, and

entrails; (2) shucking and packing fresh shellfish; (3) manufacturing frozen seafood; and (4) processing fresh and frozen marine fats and oils.

The data published with NAICS code 311712 include the following SIC industries:

2077 Animal and marine fats and oil (pt)

2092 Prepared fresh or frozen fish and seafood

3118 Bakeries and Tortilla Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 31181, Bread and Bakery Product Manufacturing; 31182, Cookie, Cracker, and Pasta Manufacturing; and 31183, Tortilla Manufacturing.

31181 Bread and Bakery Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing fresh and frozen bread and other bakery products.

311811 Retail Bakeries

This U.S. industry comprises establishments primarily engaged in retailing bread and other bakery products not for immediate consumption made on the premises from flour, not from prepared dough.

The data published with NAICS code 311811 include the following SIC industry:

5461 Retail bakeries (pt)

311812 Commercial Bakeries

This U.S. industry comprises establishments primarily engaged in manufacturing fresh and frozen bread and bread-type rolls and other fresh bakery (except cookies and crackers) products.

The data published with NAICS code 311812 include the following SIC industries:

2051 Bread, cake, and related products

2052 Cookies and crackers (pt)

311813 Frozen Cakes, Pies, and Other Pastries Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing frozen bakery products (except bread), such as cakes, pies, and doughnuts.

The data published with NAICS code 311813 include the following SIC industry:

2053 Frozen bakery products, except bread

31182 Cookie, Cracker, and Pasta Manufacturing

This industry comprises establishments primarily engaged in one of the following: (1) manufacturing cookies and crackers; (2) preparing flour and dough mixes and

dough from flour ground elsewhere; and (3) manufacturing dry pasta. The establishments in this industry may package the dry pasta they manufacture with other ingredients.

311821 Cookie and Cracker Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing cookies, crackers, and other products, such as ice cream cones.

The data published with NAICS code 311821 include the following SIC industry:

2052 Cookies and crackers (pt)

311822 Flour Mixes and Dough Manufacturing From Purchased Flour

This U.S. industry comprises establishments primarily engaged in manufacturing prepared flour mixes or dough mixes from flour ground elsewhere.

The data published with NAICS code 311822 include the following SIC industries:

2045 Blended and prepared flour

311823 Dry Pasta Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing dry pasta. The establishments in this industry may package the dry pasta they manufacture with other ingredients.

The data published with NAICS code 311823 include the following SIC industry:

2098 Macaroni and spaghetti

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311823 do not include dry pasta plants primarily engaged in packaging dry pasta with other ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31183 Tortilla Manufacturing

This industry comprises establishments primarily engaged in manufacturing tortillas.

311830 Tortilla Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing tortillas.

The data published with NAICS code 311830 include the following SIC industry:

2099 Food preparations, n.e.c. (pt)

3119 Other Food Manufacturing

This industry group comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruit, vegetable, and specialty foods; dairy products; meat products; seafood products; and bakeries and tortillas). The industry group includes industries with different productive processes, such as snack food manufacturing; coffee and tea manufacturing; concentrate, syrup, condiment, and spice manufacturing; and, in general, an entire range of other miscellaneous food product manufacturing.

31191 Snack Food Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) salting, roasting, drying, cooking, or canning nuts; (2) processing grains or seeds into snacks; (3) manufacturing peanut butter; and (4) manufacturing potato chips, corn chips, popped popcorn, pretzels (except soft), pork rinds, and similar snacks.

311911 Roasted Nuts and Peanut Butter Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) salting, roasting, drying, cooking, or canning nuts; (2) processing grains or seeds into snacks; and (3) manufacturing peanut butter.

The data published with NAICS code 311911 include the following SIC industries:

2068 Salted and roasted nuts and seeds

2099 Food preparations, n.e.c. (pt)

311919 Other Snack Food Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing snack foods (except roasted nuts and peanut butter).

The data published with NAICS code 311919 include the following SIC industries:

2052 Cookies and crackers (pt)

2096 Potato chips and similar snacks

31192 Coffee and Tea Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) roasting coffee; (2) manufacturing coffee and tea concentrates (including instant and freeze-dried); (3) blending tea; (4) manufacturing herbal tea; and (5) manufacturing coffee extracts, flavorings, and syrups.

311920 Coffee and Tea Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) roasting coffee; (2) manufacturing coffee and tea concentrates (including instant and freeze-dried); (3) blending tea; (4) manufacturing herbal tea; and (5) manufacturing coffee extracts, flavorings, and syrups.

The data published with NAICS code 311920 include the following SIC industries:

2043 Cereal breakfast foods (pt)

2095 Roasted coffee (pt)

2099 Food preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311920 do not include establishments primarily engaged in the manufacture of coffee flavorings and syrups. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31193 Flavoring Syrup and Concentrate Manufacturing

This industry comprises establishments primarily engaged in manufacturing flavoring syrup drink concentrates and related products for soda fountain use or for the manufacture of soft drinks.

311930 Flavoring Syrup and Concentrate Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing flavoring syrup drink concentrates and related products for soda fountain use or for the manufacture of soft drinks.

The data published with NAICS code 311930 include the following SIC industry:

2087 Flavoring extracts and syrups, n.e.c. (pt)

31194 Seasoning and Dressing Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dressings and sauces, such as mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravies); (2) manufacturing spices, table salt, seasoning, and flavoring extracts (except coffee and meat), and natural food colorings; and (3) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

311941 Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravy).

The data published with NAICS code 311941 include the following SIC industries:

2035 Pickles, sauces, and salad dressings (pt)

2099 Food preparations, n.e.c.(pt)

311942 Spice and Extract Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing spices, table salt, seasonings, flavoring extracts (except coffee and meat), and natural food colorings and/or (2) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

The data published with NAICS code 311942 include the following SIC industries:

2087 Flavoring extracts and syrups, n.e.c. (pt)

2095 Roasted coffee (pt)

2099 Food preparations, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311942 include establishments primarily engaged in the manufacture of coffee extracts but do not include establishments primarily engaged in the manufacture of malt extract. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31199 All Other Food Manufacturing

This industry comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruits, vegetables, and specialties; dairy products; meat products; seafood products; bakeries and tortillas; snack foods; coffee and tea; flavoring syrups and concentrates; seasonings; and dressings). Included in this industry are establishments primarily engaged in mixing purchased dried and/or dehydrated ingredients including those mixing purchased dried and/or dehydrated ingredients for soup mixes and bouillon.

311991 Perishable Prepared Food Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing perishable prepared foods, such as salads, sandwiches, prepared meals, fresh pizza, fresh pasta, and peeled or cut vegetables.

The data published with NAICS code 311991 include the following SIC industry:

2099 Food preparations, n.e.c. (pt)

311999 All Other Miscellaneous Food Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruits, vegetables, and specialties; dairy products; meat products; seafood products; bakeries and tortillas; snack foods; coffee and tea; flavoring syrups and concentrates; seasonings and dressings; and perishable prepared food). Included in this industry are establishments primarily engaged in mixing purchased dried and/or dehydrated ingredients including those mixing purchased dried and/or dehydrated ingredients for soup mixes and bouillon.

The data published with NAICS code 311999 include the following SIC industries:

2015 Poultry slaughtering and processing (pt)

2032 Canned specialties (pt)

2087 Flavoring extracts and syrups, n.e.c. (pt)

2099 Food preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311999 do not include establishments primarily engaged in the manufacture of soup mixes from purchased dehydrated ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

312 Beverage and Tobacco Product Manufacturing

Industries in the Beverage and Tobacco Product Manufacturing subsector manufacture beverages and tobacco products. The industry group, Beverage Manufacturing, includes three types of establishments: (1) those that manufacture nonalcoholic beverages; (2) those that manufacture alcoholic beverages through the fermentation process; and (3) those that produce distilled alcoholic beverages. Ice manufacturing, while not a beverage, is included with nonalcoholic beverage manufacturing because it uses the same production process as water purification.

In the case of activities related to the manufacture of beverages, the structure follows the defined productive processes. Brandy, a distilled beverage, was not placed

under distillery product manufacturing, but rather under the NAICS class for winery product manufacturing since the productive process used in the manufacturing of alcoholic grape-based beverages produces both wines (fermented beverage) and brandies (distilled beverage).

The industry group, Tobacco Manufacturing, includes two types of establishments: (1) those engaged in redrying and stemming tobacco and (2) those that manufacture tobacco products, such as cigarettes and cigars.

3121 Beverage Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 31211, Soft Drink and Ice Manufacturing; 31212, Breweries; 31213, Wineries; and 31214, Distilleries.

31211 Soft Drink and Ice Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing soft drinks; (2) manufacturing ice; and (3) purifying and bottling water.

312111 Soft Drink Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing soft drinks and artificially carbonated waters.

The data published with NAICS code 312111 include the following SIC industry:

2086 Bottled and canned soft drinks (pt)

312112 Bottled Water Manufacturing

This U.S. industry comprises establishments primarily engaged in purifying and bottling water (including naturally carbonated).

The data published with NAICS code 312112 include the following SIC industry:

2086 Bottled and canned soft drinks (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 312112 do not include establishments primarily engaged in the bottling of mineral or spring water. The NAICS definitions will be fully implemented with the 2002 Economic Census.

312113 Ice Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ice.

The data published with NAICS code 312113 include the following SIC industry:

2097 Manufactured ice

31212 Breweries

This industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.

312120 Breweries

This U.S. industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.

The data published with NAICS code 312120 include the following SIC industry:

2082 Malt beverages

31213 Wineries

This industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wine and brandies; (2) manufacturing wine and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.

312130 Wineries

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wine and brandies; (2) manufacturing wine and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.

The data published with NAICS code 312130 include the following SIC industry:

2084 Wines, brandy, and brandy spirits

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 312130 do not include establishments primarily engaged in the manufacture of applejack. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31214 Distilleries

This industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

312140 Distilleries

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

The data published with NAICS code 312140 include the following SIC industry:

2085 Distilled liquor, except brandy

3122 Tobacco Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 31221, Tobacco Stemming and Redrying; and 31222, Tobacco Product Manufacturing.

31221 Tobacco Stemming and Redrying

This industry comprises establishments primarily engaged in the stemming and redrying of tobacco.

312210 Tobacco Stemming and Redrying

This U.S. industry comprises establishments primarily engaged in the stemming and redrying of tobacco.

The data published with NAICS code 312210 include the following SIC industry:

2141 Tobacco stemming and redrying (pt)

31222 Tobacco Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing cigarettes, cigars, smoking and chewing tobacco, and reconstituted tobacco.

312221 Cigarette Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing cigarettes.

The data published with NAICS code 312221 include the following SIC industries:

2111 Cigarettes

312229 Other Tobacco Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing tobacco products (except cigarettes).

The data published with NAICS code 312229 include the following SIC industries:

2121 Cigars

2131 Chewing and smoking tobacco

2141 Tobacco stemming and redrying (pt)

313 Textile Mills

Industries in the Textile Mills subsector group establishments that transform a basic fiber (natural or synthetic) into a product, such as yarn or fabric, that is further manufactured into usable items, such as apparel, sheets and towels, and textile bags for individual or industrial consumption. The further manufacturing may be performed in the same establishment and classified in this subsector, or it may be performed at a separate establishment and be classified elsewhere in manufacturing.

The main processes in this subsector include preparation and spinning of fiber, knitting or weaving of fabric, and the finishing of the textile. The NAICS structure follows and captures this process flow. Major industries in this flow, such as preparation of fibers, weaving of fabric, knitting of fabric, and fiber and fabric finishing, are uniquely identified. Texturizing, throwing, twisting, and winding of yarn contains aspects of both fiber preparation and fiber finishing and is classified with preparation of fibers rather than with finishing of fibers.

NAICS separates the manufacturing of primary textiles and the manufacturing of textile products (except apparel) when the textile product is produced from purchased primary textiles, such as fabric. The manufacturing of textile products (except apparel) from purchased fabric is classified in Subsector 314, Textile Product Mills, and apparel from purchased fabric is classified in Subsector 315, Apparel Manufacturing.

Excluded from this subsector are establishments that weave or knit fabric and make garments. These establishments are included in Subsector 315, Apparel Manufacturing.

3131 Fiber, Yarn, and Thread Mills

This NAICS industry group includes establishments classified in NAICS Industry 31311, Fiber, Yarn, and Thread Mills.

31311 Fiber, Yarn, and Thread Mills

This industry comprises establishments primarily engaged in one or more of the following: (1) spinning yarn; (2) manufacturing thread of any fiber; (3) texturizing, throwing, twisting, and winding purchased yarn or manmade fiber filaments; and (4) producing hemp yarn and further processing into rope or bags.

313111 Yarn Spinning Mills

This U.S. industry comprises establishments primarily engaged in spinning yarn from any fiber and/or producing hemp yarn and further processing into rope or bags.

The data published with NAICS code 313111 include the following SIC industries:

2281 Yarn spinning mills

2299 Textile goods, n.e.c. (pt)

313112 Yarn Texturizing, Throwing, and Twisting Mills

This U.S. industry comprises establishments primarily engaged in texturizing, throwing, twisting, spooling, or winding purchased yarns or manmade fiber filaments.

The data published with NAICS code 313112 include the following SIC industry:

2282 Yarn throwing and winding mills (pt)

3131121 Yarn Texturing, Throwing, and Twisting Mills – Manufacturer

Establishments primarily engaged in texturing, throwing, twisting, spooling, or winding purchased yarns or manmade filaments.

3131122 Yarn Texturing, Throwing, and Twisting Mills – Commission Finisher

Establishments primarily engaged in throwing, twisting, spooling, or winding yarns or manmade filaments on a commission basis.

313113 Thread Mills

This U.S. industry comprises establishments primarily engaged in manufacturing thread (e.g., sewing, hand-knitting, crochet) of all fibers.

The data published with NAICS code 313113 include the following SIC industries:

2284 Thread mills (pt)

2299 Textile goods, n.e.c. (pt)

3132 Fabric Mills

This NAICS industry group includes establishments classified in the following NAICS Industries: 31321, Broadwoven Fabric Mills; 31322, Narrow Fabric Mills and Schiffli Machine Embroidery; 31323, Nonwoven Fabric Mills; and 31324, Knit Fabric Mills.

31321 Broadwoven Fabric Mills

This industry comprises establishments primarily engaged in weaving broadwoven fabrics and felts (except tire fabrics and rugs). Establishments in this industry may weave only, weave and finish, or weave, finish, and further fabricate fabric products.

313210 Broadwoven Fabric Mills

This U.S. industry comprises establishments primarily engaged in weaving broadwoven fabrics and felts (except tire fabrics and rugs). Establishments in this industry may weave only, weave and finish, or weave, finish, and further fabricate fabric products.

The data published with NAICS code 313210 include the following SIC industries:

2211 Weaving mills, cotton

2221 Weaving mills, synthetics

2231 Weaving and finishing mills, wool (pt)

2299 Textile goods, n.e.c. (pt)

31322 Narrow Fabric Mills and Schiffli Machine Embroidery

This industry comprises establishments primarily engaged in one or more of the following: (1) weaving or braiding narrow fabrics; (2) manufacturing Schiffli machine embroideries; and (3) making fabric-covered elastic yarn and thread.

313221 Narrow Fabric Mills

This U.S. industry comprises establishments primarily engaged in (1) weaving or braiding narrow fabrics in their final form or initially made in wider widths that are specially constructed for narrower widths and/or (2) making fabric-covered elastic yarn and thread. Establishments in this industry may weave only; weave and finish; or weave, finish, and further fabricate fabric products

The data published with NAICS code 313221 include the following SIC industries:

2241 Narrow fabric mills

2299 Textile goods, n.e.c. (pt)

313222 Schiffli Machine Embroidery

This U.S. industry comprises establishments primarily engaged in manufacturing Schiffli machine embroideries.

The data published with NAICS code 313222 include the following SIC industry:

2397 Schiffli machine embroideries

31323 Nonwoven Fabric Mills

This industry comprises establishments primarily engaged in manufacturing nonwoven fabrics and felts. Processes used include bonding and/or interlocking fibers by mechanical, chemical, thermal, or solvent means, or by combinations thereof.

313230 Nonwoven Fabric Mills

This U.S. industry comprises establishments primarily engaged in manufacturing nonwoven fabrics and felts. Processes used include bonding and/or interlocking fibers by mechanical, chemical, thermal, or solvent means, or by combinations thereof.

The data published with NAICS code 313230 include the following SIC industries:

2297 Nonwoven fabrics

2299 Textile goods, n.e.c. (pt)

31324 Knit Fabric Mills

This industry comprises establishments primarily engaged in one of the following: (1) knitting weft (i.e., circular) and warp (i.e., flat) fabric; (2) knitting and finishing

weft and warp fabric; (3) manufacturing lace; or (4) manufacturing, dyeing, and finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

313241 Weft Knit Fabric Mills

This U.S. industry comprises establishments primarily engaged in knitting weft (i.e., circular) fabric or knitting and finishing weft fabric. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

The data published with NAICS code 313241 include the following SIC industry:

2257 Circular knit fabric mills (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 313241 do not include establishments primarily engaged in the manufacture of articles of weft knit fabric. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3132411 Weft Knit Fabric Mills – Manufacturer

Establishments primarily engaged in knitting weft (i.e., circular) fabric; knitting and finishing weft fabric; or knitting, finishing, and further fabricating weft fabric products (except apparel).

3132412 Weft Knit Fabric Mills – Jobber

Establishments engaged as weft knit fabric jobbers, who perform entrepreneurial functions of a manufacturer, including buying raw materials, designing and preparing samples, arranging for fabric to be made from their materials, and marketing finished fabric or fabricated products (except apparel).

3132413 Weft Knit Fabric Mills – Contractor

Establishments primarily engaged in knitting or finishing weft knit fabric or further fabricating weft knit fabric into products (except apparel) on a commission basis.

313249 Other Knit Fabric and Lace Mills

This U.S. industry comprises establishments primarily engaged in one of the following: (1) knitting warp (i.e., flat) fabric; (2) knitting and finishing warp fabric; (3) manufacturing lace; or (4) manufacturing, dyeing, or finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

The data published with NAICS code 313249 include the following SIC industries:

2258 Lace and warp knit fabric mills (pt)

2259 Knitting mills, n.e.c. (pt)

3132491 Other Knit Fabric and Lace Mills – Manufacturer

Establishments primarily engaged in knitting warp (i.e., flat) fabric; knitting and finishing warp fabric; knitting, finishing, and further fabricating warp fabric products (except apparel); manufacturing lace; or manufacturing, dyeing, or finishing lace and lace goods.

3132492 Other Knit Fabric and Lace Mills – Jobber

Establishments engaged as other knit fabric and lace jobbers, who perform entrepreneurial functions of a manufacturer, including buying raw materials, designing and preparing samples, arranging for fabric to be made from their materials, and marketing finished fabric.

3132493 Other Knit Fabric and Lace Mills – Contractor

Establishments primarily engaged in knitting or finishing lace and other knit fabric or further fabricating lace and other knit fabric into products (except apparel) on a commission basis.

3133 Textile and Fabric Finishing and Fabric Coating Mills

This NAICS industry group includes establishments classified in the following NAICS Industries: 31331, Textile and Fabric Finishing Mills; and 31332, Fabric Coating Mills.

31331 Textile and Fabric Finishing Mills

This industry comprises (1) establishments primarily engaged in finishing of textiles, fabrics, and apparel, and (2) establishments of converters who buy fabric goods in the grey, have them finished on contract, and sell at wholesale. Finishing operations include: bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), stonewashing, and other mechanical finishing, such as preshrinking, shrinking, sponging, calendaring, mercerizing, and napping; as well as cleaning, scouring, and the preparation of natural fibers and raw stock.

313311 Broadwoven Fabric Finishing Mills

This U.S. industry comprises (1) establishments primarily engaged in finishing broadwoven fabrics and (2) establishments of converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), and other mechanical finishing, such as preshrinking, shrinking, sponging, calendaring, mercerizing and napping.

The data published with NAICS code 313311 include the following SIC industries:

- 2231 Weaving and finishing mills, wool (pt)
- 2261 Finishing plants, cotton
- 2262 Finishing plants, synthetics
- 5131 Piece goods, notions and other dry goods (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 313311 do not include establishments primarily engaged in the sponging of fabric for tailors and dressmakers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3133111 Broadwoven Fabric Finishing Mills – Manufacturer

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of purchased broadwoven fabrics.

3133112 Broadwoven Fabric Finishing Mills – Converter

Establishments engaged as converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale.

3133113 Broadwoven Fabric Finishing Mills – Commission Finisher

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of broadwoven fabrics on a commission basis.

313312 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills

This U.S. industry comprises (1) establishments primarily engaged in dyeing, bleaching, printing, and other finishing of textiles, apparel, and fabrics (except broadwoven) and (2) establishments of converters who buy fabrics (except broadwoven) in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), stonewashing, and other mechanical finishing, such as preshrinking, shrinking, sponging, calendering, mercerizing and napping; as well as cleaning, scouring, and the preparation of natural fibers and raw stock.

The data published with NAICS code 313312 include the following SIC industries:

- 2231 Weaving and finishing mills, wool (pt)
- 2257 Circular knit fabric mills (pt)
- 2258 Lace and warp knit fabric mills (pt)

2269 Finishing plants, n.e.c.

2282 Yarn throwing and winding mills (pt)

2284 Thread mills (pt)

2299 Textile goods, n.e.c. (pt)

5131 Piece goods, notions and other dry goods (pt)

3133121 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Manufacturer

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of purchased textiles, apparel, and fabrics (except broadwoven).

3133122 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Converter

Establishments engaged as converters who buy fabrics (except broadwoven) in the grey, have them finished on contract, and sell at wholesale.

3133123 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Commission Finisher

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of textiles, apparel, and fabrics (except broadwoven) on a commission basis.

31332 Fabric Coating Mills

This industry comprises establishments primarily engaged in coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

313320 Fabric Coating Mills

This U.S. industry comprises establishments primarily engaged in coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

The data published with NAICS code 313320 include the following SIC industries:

2295 Coated fabrics, not rubberized

3069 Fabricated rubber products, n.e.c. (pt)

314 Textile Product Mills

Industries in the Textile Product Mills subsector group establishments that made textile products (except apparel). With a few exceptions, processes used in these industries are generally cut and sew (i.e., purchasing fabric and cutting and sewing to make nonapparel textile products, such as sheets and towels).

3141 Textile Furnishings Mills

This NAICS industry group includes establishments classified in the following NAICS Industries: 31411, Carpet and Rug Mills; and 31412, Curtain and Linen Mills.

31411 Carpet and Rug Mills

This industry comprises establishments primarily engaged in (1) manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or (2) finishing carpets and rugs.

314110 Carpet and Rug Mills

This U.S. industry comprises establishments primarily engaged in (1) manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or (2) finishing carpets and rugs.

The data published with NAICS code 314110 include the following SIC industry:

2273 Carpets and rugs

31412 Curtain and Linen Mills

This industry comprises establishments primarily engaged in manufacturing household textile products, such as curtains, draperies, linens, bedspreads, sheets, tablecloths, towels, and shower curtains, from purchased materials.

314121 Curtain and Drapery Mills

This U.S. industry comprises establishments primarily engaged in manufacturing window curtains and draperies from purchased fabrics or sheet goods. The curtains and draperies may be made on a stock or custom basis for sale to individual retail customers.

The data published with NAICS code 314121 include the following SIC industries:

2391 Curtains and draperies

5714 Drapery and upholstery stores (pt)

314129 Other Household Textile Product Mills

This U.S. industry comprises establishments primarily engaged in manufacturing household textile products (except window curtains and draperies), such as bedspreads, sheets, tablecloths, towels, and shower curtains, from purchased materials.

The data published with NAICS code 314129 include the following SIC industry:

2392 Housefurnishings, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 314129 do not include

establishments primarily engaged in the making of custom slip covers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3149 Other Textile Product Mills

This industry group comprises establishments primarily engaged in making textile products, (except carpets and rugs, curtains and draperies, and other household textile products) from purchased materials.

31491 Textile Bag and Canvas Mills

This industry comprises establishments primarily engaged in manufacturing textile bags, awnings, tents, and related products from purchased textile fabrics.

314911 Textile Bag Mills

This U.S. industry comprises establishments primarily engaged in manufacturing bags from purchased textile fabrics or yarns.

The data published with NAICS code 314911 include the following SIC industries:

2392 Housefurnishings, n.e.c. (pt)

2393 Textile bags

314912 Canvas and Related Product Mills

This U.S. industry comprises establishments primarily engaged in manufacturing canvas and canvas-like products, such as awnings, sails, tarpaulins, and tents, from purchased fabrics.

The data published with NAICS code 314912 include the following SIC industry:

2394 Canvas and related products

31499 All Other Textile Product Mills

This industry comprises establishments primarily engaged in manufacturing nonapparel textile products (except carpet, rugs, curtains, linens, bags, and canvas products) from purchased materials.

314991 Rope, Cordage, and Twine Mills

This U.S. industry comprises establishments primarily engaged in manufacturing rope, cable, cordage, twine, and related products from all materials (e.g., abaca, sisal, henequen, hemp, cotton, paper, jute, flax, manmade fibers including glass).

The data published with NAICS code 314991 include the following SIC industry:

2298 Cordage and twine

314992 Tire Cord and Tire Fabric Mills

This U.S. industry comprises establishments primarily engaged in manufacturing cord and fabric of polyester, rayon, cotton, glass, steel, or other materials for use in reinforcing rubber tires, industrial belting, and similar uses.

The data published with NAICS code 314992 include the following SIC industry:

2296 Tire cord and fabric

314999 All Other Miscellaneous Textile Product Mills

This U.S. industry comprises establishments primarily engaged in manufacturing textile products (except carpets and rugs; curtains and linens; textile bags and canvas products; rope, cordage, and twine; and tire cord and tire fabrics) from purchased materials.

The data published with NAICS code 314999 include the following SIC industries:

2299 Textile goods, n.e.c. (pt)

2395 Pleating and stitching (pt)

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 314999 include establishments primarily engaged in the manufacture of other miscellaneous textile products from SIC 3999, but do not include establishments primarily engaged in the manufacture of dust rags or textile fire hoses, or engaged in the embroidery of advertising. The NAICS definitions will be fully implemented with the 2002 Economic Census.

315 Apparel Manufacturing

Industries in the Apparel Manufacturing subsector group establishments with two distinct manufacturing processes: (1) cut and sew (i.e., purchasing fabric and cutting and sewing to make a garment) and (2) the manufacture of garments in establishments that first knit fabric and then cut and sew the fabric into a garment. The Apparel Manufacturing subsector includes a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel manufacture; and tailors, manufacturing custom garments for individual clients are all included. Knitting, when done alone, is classified in the

Textile Mills subsector, but when knitting is combined with the production of complete garments, the activity is classified in Apparel Manufacturing.

3151 Apparel Knitting Mills

This industry group comprises establishments primarily engaged in knitting apparel or knitting fabric and then manufacturing apparel. This industry group includes jobbers performing entrepreneurial functions involved in knitting apparel and accessories. Knitting fabric, without manufacturing apparel, is classified in Subsector 313, Textile Mills.

31511 Hosiery and Sock Mills

This industry comprises establishments primarily engaged in knitting or knitting and finishing hosiery and socks.

315111 Sheer Hosiery Mills

This U.S. industry comprises establishments primarily engaged in knitting or knitting and finishing women's, misses', and girls' full-length and knee-length sheer hosiery (except socks).

The data published with NAICS code 315111 include the following SIC industries:

2251 Women's hosiery, except socks

2252 Hosiery, n.e.c. (pt)

315119 Other Hosiery and Sock Mills

This U.S. industry comprises establishments primarily engaged in knitting or knitting and finishing hosiery (except women's, misses', and girls' sheer hosiery).

The data published with NAICS code 315119 include the following SIC industry:

2252 Hosiery, n.e.c. (pt)

31519 Other Apparel Knitting Mills

This industry comprises establishments primarily engaged in one of the following: (1) knitting underwear, outerwear, and/or nightwear; (2) knitting fabric and manufacturing underwear, outerwear, and/or nightwear; or (3) knitting, manufacturing, and finishing knit underwear, outerwear, and/or nightwear.

315191 Outerwear Knitting Mills

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) knitting outerwear; (2) knitting fabric and manufacturing outerwear; and (3) knitting, manufacturing, and finishing knit outerwear. Examples of products made in knit outerwear mills are shirts, shorts, sweat suits, sweaters, gloves, and pants.

The data published with NAICS code 315191 include the following SIC industries:

2253 Knit outerwear mills

2259 Knitting mills, n.e.c. (pt)

3151911 Outerwear Knitting Mills – Manufacturer

Establishments primarily engaged in knitting outerwear clothing.

3151912 Outerwear Knitting Mills – Jobber

Establishments engaged as knit outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

3151913 Outerwear Knitting Mills – Contractor

Establishments primarily engaged in manufacturing knit outerwear on materials owned by others (commission basis).

315192 Underwear and Nightwear Knitting Mills

This U.S. industry comprises establishments primarily engaged in one of the following: (1) knitting underwear and nightwear; (2) knitting fabric and manufacturing underwear and nightwear; or (3) knitting, manufacturing, and finishing knit underwear and nightwear. Examples of products produced in underwear and nightwear knitting mills are briefs, underwear T-shirts, pajamas, nightshirts, foundation garments, and panties.

The data published with NAICS code 315192 include the following SIC industries:

2254 Knit underwear mills

2259 Knitting mills, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315192 do not include knitting mills primarily engaged in the manufacture of bath and lounge robes. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3152 Cut and Sew Apparel Manufacturing

This industry group comprises establishments primarily engaged in manufacturing cut and sew apparel from woven fabric or purchased knit fabric. Included in this industry group is a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel

manufacture; and tailors, manufacturing custom garments for individual clients. Establishments weaving or knitting fabric, without manufacturing apparel, are classified in Subsector 313, Textile Mills.

31521 Cut and Sew Apparel Contractors

This industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for apparel and accessories and/or (2) sewing materials owned by others for apparel and accessories.

315211 Men’s and Boys’ Cut and Sew Apparel Contractors

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for men’s and boys’ apparel and/or (2) sewing materials owned by others for men’s and boys’ apparel.

The data published with NAICS code 315211 include the following SIC industries:

2311 Men’s and boys’ suits and coats (pt)

2321 Shirts, men’s and boys’ (pt)

2322 Men’s and boys’ underwear and nightwear (pt)

2325 Men’s and boys’ trousers and slacks (pt)

2326 Men’s and boys’ work clothing (pt)

2329 Men’s and boys’ clothing, n.e.c. (pt)

2341 Women’s and children’s underwear (pt)

2384 Robes and dressing gowns (pt)

2385 Waterproof outer garments (pt)

2395 Pleating and stitching (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315211 do not include establishments primarily engaged in cut and sew contract work for men’s and boy’s neckwear, hats, shirts, other outerwear, fur goods, dress and work gloves, leather gloves and mittens, leather and sheep-lined clothing, apparel belts, or apparel and accessories, nec. The NAICS definitions will be fully implemented with the 2002 Economic Census.

315212 Women’s, Girls’, and Infants’ Cut and Sew Apparel Contractors

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for women’s, girls’, and infants’ apparel and accessories and/or (2) sewing materials owned by others for women’s, girls’, and infants’ apparel and accessories.

The data published with NAICS code 315212 include the following SIC industries:

- 2331 Women's blouses and waists (pt)
- 2335 Women's dresses (pt)
- 2337 Women's suits and coats (pt)
- 2339 Women's outerwear, n.e.c. (pt)
- 2341 Women's and children's underwear (pt)
- 2342 Brassieres and allied garments (pt)
- 2361 Girls' and children's dresses and blouses (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2384 Robes and dressing gowns (pt)
- 2385 Waterproof outer garments (pt)
- 2389 Apparel and accessories, n.e.c. (pt)
- 2395 Pleating and stitching (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315212 do not include establishments primarily engaged in cut and sew contract work for women's, girls', and infants' hats; fur goods; dress and work gloves; leather gloves and mittens; leather and sheep-lined clothing; or apparel belts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

31522 Men's and Boys' Cut and Sew Apparel Manufacturing

This industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew apparel from purchased fabric. Men's and boys' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315221 Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' underwear and nightwear from purchased fabric. Men's and boys' underwear and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are briefs, bathrobes, underwear T-shirts and shorts, nightshirts, and pajamas.

The data published with NAICS code 315221 include the following SIC industries:

- 2322 Men's and boys' underwear and nightwear (pt)
- 2341 Women's and children's underwear (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2384 Robes and dressing gowns (pt)

315222 Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' suits, overcoats, sport coats, tuxedos, dress uniforms, and other tailored apparel (except fur and leather) from purchased fabric. Men's and boys' suit, coat, and overcoat jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315222 include the following SIC industries:

- 2311 Men's and boys' suits and coats (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2385 Waterproof outer garments (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315222 do not include establishments primarily engaged in custom tailoring.

3152221 Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing men's and boys' suits, overcoats, sport coats, tuxedos, dress uniforms, and other tailored apparel (except fur and leather) from purchased fabric.

3152222 - Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing - Jobber

Establishments engaged as men's and boys' suit, coat, and overcoat jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315223 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric. Men's and boys' shirt (except

work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex outerwear shirts, such as T-shirts and sweatshirts that are sized without specific reference to gender (i.e., adult S, M, L, XL) are included in this industry.

The data published with NAICS code 315223 include the following SIC industries:

2321 Shirts, men's and boys' (pt)

2361 Girls' and children's dresses and blouses (pt)

3152231 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric.

3152232 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing – Jobber

Establishments engaged as men's and boys' shirt (except work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315224 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' jeans, dungarees, and other separate trousers and slacks (except work pants) from purchased fabric. Men's and boys' trouser, slack, and jean jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315224 include the following SIC industries:

2325 Men's and boys' trousers and slacks (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

3152241 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing men's and boys' jeans, dungarees, and other separate trousers and slacks (except work pants) from purchased fabric.

3152242 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing – Jobbers

Establishments engaged as men's and boys' trouser, slack, and jean jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315225 Men's and Boys' Cut and Sew Work Clothing Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' work shirts, work pants (excluding jeans and dungarees), other work clothing, and washable service apparel from purchased fabric. Men's and boys' work clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are washable service apparel, laboratory coats, work shirts, work pants (except jeans and dungarees), and hospital apparel.

The data published with NAICS code 315225 include the following SIC industry:

2326 Men's and boys' work clothing (pt)

3152251 Men's and Boys' Cut and Sew Work Clothing Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing men's and boys' work shirts, work pants (excluding jeans and dungarees), other work clothing, and washable service apparel from purchased fabric.

3152252 Men's and Boys' Cut and Sew Work Clothing Manufacturing – Jobbers

Establishments engaged as men's and boys' work clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315228 Men's and Boys' Cut and Sew Other Outerwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and work clothing). Men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples,

arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex sweat-pants and similar garments that are sized without specific reference to gender (i.e., adult S, M, L, XL) are also included in this industry. Examples of products made by these establishments are athletic clothing (except athletic uniforms), bathing suits, down coats, outerwear shorts, windbreakers and jackets, and jogging suits.

The data published with NAICS code 315228 include the following SIC industries:

2329 Men's and boys' clothing, n.e.c. (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

3152281 Men's and Boys' Cut and Sew Other Outerwear Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and working clothing).

3152282 Men's and Boys' Cut and Sew Other Outerwear Manufacturing – Jobbers

Establishments engaged as men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

31523 Women's and Girls' Cut and Sew Apparel Manufacturing

This industry comprises establishments primarily engaged in manufacturing women's and girls' apparel from purchased fabric. Women's and girls' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315231 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric. Women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their

materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathrobes, foundation garments, nightgowns, pajamas, panties, and slips.

The data published with NAICS code 315231 include the following SIC industries:

2341 Women's and children's underwear (pt)

2342 Brassieres and allied garments (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2384 Robes and dressing gowns (pt)

2389 Apparel and accessories, n.e.c. (pt)

3152311 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric.

3152312 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing – Jobbers

Establishments engaged as women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315232 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' blouses and shirts from purchased fabric. Women's and girls' blouse and shirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315232 include the following SIC industries:

2331 Women's blouses and waists (pt)

2361 Girls' and children's dresses and blouses (pt)

3152321 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing women's and girls' blouses and shirts from purchased fabric.

3152322 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing – Jobbers

Establishments engaged as women's and girls' blouse and shirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315233 Women's and Girls' Cut and Sew Dress Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' dresses from purchased fabric. Women's and girls' dress jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315233 include the following SIC industries:

2335 Women's dresses (pt)

2361 Girls' and children's dresses and blouses (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315233 do not include establishments primarily engaged in custom tailoring.

3152331 Women's and Girls' Cut and Sew Dress Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing women's and girls' dresses from purchased fabric.

3152332 Women's and Girls' Cut and Sew Dress Manufacturing – Jobbers

Establishments engaged as women's and girls' dress jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315234 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric. Women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial

functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315234 include the following SIC industries:

2337 Women's suits and coats (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

3152341 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric.

3152342 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing – Jobbers

Establishments engaged as women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

315239 Women's and Girls' Cut and Sew Other Outerwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' cut and sew apparel from purchased fabric (except underwear, lingerie, nightwear, blouses, shirts, dresses, suits, tailored coats, tailored jackets, and skirts). Women's and girls' other outerwear clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathing suits, down coats, sweaters, jogging suits, outerwear pants and shorts, and windbreakers.

The data published with NAICS code 315239 include the following SIC industries:

2339 Women's outerwear, n.e.c. (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

3152391 Women's and Girls' Cut and Sew Other Outerwear Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing women's and girls' cut and sew apparel from purchased fabric (except underwear, lingerie, nightwear, blouses, shirts, dresses, suits, tailored coats, tailored jackets, and skirts).

3152392 Women's and Girls' Cut and Sew Other Outerwear Manufacturing – Jobbers

Establishments engaged as women's and girls' other outerwear clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

31529 Other Cut and Sew Apparel Manufacturing

This industry comprises establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except men's, boys', women's, and girls' apparel). This industry includes establishments manufacturing apparel, such as fur apparel, leather apparel, infants' apparel, costumes, and clerical vestments.

315291 Infants' Cut and Sew Apparel Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing infants' dresses, blouses, shirts, and all other infants' wear from purchased fabric. Infants' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

The data published with NAICS code 315291 include the following SIC industries:

- 2341 Women's and children's underwear (pt)
- 2361 Girls' and children's dresses and blouses (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2385 Waterproof outer garments (pt)

3152911 Infants' Cut and Sew Apparel Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing infants' dresses, blouses, shirts, and all other infants' wear from purchased fabric. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

3152912 Infants' Cut and Sew Apparel Manufacturing – Jobbers

Establishments engaged as infants' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

315292 Fur and Leather Apparel Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew fur and leather apparel, and sheep-lined clothing. Fur and leather apparel jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315292 include the following SIC industries:

- 2371 Fur goods
- 2386 Leather and sheep-lined clothing

315299 All Other Cut and Sew Apparel Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel). Clothing jobbers for these products, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

The data published with NAICS code 315299 include the following SIC industries:

- 2329 Men's and boys' clothing, n.e.c. (pt)
- 2339 Women's outerwear, n.e.c. (pt)
- 2389 Apparel and accessories, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315299 do not include establishments primarily engaged in the manufacture of

waterproof rubber and plastic outerwear or rubber pants and raincoats. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3152991 All Other Cut and Sew Apparel Manufacturing – Manufacturer

Establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel). Examples of products made by these establishments are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

3152992 All Other Cut and Sew Apparel Manufacturing – Jobbers

Establishments engaged as clothing jobbers (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel), who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel. Examples of these products are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

3159 Apparel Accessories and Other Apparel Manufacturing

This industry group comprises establishments primarily engaged in manufacturing apparel accessories and other apparel (except apparel knitting mills, apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, infants' cut and sew apparel, fur and leather apparel, and all other cut and sew apparel). This industry group includes jobbers performing entrepreneurial functions involved in manufacturing apparel accessories.

31599 Apparel Accessories and Other Apparel Manufacturing

This industry comprises establishments primarily engaged in manufacturing apparel and accessories (except apparel knitting mills, cut and sew apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, and other cut and sew apparel). Jobbers, who perform entrepreneurial functions involved in apparel accessories manufacture, including buying raw materials, designing and preparing samples, arranging for

apparel accessories to be made from their materials, and marketing finished apparel accessories, are included. Examples of products made by these establishments are belts, caps, gloves (except medical, sporting, safety), hats, and neckties.

315991 Hat, Cap, and Millinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew hats, caps, millinery, and hat bodies from purchased fabric. Jobbers, who perform entrepreneurial functions involved in hat, cap, and millinery manufacture, including buying raw materials, designing and preparing samples, arranging for hats, caps, and millinery to be made from their materials, and marketing finished hats, caps, and millinery, are included.

The data published with NAICS code 315991 include the following SIC industry:

2353 Hats, caps, and millinery

315992 Glove and Mitten Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew gloves (except rubber, metal, and athletic gloves) and mittens from purchased fabric, fur, leather, or from combinations of fabric, fur, or leather. Jobbers, who perform entrepreneurial functions involved in glove and mitten manufacture, including buying raw materials, designing and preparing samples, arranging for gloves and mittens to be made from their materials, and marketing finished gloves and mittens, are included.

The data published with NAICS code 315992 include the following SIC industries:

2381 Fabric gloves and mittens

3151 Leather gloves and mittens

315993 Men's and Boys' Neckwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew neckties, scarves, and mufflers from purchased fabric, leather, or from combinations of leather and fabric. Men's and boys' neckwear jobbers, who perform entrepreneurial functions involved in neckwear manufacture, including buying raw materials, designing and preparing samples, arranging for neckwear to be made from their materials, and marketing finished neckwear, are included.

The data published with NAICS code 315993 include the following SIC industry:

2323 Men's and boys' neckwear

315999 Other Apparel Accessories and Other Apparel Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing apparel and apparel accessories (except apparel knitting mills; cut and sew apparel contractors; cut and sew apparel; hats and caps; mittens and

gloves; and men's and boys' neckwear). Jobbers for these products, who perform entrepreneurial functions involved in other apparel and accessory manufacture, including buying raw materials, designing and preparing samples, arranging for other apparel and accessories to be made from their materials, and marketing finished other apparel and accessories, are included. Examples of products made by these establishments are apparel trimmings and findings, belts, women's scarves, suspenders, and waterproof outerwear.

The data published with NAICS code 315999 include the following SIC industries:

2339 Women's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

2387 Apparel belts

2389 Apparel and accessories, n.e.c. (pt)

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

5699 Miscellaneous apparel and accessory stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315999 include establishments primarily engaged in custom tailoring but do not include establishments primarily engaged in the manufacture of rubber bibs, aprons, and bathing caps.

316 Leather and Allied Product Manufacturing

Establishments in the Leather and Allied Product Manufacturing subsector transform hides into leather by tanning or curing and fabricating the leather into products for final consumption. It also includes the manufacture of similar products from other materials, including products (except apparel) made from "leather substitutes," such as rubber, plastics, or textiles. Rubber footwear, textile luggage, and plastics purses or wallets are examples of "leather substitute" products included in this group. The products made from leather substitutes are included in this subsector because they are made in similar ways leather products are made (e.g., luggage). They are made in the same establishments, so it is not practical to separate them.

The inclusion of leather making in this subsector is partly because leather tanning is a relatively small industry that has few close neighbors as a production process, partly because leather is an input to some of the other products classified in this subsector and partly for historical reasons.

3161 Leather and Hide Tanning and Finishing

This NAICS industry group includes establishments classified in NAICS Industry 31611, Leather and Hide Tanning and Finishing.

31611 Leather and Hide Tanning and Finishing

This industry comprises establishments primarily engaged in one or more of the following: (1) tanning, currying, and finishing hides and skins; (2) having others process hides and skins on a contract basis; and (3) dyeing or dressing furs.

316110 Leather and Hide Tanning and Finishing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) tanning, currying, and finishing hides and skins; (2) having others process hides and skins on a contract basis; and (3) dyeing or dressing furs.

The data published with NAICS code 316110 include the following SIC industries:

3111 Leather tanning and finishing

3999 Manufacturing industries, n.e.c. (pt)

3162 Footwear Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 31621, Footwear Manufacturing.

31621 Footwear Manufacturing

This industry comprises establishments primarily engaged in manufacturing footwear (except orthopedic extension footwear).

316211 Rubber and Plastics Footwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing rubber and plastics footwear with vulcanized rubber or plastics soles, molded or cemented to rubber, plastics, or fabric uppers, and rubber and plastics protective footwear.

The data published with NAICS code 316211 include the following SIC industry:

Rubber and plastics footwear

316212 House Slipper Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing house slippers and slipper socks, regardless of material.

The data published with NAICS code 316212 include the following SIC industry:

3142 House slippers

316213 Men's Footwear (Except Athletic) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing men's footwear designed primarily for dress, street, and work. This industry includes men's shoes with rubber or plastics soles and leather or vinyl uppers.

The data published with NAICS code 316213 include the following SIC industry:

3143 Men's footwear, except athletic

316214 Women's Footwear (Except Athletic) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's footwear designed for dress, street, and work. This industry includes women's shoes with rubber or plastics soles and leather or vinyl uppers.

The data published with NAICS code 316214 include the following SIC industry:

3144 Women's footwear, except athletic

316219 Other Footwear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing other footwear (except rubber and plastics footwear; house slippers; men's footwear (except athletic); and women's footwear (except athletic)).

The data published with NAICS code 316219 include the following SIC industry:

3149 Footwear, except rubber, n.e.c.

3169 Other Leather and Allied Product Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 31699, Other Leather and Allied Product Manufacturing.

31699 Other Leather and Allied Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing leather products (except footwear and apparel) from purchased leather or leather substitutes (e.g., fabric, plastics).

316991 Luggage Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing luggage of any material.

The data published with NAICS code 316991 include the following SIC industry:

3161 Luggage

316992 Women's Handbag and Purse Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing women's handbags and purses of any material (except precious metal).

The data published with NAICS code 316992 include the following SIC industry:

3171 Women's handbags and purses

316993 Personal Leather Goods (Except Women's Handbag and Purse) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing personal leather goods (i.e., small articles of any material (except metal) normally carried on or about the person or in a handbag). Examples of personal leather goods made by these establishments are billfolds, coin purses, key cases, toilet kits, and watchbands (except metal).

The data published with NAICS code 316993 include the following SIC industry:

3172 Personal leather goods, n.e.c.

316999 All Other Leather Goods Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing leather goods (except footwear, luggage, handbags, purses, and personal leather goods).

The data published with NAICS code 316999 include the following SIC industries:

3131 Footwear cut stock and findings (pt)

3199 Leather goods, n.e.c.

321 Wood Product Manufacturing

Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile home), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers.

The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.

3211 Sawmills and Wood Preservation

This industry group comprises establishments whose primary production process begins with logs or bolts that are transformed into boards, dimension lumber, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips. Establishments that cut and treat round wood and/or treat wood products made in other establishments to prevent rotting by impregnation with creosote or other chemical compounds are also included in this industry group.

32111 Sawmills and Wood Preservation

This industry comprises establishments primarily engaged in one or more of the following: (1) sawing dimension lumber, boards, beams, timber, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts; (2) sawing round wood poles, pilings, and posts and treating them with preservatives; and (3) treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives to prevent decay and to protect against fire and insects. Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

321113 Sawmills

This U.S. industry comprises establishments primarily engaged in sawing dimension lumber, boards, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts. Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

The data published with NAICS code 321113 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2429 Special product sawmills, n.e.c. (pt)

2439 Structural wood members, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 321113 include establishments primarily engaged in the manufacture of lumber members made from logs and bolts, but do not include establishments primarily engaged in the manufacture of hardwood dimension made from logs and bolts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

321114 Wood Preservation

This U.S. industry comprises establishments primarily engaged in (1) treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives,

such as chromated copper arsenate, to prevent decay and to protect against fire and insects and/or (2) sawing round wood poles, pilings, and posts and treating them with preservatives.

The data published with NAICS code 321114 include the following SIC industry:

2491 Wood preserving

3212 Veneer, Plywood, and Engineered Wood Product Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 32121, Veneer, Plywood, and Engineered Wood Product Manufacturing.

32121 Veneer, Plywood, and Engineered Wood Product Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing veneer and/or plywood; (2) manufacturing engineered wood members; and (3) manufacturing reconstituted wood products. This industry includes manufacturing plywood from veneer made in the same establishment or from veneer made in other establishments, and manufacturing plywood faced with nonwood materials, such as plastics or metal.

321211 Hardwood Veneer and Plywood Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing hardwood veneer and/or hardwood plywood.

The data published with NAICS code 321211 include the following SIC industry:

2435 Hardwood veneer and plywood

321212 Softwood Veneer and Plywood Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing softwood veneer and/or softwood plywood.

The data published with NAICS code 321212 include the following SIC industry:

2436 Softwood veneer and plywood

321213 Engineered Wood Member (Except Truss) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated or laminated wood arches and/or other fabricated or laminated wood structural members.

The data published with NAICS code 321213 include the following SIC industry:

2439 Structural wood members, n.e.c. (pt)

321214 Truss Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing laminated or fabricated wood roof and floor trusses.

The data published with NAICS code 321214 include the following SIC industry:

2439 Structural wood members, n.e.c. (pt)

321219 Reconstituted Wood Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing reconstituted wood sheets and boards.

The data published with NAICS code 321219 include the following SIC industry:

2493 Reconstituted wood products

3219 Other Wood Product Manufacturing

This industry group comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and wood preservation facilities; and establishments manufacturing veneer, plywood, or engineered wood products).

32191 Millwork

This industry comprises establishments primarily engaged in manufacturing hardwood and softwood cut stock and dimension stock (i.e., shapes); wood windows and wood doors; and other millwork including wood flooring. Dimension stock or cut stock is defined as lumber and worked wood products cut or shaped to specialized sizes. These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

321911 Wood Window and Door Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing window and door units, sash, window and door frames, and doors from wood or wood clad with metal or plastics.

The data published with NAICS code 321911 include the following SIC industry:

2431 Millwork (pt)

321912 Cut Stock, Resawing Lumber, and Planing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dimension lumber from purchased lumber; (2) manufacturing dimension stock (i.e., shapes) or cut stock; (3) resawing the output of sawmills; and (4) planing purchased lumber. These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

The data published with NAICS code 321912 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2426 Hardwood dimension and flooring mills (pt)

2439 Structural wood members, n.e.c. (pt)

2499 Wood products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 321912 include establishments primarily engaged in the manufacture of hardwood dimension made from logs and bolts, lumber members made from purchased lumber, and semi-machined and fully-machined softwood dimension lumber, but do not include establishments primarily engaged in the manufacture of staves from purchased lumber. The NAICS definitions will be fully implemented with the 2002 Economic Census.

321918 Other Millwork (Including Flooring)

This U.S. industry comprises establishments primarily engaged in manufacturing millwork (except wood windows, wood doors, and cut stock).

The data published with NAICS code 321918 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2426 Hardwood dimension and flooring mills (pt)

2431 Millwork (pt)

32192 Wood Container and Pallet Manufacturing

This industry comprises establishments primarily engaged in manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers.

321920 Wood Container and Pallet Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers.

The data published with NAICS code 321920 include the following SIC industries:

2429 Special product sawmills, n.e.c. (pt)

2441 Nailed wood boxes & shoo

2448 Wood pallets and skids

2449 Wood containers, n.e.c.

2499 Wood products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 321920 include establishments primarily engaged in the manufacture of cooperage headings and staves made of purchased lumber. The NAICS definitions will be fully implemented with the 2002 Economic Census.

32199 All Other Wood Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and wood preservation facilities; and establishments manufacturing veneer, plywood, engineered wood products, millwork, wood containers, or pallets).

321991 Manufactured Home (Mobile Home) Manufacturing

This U.S. industry comprises establishments primarily engaged in making manufactured homes (i.e., mobile homes) and nonresidential mobile buildings. Manufactured homes are designed to accept permanent water, sewer, and utility connections and although equipped with wheels, they are not intended for regular highway movement.

The data published with NAICS code 321991 include the following SIC industry:

2451 Mobile homes

321992 Prefabricated Wood Building Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing prefabricated wood buildings and wood sections and panels for prefabricated wood buildings.

The data published with NAICS code 321992 include the following SIC industry:

2452 Prefabricated wood buildings

321999 All Other Miscellaneous Wood Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and preservation facilities; establishments manufacturing veneer, engineered wood products, millwork, wood containers, pallets, and wood container parts; and establishments making manufactured homes (i.e., mobile homes) and prefabricated buildings and components).

The data published with NAICS code 321999 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2429 Special product sawmills, n.e.c. (pt)

2499 Wood products, n.e.c. (pt)

3131 Footwear cut stock and findings (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 321999 include establishments primarily engaged in the manufacture of wood cooling towers, but do not include establishments primarily engaged in the manufacture of finished metal moldings for mirrors and pictures, semi-machined and fully-machined softwood dimension, or cooperage headings. The NAICS definitions will be fully implemented with the 2002 Economic Census.

322 Paper Manufacturing

Industries in the Paper Manufacturing subsector make pulp, paper, or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment. There are essentially three activities. The manufacturing of pulp involves separating the cellulose fibers from other impurities in wood or used paper. The manufacturing of paper involves matting these fibers into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and includes coating and laminating activities.

The Paper Manufacturing subsector is subdivided into two industry groups, the first for the manufacturing of pulp and paper and the second for the manufacturing of converted paper products. Paper making is treated as the core activity of the subsector. Therefore, any establishment that makes paper (including paperboard), either alone or in combination with pulp manufacturing or paper converting, is classified as a paper or paperboard mill. Establishments that make pulp without making paper are classified as pulp mills. Pulp mills, paper mills and paperboard mills comprise the first industry group.

Establishments that make products from purchased paper and other materials make up the second industry group, Converted Paper Product Manufacturing. This general activity is then subdivided based, for the most part, on process distinctions. Paperboard container manufacturing uses corrugating, cutting, and shaping machinery to form paperboard into containers. Paper bag and coated and treated paper manufacturing establishments cut and coat paper and foil. Stationery product manufacturing establishments make a variety of paper products used for writing, filing, and similar applications. Other converted paper product manufacturing includes, in particular, the conversion of sanitary paper stock into such things as tissue paper and disposable diapers.

An important process used in the Paper Bag and Coated and Treated Paper Manufacturing industry is lamination, often combined with coating. Lamination and coating makes a composite material with improved properties of strength, impermeability, and so on. The laminated materials may be paper, metal foil, or plastics film. While paper is often one of the components, it is not always. Lamination of plastics film to plastics film is classified in the NAICS Subsector 326, Plastics and Rubber Products Manufacturing, because establishments that do this often first make the film.

The same situation holds with respect to bags. The manufacturing of bags from plastics only, whether or not laminated, is classified in Subsector 326, Plastics and Rubber Products Manufacturing, but all other bag manufacturing is classified in this subsector.

Excluded from this subsector are photosensitive papers. These papers are chemically treated and are classified in Industry 32599, All Other Chemical Product and Preparation Manufacturing.

3221 Pulp, Paper, and Paperboard Mills

This industry group comprises establishments primarily engaged in manufacturing pulp, paper, or paperboard.

32211 Pulp Mills

This industry comprises establishments primarily engaged in manufacturing pulp without manufacturing paper or paperboard. The pulp is made by separating the cellulose fibers from the other impurities in wood or other materials, such as used or recycled rags, linters, scrap paper, and straw.

322110 Pulp Mills

This U.S. industry comprises establishments primarily engaged in manufacturing pulp without manufacturing paper or paperboard. The pulp is made by separating the cellulose fibers from the other impurities in wood or other materials, such as used or recycled rags, linters, scrap paper, and straw.

The data published with NAICS code 322110 include the following SIC industry:

2611 Pulp mills

32212 Paper Mills

This industry comprises establishments primarily engaged in manufacturing paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may convert the paper they make. The activity of making paper classifies an establishment into this industry regardless of the output.

322121 Paper (Except Newsprint) Mills

This U.S. industry comprises establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paper they make.

The data published with NAICS code 322121 include the following SIC industries:

2621 Paper mills (pt)

2676 Sanitary paper products (pt)

3842 Surgical appliances and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 322121 include paper mills which convert sanitary paper stock into sanitary paper products, but do not include paper mills which are primarily engaged in the manufacture of other converted paper products. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3221211 Paper (Except Newsprint) Mills – Integrated Producer

Establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp in combination with pulp manufacture.

3221212 Paper (Except Newsprint) Mills – Nonintegrated Producer

Establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp not in combination with pulp manufacture.

322122 Newsprint Mills

This U.S. industry comprises establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paper they make.

The data published with NAICS code 322122 include the following SIC industry:

2621 Paper mills (pt)

3221221 Newsprint Mills – Integrated Producer

Establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp in combination with pulp manufacture.

3221222 Newsprint Mills – Nonintegrated Producer

Establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp not in combination with pulp manufacture.

32213 Paperboard Mills

This industry comprises establishments primarily engaged in manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

322130 Paperboard Mills

This U.S. industry comprises establishments primarily engaged in manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

The data published with NAICS code 322130 include the following SIC industry:

2631 Paperboard mills

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 322130 do not include paperboard mills primarily engaged in converting paperboard into paperboard products. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3221301 Paperboard Mills – Integrated Producer

Establishments primarily engaged in manufacturing paperboard from pulp in combination with pulp manufacture.

3221302 Paperboard Mills – Nonintegrated Producer

Establishments primarily engaged in manufacturing paperboard from pulp not in combination with pulp manufacture or paperboard converting.

3222 Converted Paper Product Manufacturing

This industry group comprises establishments primarily engaged in converting paper or paperboard without manufacturing paper or paperboard.

32221 Paperboard Container Manufacturing

This industry comprises establishments primarily engaged in converting paperboard into containers without manufacturing paperboard. These establishments use corrugating, cutting, and shaping machinery to form paperboard into containers. Products made by these establishments include boxes; corrugated sheets, pads, and pallets; paper dishes; and fiber drums and reels.

322211 Corrugated and Solid Fiber Box Manufacturing

This U.S. industry comprises establishments primarily engaged in laminating purchased paper or paperboard into corrugated or solid fiber boxes and related products, such as pads, partitions, pallets, and corrugated paper without manufacturing paperboard. These boxes are generally used for shipping.

The data published with NAICS code 322211 include the following SIC industry:

2653 Corrugated and solid fiber boxes

322212 Folding Paperboard Box Manufacturing

This U.S. industry comprises establishments primarily engaged in converting paperboard (except corrugated) into folding paperboard boxes without manufacturing paper and paperboard.

The data published with NAICS code 322212 include the following SIC industry:

2657 Folding paperboard boxes

322213 Setup Paperboard Box Manufacturing

This U.S. industry comprises establishments primarily engaged in converting paperboard into setup paperboard boxes (i.e., rigid-sided boxes not shipped flat) without manufacturing paperboard.

The data published with NAICS code 322213 include the following SIC industry:

2652 Setup paperboard boxes

322214 Fiber Can, Tube, Drum, and Similar Products Manufacturing

This U.S. industry comprises establishments primarily engaged in converting paperboard into fiber cans, tubes, drums, and similar products without manufacturing paperboard.

The data published with NAICS code 322214 include the following SIC industry:

2655 Fiber cans, drums, and similar products

322215 Nonfolding Sanitary Food Container Manufacturing

This U.S. industry comprises establishments primarily engaged in converting sanitary foodboard into food containers (except folding).

The data published with NAICS code 322215 include the following SIC industry:

2656 Sanitary food containers

32222 Paper Bag and Coated and Treated Paper Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) cutting and coating paper and paperboard; (2) cutting and laminating paper and paperboard and other flexible materials (except plastics film to plastics film); (3) manufacturing bags or multiwall bags or sacks of paper, metal foil, coated paper, or laminates or coated combinations of paper and foil with plastics film; (4) manufacturing laminated aluminum and other converted metal foils from purchased foils; and (5) surface coating paper or paperboard.

322221 Coated and Laminated Packaging Paper and Plastics Film Manufacturing

This U.S. industry comprises establishments primarily engaged in performing one or more of the following activities associated with the manufacturing of packaging materials: (1) cutting and coating paper; and (2) cutting and laminating paper with other flexible materials (except plastics to plastics or foil to paper laminates). The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

The data published with NAICS code 322221 include the following SIC industry:

2671 Paper - coated and laminated, packaging (pt)

322222 Coated and Laminated Paper Manufacturing

This U.S. industry comprises establishments primarily engaged in performing one or more of the following activities associated with making products designed for purposes other than packaging: (1) cutting and coating paper; (2) cutting and laminating paper and other flexible materials (except plastics film to plastics film); and (3) manufacturing converted aluminum and other metal foils for non-packaging uses from purchased foils. The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

The data published with NAICS code 322222 include the following SIC industries:

2672 Paper - coated and laminated, n.e.c.

2679 Converted paper products, n.e.c. (pt)

322223 Plastics, Foil, and Coated Paper Bag Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing bags of coated paper, of metal foil, or of laminated or coated combinations of plastics, foil, and paper, whether or not printed.

The data published with NAICS code 322223 include the following SIC industry:

2673 Bags - plastics, laminated, and coated (pt)

322224 Uncoated Paper and Multiwall Bag Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing uncoated paper bags or multiwall bags and sacks.

The data published with NAICS code 322224 include the following SIC industry:

2674 Bags - uncoated paper and multiwall

322225 Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses

This U.S. industry comprises establishments primarily engaged in laminating aluminum and other metal foil into products with flexible packaging uses or gift wrap and other packaging wrap applications.

The data published with NAICS code 322225 include the following SIC industry:

3497 Metal foil and leaf (pt)

322226 Surface-Coated Paperboard Manufacturing

This U.S. industry comprises establishments primarily engaged in laminating, lining, or surface coating purchased paperboard to make other paperboard products.

The data published with NAICS code 322226 include the following SIC industry:

2675 Die-cut paper and board (pt)

32223 Stationery Product Manufacturing

This industry comprises establishments primarily engaged in converting paper or paperboard into products used for writing, filing, art work, and similar applications.

322231 Die-Cut Paper and Paperboard Office Supplies Manufacturing

This U.S. industry comprises establishments primarily engaged in converting paper rollstock or paperboard into die-cut paper or paperboard office supplies. For the purpose of this industry, office supplies are defined as office products, such as filing folders, index cards, rolls for adding machines, file separators and dividers, tabulating cards, and other paper and paperboard office supplies.

The data published with NAICS code 322231 include the following SIC industries:

2675 Die-cut paper and board (pt)

2679 Converted paper products, n.e.c. (pt)

322232 Envelope Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing envelopes for mailing or stationery of any material including combinations.

The data published with NAICS code 322232 include the following SIC industry:

2677 Envelopes

322233 Stationery, Tablet, and Related Product Manufacturing

This U.S. industry comprises establishments primarily engaged in converting paper and paperboard into products used for writing and similar applications (e.g., loose-leaf fillers, notebooks, pads, stationery, tablets).

The data published with NAICS code 322233 include the following SIC industry:

2678 Stationery products

32229 Other Converted Paper Product Manufacturing

This industry comprises establishments primarily engaged in (1) converting paper and paperboard into products (except containers, bags, coated and treated paper and paperboard, and stationery products), or (2) converting pulp into pulp products, such as disposable diapers, or molded pulp egg cartons, food trays, and dishes. Processes used include laminating or lining purchased paper or paperboard.

322291 Sanitary Paper Product Manufacturing

This U.S. industry comprises establishments primarily engaged in converting purchased sanitary paper stock or wadding into sanitary paper products, such as facial tissues and handkerchiefs, table napkins, toilet paper, towels, disposable diapers, sanitary napkins, and tampons.

The data published with NAICS code 322291 include the following SIC industries:

2676 Sanitary paper products (pt)

3842 Surgical appliances and supplies (pt)

322299 All Other Converted Paper Product Manufacturing

This U.S. industry comprises establishments primarily engaged in converting paper or paperboard into products (except containers, bags, coated and treated paper, stationery products, and sanitary paper products) or converting pulp into pulp products, such as egg cartons, food trays, and other food containers from molded pulp.

The data published with NAICS code 322299 include the following SIC industries:

2675 Die-cut paper and board (pt)

2679 Converted paper products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

323 Printing and Related Support Activities

Industries in the Printing and Related Support Activities subsector print products, such as newspapers, books, periodicals, business forms, greeting cards, and other materials, and perform support activities, such as book-binding, platemaking services, and data imaging. The support activities included here are an integral part of the printing industry, and a product (a printing plate, a bound book, or a computer disk or file) that is an integral part of the printing industry is almost always provided by these operations.

Processes used in printing include a variety of methods used to transfer an image from a plate, screen, or computer file to some medium, such as paper, plastics, metal, textile articles, or wood. The most prominent of these methods is to transfer the image from a plate or screen to the medium (lithographic, gravure, screen, and flexographic printing). A rapidly growing new technology uses a computer file to directly “drive” the printing mechanism to create the image and new electrostatic and other types of equipment (digital or nonimpact printing).

In contrast to many other classification systems that locate publishing of printed materials in manufacturing, NAICS classifies the publishing of printed products in Subsector 511, Publishing Industries. Though printing and publishing are often carried out by the same enterprise (a newspaper, for example), it is less and less the case that these distinct activities are carried out in the same establishment. When publishing and printing are done in the same establishment, the establishment is classified in Sector 51, Information, in the appropriate NAICS industry even if the receipts for printing exceed those for publishing.

This subsector includes printing on clothing because the production process for that activity is printing, not clothing manufacturing. For instance, the printing of T-shirts is included in this subsector. In contrast, printing on fabric (or grey goods) is not included. This activity is part of the process of finishing the fabric and is included in the NAICS Textile Mills subsector in Industry 31331, Textile and Fabric Finishing Mills.

3231 Printing and Related Support Activities

This NAICS industry group includes establishments classified in the following NAICS Industries: 32311, Printing; and 32312, Support Activities for Printing.

32311 Printing

This industry comprises establishments primarily engaged in printing on apparel and textile products, paper, metal, glass, plastics, and other materials, except fabric (grey goods). The printing processes employed include, but are not limited to, lithographic, gravure, screen, flexographic, digital, and letterpress. Establishments in this industry do not manufacture the stock that they print but may perform postprinting activities, such as bending, cutting, or laminating the materials they print, and mailing.

323110 Commercial Lithographic Printing

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

The data published with NAICS code 3231 10 include the following SIC industries:

- 2752 Commercial printing, lithographic (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

323111 Commercial Gravure Printing

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

The data published with NAICS code 3231 11 include the following SIC industries:

- 2754 Commercial printing, gravure
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

323112 Commercial Flexographic Printing

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

The data published with NAICS code 3231 12 include the following SIC industries:

- 2759 Commercial printing, n.e.c. (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

323113 Commercial Screen Printing

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

The data published with NAICS code 3231 13 include the following SIC industries:

- 2396 Automotive and apparel trimmings (pt)
- 2759 Commercial printing, n.e.c. (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

323114 Quick Printing

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

The data published with NAICS code 3231 14 include the following SIC industries:

- 2752 Commercial printing, lithographic (pt)
- 2759 Commercial printing, n.e.c. (pt)

323115 Digital Printing

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

The data published with NAICS code 3231 15 include the following SIC industry:

- 2759 Commercial printing, n.e.c. (pt)

323116 Manifold Business Form Printing

This U.S. industry comprises establishments primarily engaged in printing special forms, including checkbooks, for use in the operation of a business. The forms may be in single and multiple sets, including carbonized, interleaved with carbon, or otherwise processed for multiple reproduction.

The data published with NAICS code 3231 16 include the following SIC industries:

- 2761 Manifold business forms
- 2782 Blankbooks and looseleaf binders (pt)

323117 Book Printing

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

The data published with NAICS code 3231 17 include the following SIC industry:

- 2732 Book printing

323118 Blankbook, Looseleaf Binders, and Devices Manufacturing

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

The data published with NAICS code 323118 include the following SIC industry:

2782 Blankbooks and looseleaf binders (pt)

323119 Other Commercial Printing

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

The data published with NAICS code 323119 include the following SIC industries:

2759 Commercial printing, n.e.c. (pt)

2771 Greeting cards (pt)

3999 Manufacturing industries, n.e.c. (pt)

32312 Support Activities for Printing

This industry comprises establishments primarily engaged in performing prepress (e.g., platemaking, typesetting) and postpress services (e.g., book binding) in support of printing activities.

323121 Tradebinding and Related Work

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

The data published with NAICS code 323121 include the following SIC industry:

2789 Bookbinding and related work

323122 Prepress Services

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

The data published with NAICS code 323122 include the following SIC industries:

2791 Typesetting

2796 Platemaking services

324 Petroleum and Coal Products Manufacturing

The Petroleum and Coal Products Manufacturing subsector is based on the transformation of crude petroleum and coal into usable products. The dominant process is

petroleum refining that involves the separation of crude petroleum into component products through such techniques as cracking and distillation.

In addition, this subsector includes establishments that primarily further process refined petroleum and coal products and produce products, such as asphalt coatings and petroleum lubricating oils. However, establishments that manufacture petrochemicals from refined petroleum are classified in Industry 32511, Petrochemical Manufacturing.

3241 Petroleum and Coal Products Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32411, Petroleum Refineries; 32412, Asphalt Paving, Roofing, and Saturated Materials Manufacturing; and 32419, Other Petroleum and Coal Products Manufacturing.

32411 Petroleum Refineries

This industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

324110 Petroleum Refineries

This U.S. industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

The data published with NAICS code 324110 include the following SIC industry:

2911 Petroleum refining

32412 Asphalt Paving, Roofing, and Saturated Materials Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

32412 Asphalt Paving, Roofing, and Saturated Materials Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

324121 Asphalt Paving Mixture and Block Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing asphalt and tar paving mixtures and blocks from purchased asphaltic materials.

The data published with NAICS code 324121 include the following SIC industry:

2951 Asphalt paving mixtures and blocks

324122 Asphalt Shingle and Coating Materials Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials and (2) manufacturing asphalt and tar and roofing cements and coatings from purchased asphaltic materials.

The data published with NAICS code 324122 include the following SIC industry:

2952 Asphalt felts and coatings

32419 Other Petroleum and Coal Products Manufacturing

This industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing, and saturated materials) from refined petroleum or coal products made in coke ovens not integrated with a steel mill.

324191 Petroleum Lubricating Oil and Grease Manufacturing

This U.S. industry comprises establishments primarily engaged in blending or compounding refined petroleum to make lubricating oils and greases and/or re-refining used petroleum lubricating oils.

The data published with NAICS code 324191 include the following SIC industry:

2992 Lubricating oils and greases

324199 All Other Petroleum and Coal Products Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing, and saturated materials and lubricating oils and greases) from refined petroleum and coal products made in coke ovens not integrated with a steel mill.

The data published with NAICS code 324199 include the following SIC industries:

2999 Petroleum and coal products, n.e.c.

3312 Blast furnaces and steel mills (pt)

325 Chemical Manufacturing

The Chemical Manufacturing subsector is based on the transformation of organic and inorganic raw materials by a chemical process and the formulation of products. This subsector distinguishes the production of basic chemicals that comprise the first industry group from the production of intermediate and end products produced by further processing of basic chemicals that make up the remaining industry groups.

This subsector does not include all industries transforming raw materials by a chemical process. It is common for some chemical processing to occur during mining operations. These beneficiating operations, such as copper concentrating, are classified in Sector 21, Mining. Furthermore, the refining of crude petroleum is included in Subsector 324, Petroleum and Coal Products Manufacturing. In addition, the manufacturing of aluminum oxide is included in Subsector 331, Primary Metal Manufacturing; and beverage distilleries are classified in Subsector 312, Beverage and Tobacco Product Manufacturing. As in the case of these two activities, the grouping of industries into subsectors may take into account the association of the activities performed with other activities in the subsector.

3251 Basic Chemical Manufacturing

This industry group comprises establishments primarily engaged in manufacturing chemicals using basic processes, such as thermal cracking and distillation. Chemicals manufactured in this industry group are usually separate chemical elements or separate chemically-defined compounds.

32511 Petrochemical Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or (2) manufacturing cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

325110 Petrochemical Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or (2) manufacturing cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

The data published with NAICS code 325110 include the following SIC industries:

2865 Cyclic crudes and intermediates (pt)

2869 Industrial organic chemicals, n.e.c. (pt)

32512 Industrial Gas Manufacturing

This industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

325120 Industrial Gas Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

The data published with NAICS code 325120 include the following SIC industries:

2813 Industrial gases

2869 Industrial organic chemicals, n.e.c. (pt)

32513 Synthetic Dye and Pigment Manufacturing

This industry comprises establishments primarily engaged in manufacturing synthetic organic and inorganic dyes and pigments, such as lakes and toners (except electrostatic and photographic).

325131 Inorganic Dye and Pigment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing inorganic dyes and pigments.

The data published with NAICS code 325131 include the following SIC industries:

2816 Inorganic pigments (pt)

2819 Industrial inorganic chemicals, n.e.c. (pt)

325132 Synthetic Organic Dye and Pigment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing synthetic organic dyes and pigments, such as lakes and toners (except electrostatic and photographic).

The data published with NAICS code 325132 include the following SIC industry:

2865 Cyclic crudes and intermediates (pt)

32518 Other Basic Inorganic Chemical Manufacturing

This industry comprises establishments primarily engaged in manufacturing basic inorganic chemicals (except industrial gases and synthetic dyes and pigments).

325181 Alkalies and Chlorine Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing chlorine, sodium hydroxide (i.e., caustic soda), and other alkalies often using an electrolysis process.

The data published with NAICS code 325181 include the following SIC industry:

2812 Alkalies and chlorine

325182 Carbon Black Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing carbon black, bone black, and lamp black.

The data published with NAICS code 325182 include the following SIC industries:

2816 Inorganic pigments (pt)

2895 Carbon black

325188 All Other Basic Inorganic Chemical Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing basic inorganic chemicals (except industrial gases, inorganic dyes and pigments, alkalies and chlorine, and carbon black).

The data published with NAICS code 325188 include the following SIC industries:

2819 Industrial inorganic chemicals, n.e.c. (pt)

2869 Industrial organic chemicals, n.e.c. (pt)

32519 Other Basic Organic Chemical Manufacturing

This industry comprises establishments primarily engaged in manufacturing basic organic chemicals (except petrochemicals, industrial gases, and synthetic dyes and pigments).

325191 Gum and Wood Chemical Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) distilling wood or gum into products, such as tall oil and wood distillates, and (2) manufacturing wood or gum chemicals, such as naval stores, natural tanning materials, charcoal briquettes, and charcoal (except activated).

The data published with NAICS code 325191 include the following SIC industry:

2861 Gum and wood chemicals

325192 Cyclic Crude and Intermediate Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) distilling coal tars and/or (2) manufacturing cyclic crudes or cyclic intermediates (i.e., hydrocarbons, except aromatic petrochemicals) from refined petroleum or natural gas.

The data published with NAICS code 325192 include the following SIC industry:

2865 Cyclic crudes and intermediates (pt)

325193 Ethyl Alcohol Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonpotable ethyl alcohol.

The data published with NAICS code 325193 include the following SIC industry:

2869 Industrial organic chemicals, n.e.c. (pt)

325199 All Other Basic Organic Chemical Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing basic organic chemical products (except aromatic petrochemicals, industrial gases, synthetic organic dyes and pigments, gum and wood chemicals, cyclic crudes and intermediates, and ethyl alcohol).

The data published with NAICS code 325199 include the following SIC industries:

2869 Industrial organic chemicals, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

3252 Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing

32521 Resin and Synthetic Rubber Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing synthetic resins, plastics materials, and nonvulcanizable elastomers and mixing and blending resins on a custom basis; (2) manufacturing noncustomized synthetic resins; and (3) manufacturing synthetic rubber.

325211 Plastics Material and Resin Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing resins, plastics materials, and nonvulcanizable thermoplastic elastomers and mixing and blending resins on a custom basis and/or (2) manufacturing noncustomized synthetic resins.

The data published with NAICS code 325211 include the following SIC industry:

2821 Plastics materials and resins

325212 Synthetic Rubber Manufacturing

This U.S. industry consists of establishments primarily engaged in manufacturing synthetic rubber.

The data published with NAICS code 325212 include the following SIC industry:

2822 Synthetic rubber

32522 Artificial and Synthetic Fibers and Filaments Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing cellulosic (i.e., rayon and acetate) and noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing cellulosic and noncellulosic fibers and filaments.

325221 Cellulosic Organic Fiber Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing cellulosic (i.e., rayon and acetate) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing cellulosic fibers and filaments.

The data published with NAICS code 325221 include the following SIC industry:

2823 Cellulosic manmade fibers

325222 Noncellulosic Organic Fiber Manufacturing

This U.S. industry consists of establishments primarily engaged in (1) manufacturing noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing noncellulosic fibers and filaments.

The data published with NAICS code 325222 include the following SIC industry:

2824 Organic fibers, noncellulosic

3253 Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32531, Fertilizer Manufacturing; and 32532, Pesticide and Other Agricultural Chemical Manufacturing.

32531 Fertilizer Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous or phosphatic fertilizer materials; (2) manufacturing fertilizers from sewage or animal waste; (3) manufacturing nitrogenous or phosphatic materials and mixing with other ingredients into fertilizers; and (4) mixing ingredients made elsewhere into fertilizers.

325311 Nitrogenous Fertilizer Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous fertilizer materials and mixing ingredients

into fertilizers; (2) manufacturing fertilizers from sewage or animal waste; and (3) manufacturing nitrogenous materials and mixing them into fertilizers.

The data published with NAICS code 325311 include the following SIC industry:

2873 Nitrogenous fertilizers

325312 Phosphatic Fertilizer Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing phosphatic fertilizer materials or (2) manufacturing phosphatic materials and mixing them into fertilizers.

The data published with NAICS code 325312 include the following SIC industry:

2874 Phosphatic fertilizers

325314 Fertilizer (Mixing Only) Manufacturing

This U.S. industry comprises establishments primarily engaged in mixing ingredients made elsewhere into fertilizers.

The data published with NAICS code 325314 include the following SIC industry:

2875 Fertilizers, mixing only

32532 Pesticide and Other Agricultural Chemical Manufacturing

This industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

325320 Pesticide and Other Agricultural Chemical Manufacturing

This U.S. industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

The data published with NAICS code 325320 include the following SIC industry:

2879 Agricultural chemicals, n.e.c.

3254 Pharmaceutical and Medicine Manufacturing

This NAICS industry group includes establishments classified in Industry 32541, Pharmaceutical and Medicine Manufacturing.

32541 Pharmaceutical and Medicine Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical drugs and herbs; (3) isolating active medicinal principals from botanical drugs and herbs; and (4) manufacturing pharmaceutical

products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

325411 Medicinal and Botanical Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing uncompounded medicinal chemicals and their derivatives (i.e., generally for use by pharmaceutical preparation manufacturers) and/or (2) grading, grinding, and milling uncompounded botanicals.

The data published with NAICS code 325411 include the following SIC industry:

2833 Medicinals and botanicals

325412 Pharmaceutical Preparation Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing in-vivo diagnostic substances and pharmaceutical preparations (except biological) intended for internal and external consumption in dose forms, such as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

The data published with NAICS code 325412 include the following SIC industries:

2834 Pharmaceutical preparations

2835 Diagnostic substances (pt)

325413 In-Vitro Diagnostic Substance Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing in-vitro (i.e., not taken internally) diagnostic substances, such as chemical, biological, or radioactive substances. The substances are used for diagnostic tests that are performed in test tubes, petri dishes, machines, and other diagnostic test-type devices.

The data published with NAICS code 325413 include the following SIC industry:

2835 Diagnostic substances (pt)

325414 Biological Product (Except Diagnostic) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing vaccines, toxoids, blood fractions, and culture media of plant or animal origin (except diagnostic).

The data published with NAICS code 325414 include the following SIC industry:

2836 Biological products, except diagnostic

3255 Paint, Coating, and Adhesive Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32551, Paint and Coating Manufacturing; and 32552, Adhesive Manufacturing.

32551 Paint and Coating Manufacturing

This industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

325510 Paint and Coating Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

The data published with NAICS code 325510 include the following SIC industries:

2851 Paints and allied products

2899 Chemical preparations, n.e.c. (pt)

32552 Adhesive Manufacturing

This industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

325520 Adhesive Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

The data published with NAICS code 325520 include the following SIC industry:

2891 Adhesives and sealants

3256 Soap, Cleaning Compound, and Toilet Preparation Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32561, Soap and Cleaning Compound Manufacturing; and 32562, Toilet Preparation Manufacturing.

32561 Soap and Cleaning Compound Manufacturing

This industry comprises establishments primarily engaged in manufacturing and packaging soap and other cleaning compounds, surface active agents, and textile and leather finishing agents used to reduce tension or speed the drying process.

325611 Soap and Other Detergent Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging soaps and other detergents, such as laundry detergents; dishwashing detergents; toothpaste gels and tooth powders; and natural glycerin.

The data published with NAICS code 325611 include the following SIC industries:

2841 Soap and other detergents

2844 Toilet preparations (pt)

325612 Polish and Other Sanitation Good Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging polishes and specialty cleaning preparations.

The data published with NAICS code 325612 include the following SIC industry:

2842 Polishes and sanitation goods

325613 Surface Active Agent Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing bulk surface active agents for use as wetting agents, emulsifiers, and penetrants, and/or (2) manufacturing textiles and leather finishing agents used to reduce tension or speed the drying process.

The data published with NAICS code 325613 include the following SIC industry:

2843 Surface active agents

32562 Toilet Preparation Manufacturing

This industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

325620 Toilet Preparation Manufacturing

This U.S. industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

The data published with NAICS code 325620 include the following SIC industry:

2844 Toilet preparations (pt)

3259 Other Chemical Product Manufacturing

This industry group comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals; resins, synthetic rubber, cellulosic and

noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soaps and cleaning compounds; and toilet preparations).

32591 Printing Ink Manufacturing

This industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

325910 Printing Ink Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

The data published with NAICS code 325910 include the following SIC industry:

2893 Printing ink

32592 Explosives Manufacturing

This industry comprises establishments primarily engaged in manufacturing explosives.

325920 Explosives Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing explosives.

The data published with NAICS code 325920 include the following SIC industry:

2892 Explosives

32599 All Other Chemical Product and Preparation Manufacturing

This industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, and synthetic rubber; cellulosic and noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; and soaps, cleaning compounds, and toilet preparations; printing inks; and explosives).

325991 Custom Compounding of Purchased Resins

This U.S. industry comprises establishments primarily engaged in (1) custom mixing and blending plastics resins made elsewhere or (2) reformulating plastics resins from recycled plastics products.

The data published with NAICS code 325991 include the following SIC industries:

3087 Custom compound purchased resins

325992 Photographic Film, Paper, Plate, and Chemical Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing sensitized film, sensitized paper, sensitized cloth, sensitized plates, toners (i.e., for photocopiers, laser printers, and similar electrostatic printing devices), toner cartridges, and photographic chemicals.

The data published with NAICS code 325992 include the following SIC industry:

3861 Photographic equipment and supplies (pt)

325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, synthetic rubber; cellulosic and noncellulosic fiber and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soap, cleaning compounds, and toilet preparations; printing inks; explosives; custom compounding of purchased resins; and photographic films, papers, plates, and chemicals).

The data published with NAICS code 325998 include the following SIC industries:

2819 Industrial inorganic chemicals, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 325998 do not include establishments primarily engaged in aerosol packaging. The NAICS definitions will be fully implemented with the 2002 Economic Census.

326 Plastics and Rubber Products Manufacturing

Industries in the Plastics and Rubber Products Manufacturing subsector make goods by processing plastics materials and raw rubber. The core technology employed by establishments in this subsector is that of plastics or rubber product production. Plastics and rubber are combined in the same subsector because plastics are increasingly being used as a substitute for rubber; however, the subsector is generally restricted to the production of products made of just one material, either solely plastics or rubber.

Many manufacturing activities use plastics or rubber, for example the manufacture of footwear, or furniture. Typically, the production process of these products

involves more than one material. In these cases, technologies that allow disparate materials to be formed and combined are of central importance in describing the manufacturing activity. In NAICS, such activities (the footwear and furniture manufacturing) are not classified in the Plastics and Rubber Products Manufacturing subsector because the core technologies for these activities are diverse and involve multiple materials.

Within the Plastics and Rubber Products Manufacturing subsector, a distinction is made between plastics and rubber products at the industry group level, although it is not a rigid distinction, as can be seen from the definition of Industry 32622, Rubber and Plastics Hose and Belting Manufacturing. As materials technology progresses, plastics are increasingly being used as a substitute for rubber; and eventually, the distinction may disappear as a basis for establishment classification.

In keeping with the core technology focus of plastics, lamination of plastics film to plastics film as well as the production of bags from plastics only is classified in this subsector. Lamination and bag production involving plastics and materials other than plastics are classified in the NAICS Subsector 322, Paper Manufacturing.

3261 Plastics Product Manufacturing

This industry group comprises establishments primarily engaged in processing new or spent (i.e., recycled) plastics resins into intermediate or final products, using such processes as compression molding; extrusion molding; injection molding; blow molding; and casting. Within most of these industries, the production process is such that a wide variety of products can be made.

32611 Unsupported Plastics Film, Sheet, and Bag Manufacturing

This industry comprises establishments primarily engaged in (1) converting plastics resins into unsupported plastics film and sheet and/or (2) forming, coating, or laminating plastics film and sheet into plastics bags.

326111 Unsupported Plastics Bag Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) converting plastics resins into plastics bags or (2) forming, coating, or laminating plastics film and sheet into single wall or multiwall plastics bags. Establishments in this industry may print on the bags they manufacture.

The data published with NAICS code 326111 include the following SIC industry:

2673 Bags - plastics, laminated, and coated (pt)

326112 Unsupported Plastics Packaging Film and Sheet Manufacturing

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics packaging (flexible) film and packaging sheet.

The data published with NAICS code 326112 include the following SIC industry:

2671 Paper - coated and laminated, packaging (pt)

326113 Unsupported Plastics Film and Sheet (Except Packaging) Manufacturing

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics film and unlaminated sheet (except packaging).

The data published with NAICS code 326113 include the following SIC industry:

3081 Unsupported plastics film and sheet

32612 Plastics Pipe, Pipe Fitting, and Unsupported Profile Shape Manufacturing

This industry comprises establishments primarily engaged in manufacturing plastics pipes and pipe fittings, and plastics profile shapes such as rod, tube, and sausage casings.

326121 Unsupported Plastics Profile Shapes Manufacturing

This U.S. industry comprises establishments primarily engaged in converting plastics resins into nonrigid plastics profile shapes (except film, sheet, and bags), such as rod, tube, and sausage casings.

The data published with NAICS code 326121 include the following SIC industry:

3082 Unsupported plastics profile shapes

326122 Plastics Pipe and Pipe Fitting Manufacturing

This U.S. industry comprises establishments primarily engaged in converting plastics resins into rigid plastics pipes and pipe fittings.

The data published with NAICS code 326122 include the following SIC industries:

3084 Plastics pipe

3089 Plastics products, n.e.c. (pt)

32613 Laminated Plastics Plate, Sheet, and Shape Manufacturing

This industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

326130 Laminated Plastics Plate, Sheet, and Shape Manufacturing

This U.S. industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

The data published with NAICS code 326130 include the following SIC industry:

3083 Laminated plastics plate and sheet

32614 Polystyrene Foam Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

326140 Polystyrene Foam Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

The data published with NAICS code 326140 include the following SIC industry:

3086 Plastics foam products (pt)

32615 Urethane and Other Foam Product (Except Polystyrene) Manufacturing

This industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

326150 Urethane and Other Foam Product (Except Polystyrene) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

The data published with NAICS code 326150 include the following SIC industry:

3086 Plastics foam products (pt)

32616 Plastics Bottle Manufacturing

This industry comprises establishments primarily engaged in manufacturing plastics bottles.

326160 Plastics Bottle Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing plastics bottles.

The data published with NAICS code 326160 include the following SIC industry:

3085 Plastics bottles

32619 Other Plastics Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing resilient floor covering and other plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, and bottles).

326191 Plastics Plumbing Fixture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing plastics or fiberglass plumbing fixtures. Examples of products made by these establishments are plastics or fiberglass bathtubs, hot tubs, portable toilets, and shower stalls.

The data published with NAICS code 326191 include the following SIC industry:

3088 Plastics plumbing fixtures

326192 Resilient Floor Covering Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing resilient floor coverings for permanent installation.

The data published with NAICS code 326192 include the following SIC industries:

3069 Fabricated rubber products, n.e.c. (pt)

3996 Hard surface floor coverings

326199 All Other Plastics Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, bottles, plumbing fixtures, and resilient floor coverings).

The data published with NAICS code 326199 include the following SIC industries:

3089 Plastics products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 326199 include establishments primarily engaged in the manufacture of plastic furniture parts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3262 Rubber Product Manufacturing

This industry group comprises establishments primarily engaged in processing natural and synthetic or reclaimed rubber materials into intermediate or final products using processes such as vulcanizing, cementing, molding, extruding, and lathe-cutting.

32621 Tire Manufacturing

This industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber and retreading or rebuilding tires.

326211 Tire Manufacturing (Except Retreading)

This U.S. industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber.

The data published with NAICS code 326211 include the following SIC industry:

3011 Tires and inner tubes

326212 Tire Retreading

This U.S. industry comprises establishments primarily engaged in retreading, or rebuilding tires.

The data published with NAICS code 326212 include the following SIC industry:

7534 Tire retreading and repair shops (pt)

32622 Rubber and Plastics Hoses and Belting Manufacturing

This industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

326220 Rubber and Plastics Hoses and Belting Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

The data published with NAICS code 326220 include the following SIC industry:

3052 Rubber and plastics hose and belting

32629 Other Rubber Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing rubber products (except tires, hoses, and belting) from natural and synthetic rubber.

326291 Rubber Product Manufacturing for Mechanical Use

This U.S. industry comprises establishments primarily engaged in molding, extruding, or lathe-cutting rubber to manufacture rubber goods (except tubing) for mechanical applications. Products of this industry are generally parts for motor vehicles, machinery, and equipment.

The data published with NAICS code 326291 include the following SIC industry:

3061 Mechanical rubber goods

326299 All Other Rubber Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing rubber products (except tires; hoses and belting; and molded, extruded, and lathe-cut rubber goods for mechanical applications) from natural and synthetic rubber.

The data published with NAICS code 326299 include the following SIC industry:

3069 Fabricated rubber products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 326299 include establishments primarily engaged in the manufacture of rubber products including gloves, toys, pants, raincoats, bibs, aprons, bathing caps, life jackets, and wet suits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

327 Nonmetallic Mineral Product Manufacturing

The Nonmetallic Mineral Product Manufacturing subsector transforms mined or quarried nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials, into products for intermediate or final consumption. Processes used include grinding, mixing, cutting, shaping, and honing. Heat often is used in the process and chemicals are frequently mixed to change the composition, purity, and chemical properties for the intended product. For example, glass is produced by heating silica sand to the melting point (sometimes combined with cullet or recycled glass) and then drawn, floated, or blow molded to the desired shape or thickness. Refractory materials are heated and then formed into bricks or other shapes for use in industrial applications.

The Nonmetallic Mineral Product Manufacturing subsector includes establishments that manufacture products, such as bricks, refractories, ceramic products, and glass and glass products, such as plate glass and containers. Also included are cement and concrete products, lime, gypsum and other nonmetallic mineral products including abrasive products, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. The products are used in a wide range of activities from construction and heavy and light manufacturing to articles for personal use.

Mining, beneficiating, and manufacturing activities often occur in a single location. Separate receipts will be collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals, beneficiate the nonmetallic minerals and further

process the nonmetallic minerals into a more finished manufactured product are classified based on the primary activity of the establishment. A mine that manufactures a small amount of finished products will be classified in Sector 21, Mining. An establishment that mines whose primary output is a more-finished manufactured product will be classified in the Manufacturing Sector.

Excluded from the Nonmetallic Mineral Product Manufacturing subsector are establishments that primarily benefit mined nonmetallic minerals. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. Beneficiation establishments are included in Sector 21, Mining.

3271 Clay Product and Refractory Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32711, Pottery, Ceramics, and Plumbing Fixture Manufacturing; and 32712, Clay Building Material and Refractories Manufacturing.

32711 Pottery, Ceramics, and Plumbing Fixture Manufacturing

This industry comprises establishments primarily engaged in shaping, molding, glazing, and firing pottery, ceramics, and plumbing fixtures made entirely or partly of clay or other ceramic materials.

327111 Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing vitreous china plumbing fixtures and china and earthenware bathroom accessories, such as faucet handles, towel bars, and soap dishes.

The data published with NAICS code 327111 include the following SIC industry:

3261 Vitreous plumbing fixtures

327112 Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing table and kitchen articles, art and ornamental items, and similar vitreous china, fine earthenware, stoneware, coarse earthenware, and pottery products.

The data published with NAICS code 327112 include the following SIC industries:

3262 Vitreous china table and kitchen articles

3263 Fine earthenware table and kitchen articles

3269 Pottery products, n.e.c.

3299 Nonmetallic mineral products, n.e.c. (pt)

327113 Porcelain Electrical Supply Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing porcelain electrical insulators, molded porcelain parts for electrical devices, ferrite or ceramic magnets, and electronic and electrical supplies from nonmetallic minerals, such as clay and ceramic materials.

The data published with NAICS code 327113 include the following SIC industry:

3264 Porcelain electrical supplies

32712 Clay Building Material and Refractories Manufacturing

This industry comprises establishments primarily engaged in shaping, molding, baking, burning, or hardening clay refractories, nonclay refractories, ceramic tile, structural clay tile, brick, and other structural clay building materials.

327121 Brick and Structural Clay Tile Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing brick and structural clay tiles.

The data published with NAICS code 327121 include the following SIC industry:

3251 Brick and structural clay tile

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 327121 include establishments primarily engaged in the manufacture of slumped brick. The NAICS definitions will be fully implemented with the 2002 Economic Census.

327122 Ceramic Wall and Floor Tile Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ceramic wall and floor tiles.

The data published with NAICS code 327122 include the following SIC industry:

3253 Ceramic wall and floor tile

327123 Other Structural Clay Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing clay sewer pipe, drain tile, flue lining tile, architectural terra-cotta, and other structural clay products.

The data published with NAICS code 327123 include the following SIC industry:

3259 Structural clay products, n.e.c.

327124 Clay Refractory Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing clay refractory, mortar, brick, block, tile, and fabricated clay refractories, such as melting pots. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

The data published with NAICS code 327124 include the following SIC industry:

3255 Clay refractories

327125 Nonclay Refractory Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonclay refractory, mortar, brick, block, tile, and fabricated nonclay refractories such as graphite, magnesite, silica, or alumina crucibles. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

The data published with NAICS code 327125 include the following SIC industry:

3297 Nonclay refractories

3272 Glass and Glass Product Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 32721, Glass and Glass Product Manufacturing.

32721 Glass and Glass Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing glass and/or glass products. Establishments in this industry may manufacture glass and/or glass products by melting silica sand or cullet, or purchasing glass.

327211 Flat Glass Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing flat glass by melting silica sand or cullet or (2) manufacturing both flat glass and laminated glass by melting silica sand or cullet.

The data published with NAICS code 327211 include the following SIC industry:

3211 Flat glass

327212 Other Pressed and Blown Glass and Glassware Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing glass by melting silica sand or cullet and making pressed, blown, or shaped glass or glassware (except glass packaging containers).

The data published with NAICS code 327212 include the following SIC industry:

3229 Pressed and blown glass, n.e.c.

327213 Glass Container Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing glass packaging containers.

The data published with NAICS code 327213 include the following SIC industry:

3221 Glass containers

327215 Glass Product Manufacturing Made of Purchased Glass

This U.S. industry comprises establishments primarily engaged in remelting, pressing, blowing, or shaping purchased glass.

The data published with NAICS code 327215 include the following SIC industry:

3231 Products of purchased glass

3273 Cement and Concrete Product Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32731, Cement Manufacturing; 32732, Ready-Mix Concrete Manufacturing; 32733, Concrete Pipe, Brick, and Block Manufacturing; and 32739, Other Concrete Product Manufacturing.

32731 Cement Manufacturing

This industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

327310 Cement Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

The data published with NAICS code 327310 include the following SIC industry:

3241 Cement, hydraulic

32732 Ready-Mix Concrete Manufacturing

This industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

327320 Ready-Mix Concrete Manufacturing

This U.S. industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

The data published with NAICS code 327320 include the following SIC industry:

3273 Ready-mixed concrete

32733 Concrete Pipe, Brick, and Block Manufacturing

This industry comprises establishments primarily engaged in manufacturing concrete pipe, brick, and block

327331 Concrete Block and Brick Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing concrete block and brick.

The data published with NAICS code 327331 include the following SIC industry:

3271 Concrete brick and block

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 327331 do not include establishments primarily engaged in the manufacture of slumped brick. The NAICS definitions will be fully implemented with the 2002 Economic Census.

327332 Concrete Pipe Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing concrete pipe.

The data published with NAICS code 327332 include the following SIC industry:

3272 Concrete products, n.e.c. (pt)

32739 Other Concrete Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

327390 Other Concrete Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

The data published with NAICS code 327390 include the following SIC industry:

3272 Concrete products, n.e.c. (pt)

3274 Lime and Gypsum Product Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 32741, Lime Manufacturing; and 32742, Gypsum Product Manufacturing.

32741 Lime Manufacturing

This industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

327410 Lime Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

The data published with NAICS code 327410 include the following SIC industry:

3274 Lime

32742 Gypsum Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing gypsum products such as wall-board, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

327420 Gypsum Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing gypsum products, such as wall-board, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

The data published with NAICS code 327420 include the following SIC industries:

3275 Gypsum products

3299 Nonmetallic mineral products, n.e.c. (pt)

3279 Other Nonmetallic Mineral Product Manufacturing

The Other Nonmetallic Mineral Product Manufacturing industry group comprises establishments manufacturing nonmetallic mineral products (except clay products, refractory products, glass products, cement and concrete products, lime, and gypsum products).

32791 Abrasive Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products

327910 Abrasive Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products.

The data published with NAICS code 327910 include the following SIC industry:

3291 Abrasive products (pt)

32799 All Other Nonmetallic Mineral Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; and abrasive products).

327991 Cut Stone and Stone Product Manufacturing

This U.S. industry comprises establishments primarily engaged in cutting, shaping, and finishing granite, marble, limestone, slate, and other stone for building and miscellaneous uses. Stone product manufacturing establishments may mine, quarry, or purchase stone.

The data published with NAICS code 327991 include the following SIC industry:

3281 Cut stone and stone products

327992 Ground or Treated Mineral and Earth Manufacturing

This U.S. industry comprises establishments primarily engaged in calcining, dead burning, or otherwise processing beyond beneficiation, clays, ceramic and refractory minerals, barite, and miscellaneous nonmetallic minerals.

The data published with NAICS code 327992 include the following SIC industry:

3295 Minerals, ground or treated

327993 Mineral Wool Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing mineral wool and mineral wool (i.e., fiberglass) insulation products made of such siliceous materials as rock, slag, and glass or combinations thereof.

The data published with NAICS code 327993 include the following SIC industry:

3296 Mineral wool

327999 All Other Miscellaneous Nonmetallic Mineral Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; abrasive products; cut stone and stone products; ground and treated minerals and earth; and mineral wool).

The data published with NAICS code 327999 include the following SIC industries:

3272 Concrete products, n.e.c. (pt)

3292 Asbestos products (pt)

3299 Nonmetallic mineral products, n.e.c. (pt)

331 Primary Metal Manufacturing

Industries in the Primary Metal Manufacturing subsector smelt and/or refine ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques. Establishments in this subsector also manufacture metal alloys and superalloys by introducing other chemical elements to pure metals. The output of smelting and refining, usually in ingot form, is used in rolling, drawing, and extruding operations to make sheet, strip, bar, rod, or wire, and in molten form to make castings and other basic metal products.

Primary manufacturing of ferrous and nonferrous metals begins with ore or concentrate as the primary input. Establishments manufacturing primary metals from ore and/or concentrate remain classified in the primary smelting, primary refining, or iron and steel mill, industries regardless of the form of their output. Establishments primarily engaged in secondary smelting and/or secondary refining recover ferrous and nonferrous metals from scrap and/or dross. The output of the secondary smelting and/or secondary refining industries is limited to shapes, such as ingot or billet, that will be further processed. Recovery of metals from scrap often occurs in establishments that are primarily engaged in activities, such as rolling, drawing, extruding, or similar processes.

Excluded from the Primary Metal Manufacturing subsector are establishments primarily engaged in manufacturing ferrous and nonferrous forgings (except ferrous forgings made in steel mills) and stampings. Although forging, stamping, and casting are all methods used to make metal shapes, forging and stamping do not use molten metals and are included in Subsector 332, Fabricated Metal Product Manufacturing. Establishments primarily engaged in operating coke ovens are classified in Industry 32419, Other Petroleum and Coal Products Manufacturing.

3311 Iron and Steel Mills and Ferroalloy Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33111, Iron and Steel Mills and Ferroalloy Manufacturing.

33111 Iron and Steel Mills and Ferroalloy Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) manufacturing ferroalloys; (5) making steel; (6) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); and (7) making steel and forming pipe and tube.

331111 Iron and Steel Mills

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) making steel; (5) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); and (6) making steel and forming tube and pipe.

The data published with NAICS code 331111 include the following SIC industries:

3312 Blast furnaces and steel mills (pt)

3399 Primary metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331111 include establishments primarily engaged in the manufacture of ferrous metal powder, paste, and flake. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3311111 Iron and Steel Mills – Fully Integrated

Establishments primarily engaged in smelting iron ore in a blast furnace to produce pig iron in molten or solid form; then converting pig iron into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire.

3311112 Iron and Steel Mills – Partially Integrated With a Blast Furnace

Establishments primarily engaged in smelting iron ore in a blast furnace to produce pig iron in molten or solid form; then converting pig iron into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing ingots and/or semfinished shapes, such as blooms, billets, and rods.

3311113 Iron and Steel Mills – Partially Integrated Without a Blast Furnace

Establishments primarily engaged in converting pig iron, direct reduced iron, and/or scrap into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire.

3311114 Iron and Steel Mills – Nonintegrated

Establishments primarily engaged in producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire from purchased ingots and/or semfinished shapes, such as blooms, billets, and rods.

331112 Electrometallurgical Ferroalloy Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electrometallurgical ferroalloys. Ferroalloys add critical elements, such as silicon and manganese for carbon steel and chromium, vanadium, tungsten, titanium, and molybdenum for low- and high-alloy metals. Ferroalloys include iron-rich alloys and more pure forms of elements added during the steel manufacturing process that alter or improve the characteristics of the metal being made.

The data published with NAICS code 331112 include the following SIC industry:

3313 Electrometallurgical products (pt)

3312 Steel Product Manufacturing From Purchased Steel

This industry group comprises establishments primarily engaged in manufacturing iron and steel tube and pipe, drawing steel wire, and rolling or drawing shapes from purchased iron or steel.

33121 Iron and Steel Pipes and Tubes Manufacturing From Purchased Steel

This industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

331210 Iron and Steel Pipes and Tubes Manufacturing From Purchased Steel

This U.S. industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

The data published with NAICS code 331210 include the following SIC industry:

3317 Steel pipe and tubes

33122 Rolling and Drawing of Purchased Steel

This industry comprises establishments primarily engaged in rolling and/or drawing steel shapes, such as plate, sheet, strip, rod, and bar, from purchased steel.

331221 Rolled Steel Shape Manufacturing

This U.S. industry comprises establishments primarily engaged in rolling or drawing shapes (except wire), such as plate, sheet, strip, rod, and bar, from purchased steel.

The data published with NAICS code 331221 include the following SIC industry:

3316 Cold finishing of steel shapes

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331221 do not include establishments primarily engaged in making coke oven and blast furnace products; in making steel and rolling or drawing steel shapes; or in the making of ferrous metal powder, paste, and flake. The NAICS definitions will be fully implemented with the 2002 Economic Census.

331222 Steel Wire Drawing

This U.S. industry comprises establishments primarily engaged in drawing wire from purchased steel.

The data published with NAICS code 331222 include the following SIC industry:

3315 Steel wire and related products (pt)

3313 Alumina and Aluminum Production and Processing

This NAICS industry group includes establishments classified in NAICS Industry 33131, Alumina and Aluminum Production and Processing.

33131 Alumina and Aluminum Production and Processing

This industry comprises establishments primarily engaged in one or more of the following: (1) refining alumina; (2) making (i.e., the primary production) aluminum from alumina; (3) recovering aluminum from scrap or dross; (4) alloying purchased aluminum; and (5) manufacturing aluminum primary forms (e.g., bar, foil, pipe, plate, rod, sheet, tube, wire).

331311 Alumina Refining

This U.S. industry comprises establishments primarily engaged in refining alumina (i.e., aluminum oxide) generally from bauxite.

The data published with NAICS code 331311 include the following SIC industry:

2819 Industrial inorganic chemicals, n.e.c. (pt)

331312 Primary Aluminum Production

This U.S. industry comprises establishments primarily engaged in (1) making aluminum from alumina and/or (2) making aluminum from alumina and rolling, drawing, extruding, or casting the aluminum they make into primary forms (e.g., bar, billet, ingot, plate, rod, sheet, strip). Establishments in this industry may make primary aluminum or aluminum-based alloys from alumina.

The data published with NAICS code 331312 include the following SIC industry:

3334 Primary aluminum

331314 Secondary Smelting and Alloying of Aluminum

This U.S. industry comprises establishments primarily engaged in (1) recovering aluminum and aluminum alloys from scrap and/or dross (i.e., secondary smelting) and making billet or ingot (except by rolling) and/or (2) manufacturing alloys, powder, paste, or flake from purchased aluminum.

The data published with NAICS code 331314 include the following SIC industries:

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

331315 Aluminum Sheet, Plate, and Foil Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) flat rolling or continuous casting sheet, plate, foil, and welded tube from purchased aluminum and/or (2) recovering aluminum from scrap and flat rolling or continuous casting sheet, plate, foil, and welded tube in integrated mills.

The data published with NAICS code 331315 include the following SIC industry:

3353 Aluminum sheet, plate, and foil (pt)

331316 Aluminum Extruded Product Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) extruding aluminum bar, pipe, and tube blooms or extruding or drawing tube from purchased aluminum; and/or (2) recovering aluminum from scrap and extruding bar, pipe, and tube blooms or drawing tube in integrated mills.

The data published with NAICS code 331316 include the following SIC industry:

3354 Aluminum extruded products

331319 Other Aluminum Rolling and Drawing

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) from purchased aluminum and/or (2) recovering aluminum from scrap and rolling, drawing or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) in integrated mills.

The data published with NAICS code 331319 include the following SIC industries:

3355 Aluminum rolling and drawing, n.e.c.

3357 Nonferrous wire drawing and insulating (pt)

3314 Nonferrous Metal (Except Aluminum) Production and Processing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33141, Nonferrous Metal (Except Aluminum) Smelting and Refining; 33142, Copper Rolling, Drawing, Extruding, and Alloying; and 33149, Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying.

33141 Nonferrous Metal (Except Aluminum) Smelting and Refining

This industry comprises establishments primarily engaged in (1) smelting ores into nonferrous metals and/or (2) the primary refining of nonferrous metals (except aluminum) using electrolytic or other processes.

331411 Primary Smelting and Refining of Copper

This U.S. industry comprises establishments primarily engaged in (1) smelting copper ore and/or (2) the primary refining of copper by electrolytic methods or other processes. Establishments in this industry make primary copper and copper-based alloys, such as brass and bronze, from ore or concentrates.

The data published with NAICS code 331411 include the following SIC industry:

3331 Primary copper

331419 Primary Smelting and Refining of Nonferrous Metal (Except Copper and Aluminum)

This U.S. industry comprises establishments primarily engaged in (1) making (i.e., the primary production) nonferrous metals by smelting ore and/or (2) the primary refining of nonferrous metals by electrolytic methods or other processes.

The data published with NAICS code 331419 include the following SIC industry:

3339 Primary nonferrous metals, n.e.c.

33142 Copper Rolling, Drawing, Extruding, and Alloying

This industry comprises establishments primarily engaged in one or more of the following: (1) recovering copper or copper alloys from scraps; (2) alloying purchased copper; (3) rolling, drawing, or extruding shapes, (e.g., bar, plate, sheet, strip, tube, and wire) from purchased copper; and (4) recovering copper or copper alloys from scrap and rolling drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube, and wire).

331421 Copper Rolling, Drawing, and Extruding

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube (except bare or insulated copper communication or energy wire)) from purchased copper; and/or (2) recovering copper from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube (except bare or insulated copper communication or energy wire in integrated mills)).

The data published with NAICS code 331421 include the following SIC industry:

3351 Copper rolling and drawing

331422 Copper Wire (Except Mechanical) Drawing

This U.S. industry comprises establishments primarily engaged in drawing or drawing and insulating communication and energy wire and cable from purchased copper or in integrated secondary smelting and wire drawing plants.

The data published with NAICS code 331422 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

331423 Secondary Smelting, Refining, and Alloying of Copper

This U.S. industry comprises establishments primarily engaged in (1) recovering copper and copper alloys from scrap and/or (2) alloying purchased copper. Establishments in this industry make primary forms, such as ingot, wire bar, cake, and slab from copper or copper alloys, such as brass and bronze.

The data published with NAICS code 331423 include the following SIC industries:

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

33149 Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying

This industry comprises establishments primarily engaged in one or more of the following: (1) recovering nonferrous metals (except copper and aluminum) and nonferrous metal alloys from scrap; (2) alloying purchased

nonferrous metals (except copper and aluminum); (3) rolling, drawing, and extruding shapes from purchased nonferrous metals (except copper and aluminum); and (4) recovering nonferrous metals from scrap (except copper and aluminum) and rolling, drawing, or extruding shapes in integrated facilities.

331491 Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, and Extruding

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube) from purchased nonferrous metals and/or (2) recovering nonferrous metals from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube) in integrated mills.

The data published with NAICS code 331491 include the following SIC industries:

3356 Nonferrous rolling and drawing, n.e.c.

3357 Nonferrous wire drawing and insulating (pt)

331492 Secondary Smelting, Refining, and Alloying of Nonferrous Metal (Except Copper and Aluminum)

This U.S. industry comprises establishments primarily engaged in (1) alloying purchased nonferrous metals and/or (2) recovering nonferrous metals from scrap. Establishments in this industry make primary forms (e.g., bar, billet, bloom, cake, ingot, slab, slug, wire) using smelting or refining processes.

The data published with NAICS code 331492 include the following SIC industries:

3313 Electrometallurgical products (pt)

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331492 include establishments primarily engaged in the manufacture of other nonferrous additive alloys. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3315 Foundries

This industry group comprises establishments primarily engaged in pouring molten metal into molds or dies to form castings. Establishments making castings and further manufacturing, such as machining or assembling, a specific manufactured product are classified in the industry of the finished product. Foundries may perform operations, such as cleaning and deburring, on the castings they manufacture. More involved processes, such as tapping,

threading, milling, or machining to tight tolerances, that transform castings into more finished products are classified elsewhere in the manufacturing sector based on the product being made.

Establishments in this industry group make castings from purchased metals or in integrated secondary smelting and casting facilities. When the production of primary metals is combined with making castings, the establishment is classified in 331 with the primary metal being made.

33151 Ferrous Metal Foundries

This industry comprises establishments primarily engaged in pouring molten iron and steel into molds of a desired shape to make castings. Establishments in this industry purchase iron and steel made in other establishments.

331511 Iron Foundries

This U.S. industry comprises establishments primarily engaged in pouring molten pig iron or iron alloys into molds to manufacture castings, (e.g., cast iron man-hole covers, cast iron pipe, cast iron skillets). Establishments in this industry purchase iron made in other establishments.

The data published with NAICS code 331511 include the following SIC industries:

3321 Gray iron foundries

3322 Malleable iron foundries

331512 Steel Investment Foundries

This U.S. industry comprises establishments primarily engaged in manufacturing steel investment castings. Investment molds are formed by covering a wax shape with a refractory slurry. After the refractory slurry hardens, the wax is melted, leaving a seamless mold. Investment molds provide highly detailed, consistent castings. Establishments in this industry purchase steel made in other establishments.

The data published with NAICS code 331512 include the following SIC industry:

3324 Steel investment foundries

331513 Steel Foundries (Except Investment)

This U.S. industry comprises establishments primarily engaged in manufacturing steel castings (except steel investment castings). Establishments in this industry purchase steel made in other establishments.

The data published with NAICS code 331513 include the following SIC industry:

3325 Steel foundries, n.e.c.

33152 Nonferrous Metal Foundries

This industry comprises establishments primarily engaged in pouring and/or introducing molten nonferrous metal, under high pressure, into metal molds or dies to manufacture castings. Establishments in this industry purchase nonferrous metals made in other establishments.

331521 Aluminum Die-Casting Foundries

This U.S. industry comprises establishments primarily engaged in introducing molten aluminum, under high pressure, into molds or dies to make aluminum die-castings. Establishments in this industry purchase aluminum made in other establishments.

The data published with NAICS code 331521 include the following SIC industry:

3363 Aluminum die-castings

331522 Nonferrous (Except Aluminum) Die-Casting Foundries

This U.S. industry comprises establishments primarily engaged in introducing molten nonferrous metal (except aluminum), under high pressure, into molds to make nonferrous metal die-castings. Establishments in this industry purchase nonferrous metals made in other establishments.

The data published with NAICS code 331522 include the following SIC industry:

3364 Nonferrous die-casting, except aluminum

331524 Aluminum Foundries (Except Die-Casting)

This U.S. industry comprises establishments primarily engaged in pouring molten aluminum into molds to manufacture aluminum castings. Establishments in this industry purchase aluminum made in other establishments.

The data published with NAICS code 331524 include the following SIC industry:

3365 Aluminum foundries

331525 Copper Foundries (Except Die-Casting)

This U.S. industry comprises establishments primarily engaged in pouring molten copper into molds to manufacture copper castings. Establishments in this industry purchase copper made in other establishments.

The data published with NAICS code 331525 include the following SIC industry:

3366 Copper foundries

331528 Other Nonferrous Foundries (Except Die-Casting)

This U.S. industry comprises establishments primarily engaged in pouring molten nonferrous metals (except aluminum and copper) into molds to manufacture nonferrous castings (except aluminum die-castings, nonferrous

(except aluminum) die-castings, aluminum castings, and copper castings). Establishments in this industry purchase nonferrous metals, such as nickel, lead, and zinc, made in other establishments.

The data published with NAICS code 331528 include the following SIC industry:

3369 Nonferrous foundries, n.e.c.

332 Fabricated Metal Product Manufacturing

Industries in the Fabricated Metal Product Manufacturing subsector transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture or treating metals and metal formed products fabricated elsewhere. Important fabricated metal processes are forging, stamping, bending, forming, and machining, used to shape individual pieces of metal; and other processes, such as welding and assembling, used to join separate parts together. Establishments in this subsector may use one of these processes or a combination of these processes.

The NAICS structure for this subsector distinguishes the forging and stamping processes in a single industry. The remaining industries, in the subsector, group establishments based on similar combinations of processes used to make products.

The manufacturing performed in the Fabricated Metal Product Manufacturing subsector begins with manufactured metal shapes. The establishments in this sector further fabricate the purchased metal shapes into a product. For instance, the Spring and Wire Product Manufacturing industry starts with wire and fabricates such items.

Within manufacturing there are other establishments that make the same products made by this subsector; only these establishments begin production further back in the production process. These establishments have a more integrated operation. For instance, one establishment may manufacture steel, draw it into wire, and make wire products in the same establishment. Such operations are classified in the Primary Metal Manufacturing subsector.

3321 Forging and Stamping

This NAICS industry group includes establishments classified in NAICS Industry 33211, Forging and Stamping.

33211 Forging and Stamping

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing forgings from purchased metals; (2) manufacturing metal custom roll forming products; (3) manufacturing metal stamped and spun products (except automotive, cans, coins); and (4) manufacturing powder metallurgy products. Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished

product. Metal forging, metal stamping, and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

332111 Iron and Steel Forging

This U.S. industry comprises establishments primarily engaged in manufacturing iron and steel forgings from purchased iron and steel by hammering mill shapes. Establishments making iron and steel forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Iron and steel forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

The data published with NAICS code 332111 include the following SIC industry:

3462 Iron and steel forgings

332112 Nonferrous Forging

This U.S. industry comprises establishments primarily engaged in manufacturing nonferrous forgings from purchased nonferrous metals by hammering mill shapes. Establishments making nonferrous forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Nonferrous forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

The data published with NAICS code 332112 include the following SIC industry:

3463 Nonferrous forgings

332114 Custom Roll Forming

This U.S. industry comprises establishments primarily engaged in custom roll forming metal products by use of rotary motion of rolls with various contours to bend or shape the products.

The data published with NAICS code 332114 include the following SIC industry:

3449 Miscellaneous metal work (pt)

332115 Crown and Closure Manufacturing

This U.S. industry comprises establishments primarily engaged in stamping metal crowns and closures, such as bottle caps and home canning lids and rings.

The data published with NAICS code 332115 include the following SIC industry:

3466 Crowns and closures

332116 Metal Stamping

This U.S. industry comprises establishments primarily engaged in manufacturing unfinished metal stampings and spinning unfinished metal products (except crowns, cans, closures, automotive, and coins). Establishments making metal stampings and metal spun products and further manufacturing (e.g., machining, assembling) a specific product are classified in the industry of the finished product. Metal stamping and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

The data published with NAICS code 332116 include the following SIC industry:

3469 Metal stampings, n.e.c. (pt)

332117 Powder Metallurgy Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing powder metallurgy products by compacting them in a shaped die and sintering. Establishments in this industry generally make a wide range of parts on a job or order basis.

The data published with NAICS code 332117 include the following SIC industry:

3499 Fabricated metal products, n.e.c. (pt)

3322 Cutlery and Handtool Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33221, Cutlery and Handtool Manufacturing.

33221 Cutlery and Handtool Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nonprecious and precious plated metal cutlery and flatware; (2) manufacturing nonpowered hand and edge tools; (3) manufacturing nonpowered handsaws; (4) manufacturing saw blades, all types (including those for sawing machines); and (5) manufacturing metal kitchen utensils (except cutting-type) and pots and pans (except those manufactured by casting (e.g., cast iron skillet) or stamped without further fabrication).

332211 Cutlery and Flatware (Except Precious) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonprecious and precious plated metal cutlery and flatware.

The data published with NAICS code 332211 include the following SIC industries:

3421 Cutlery

3914 Silverware and plated ware (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census—Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332211 do not include establishments primarily engaged in the manufacture of hand-operated clippers for human hair. The NAICS definitions will be fully implemented with the 2002 Economic Census.

332212 Hand and Edge Tool Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonpowered hand and edge tools (except saws).

The data published with NAICS code 332212 include the following SIC industries:

- 3423 Hand and edge tools, n.e.c.
- 3523 Farm machinery and equipment (pt)
- 3524 Lawn and garden equipment (pt)
- 3545 Machine tool accessories (pt)
- 3699 Electrical equipment and supplies, n.e.c. (pt)
- 3799 Transportation equipment, n.e.c. (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census—Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332212 include establishments primarily engaged in the manufacture of wheelbarrows or quality control laser equipment but do not include establishments primarily engaged in the manufacture of tool-type shears or fish wire, an electrical wiring tool. The NAICS definitions will be fully implemented with the 2002 Economic Census.

332213 Saw Blade and Handsaw Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing nonpowered handsaws and/or (2) manufacturing saw blades, all types (including those for power sawing machines).

The data published with NAICS code 332213 include the following SIC industry:

- 3425 Saw blades and handsaws

332214 Kitchen Utensil, Pot, and Pan Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal kitchen utensils (except cutting-type), pots, and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

The data published with NAICS code 332214 include the following SIC industry:

- 3469 Metal stampings, n.e.c. (pt)

3323 Architectural and Structural Metals Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33231, Plate Work and Fabricated Structural Product Manufacturing; and 33232, Ornamental and Architectural Metal Products Manufacturing.

33231 Plate Work and Fabricated Structural Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing one or more of the following: (1) prefabricated metal buildings, panels, and sections; (2) structural metal products; and (3) metal plate work products.

332311 Prefabricated Metal Building and Component Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing prefabricated metal buildings, panels, and sections.

The data published with NAICS code 332311 include the following SIC industry:

- 3448 Prefabricated metal buildings

332312 Fabricated Structural Metal Manufacturing

This U.S. industry comprises establishments primarily engaged in fabricating structural metal products, such as concrete reinforcing bars and fabricated bar joists.

The data published with NAICS code 332312 include the following SIC industries:

- 3441 Fabricated structural metal
- 3449 Miscellaneous metal work (pt)

332313 Plate Work Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal plate work by cutting, punching, bending, shaping, and welding purchased metal plate.

The data published with NAICS code 332313 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

33232 Ornamental and Architectural Metal Products Manufacturing

This industry comprises establishments primarily engaged in manufacturing one or more of the following: (1) metal framed windows (i.e., typically using purchased glass) and metal doors; (2) sheet metal work; and (3) ornamental and architectural metal products.

332321 Metal Window and Door Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal framed windows (i.e., typically using purchased glass) and metal doors. Examples of products made by these establishments are metal door frames; metal framed window and door screens; metal molding and trim (except automotive); and metal curtain walls.

The data published with NAICS code 332321 include the following SIC industries:

- 2499 Wood products, n.e.c. (pt)
- 3442 Metal doors, sash, and trim
- 3449 Miscellaneous metal work (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332321 include establishments primarily engaged in the manufacture of metal finished moldings for mirrors and pictures. The NAICS definitions will be fully implemented with the 2002 Economic Census.

332322 Sheet Metal Work Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing sheet metal work (except stampings).

The data published with NAICS code 332322 include the following SIC industry:

- 3444 Sheet metal work (pt)

332323 Ornamental and Architectural Metal Work Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ornamental and architectural metal work, such as staircases, metal open steel flooring, fire escapes, railings, and scaffolding.

The data published with NAICS code 332323 include the following SIC industries:

- 3446 Architectural metal work
- 3449 Miscellaneous metal work (pt)
- 3523 Farm machinery and equipment (pt)

3324 Boiler, Tank, and Shipping Container Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33241, Power Boiler and Heat Exchanger Manufacturing; 33242, Metal Tank (Heavy Gauge) Manufacturing; and 33243, Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing.

33241 Power Boiler and Heat Exchanger Manufacturing

This industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

332410 Power Boiler and Heat Exchanger Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

The data published with NAICS code 332410 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332410 do not include establishments primarily engaged in the manufacture of nuclear control drive mechanisms. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33242 Metal Tank (Heavy Gauge) Manufacturing

This industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

332420 Metal Tank (Heavy Gauge) Manufacturing

This U.S. industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

The data published with NAICS code 332420 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

33243 Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing

This industry comprises establishments primarily engaged in forming light gauge metal containers.

332431 Metal Can Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal cans, lids, and ends.

The data published with NAICS code 332431 include the following SIC industry:

- 3411 Metal cans

332439 Other Metal Container Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal (light gauge) containers (except cans).

The data published with NAICS code 332439 include the following SIC industries:

- 3412 Metal barrels, drums, and pails
- 3429 Hardware, n.e.c. (pt)
- 3444 Sheet metal work (pt)
- 3499 Fabricated metal products, n.e.c. (pt)
- 3537 Industrial trucks and tractors (pt)

3325 Hardware Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33251, Hardware Manufacturing.

33251 Hardware Manufacturing

This industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated, time locks).

332510 Hardware Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated, time locks).

The data published with NAICS code 332510 include the following SIC industries:

- 3429 Hardware, n.e.c. (pt)
- 3499 Fabricated metal products, n.e.c. (pt)

3326 Spring and Wire Product Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33261, Spring and Wire Product Manufacturing.

33261 Spring and Wire Product Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing steel springs by forming, such as cutting, bending, and heat winding metal rod or strip stock and/or (2) manufacturing wire springs and fabricated wire products from wire drawn elsewhere (except watch and clock springs).

332611 Spring (Heavy Gauge) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing heavy gauge springs by forming, such as cutting, bending, and heat winding rod or strip stock.

The data published with NAICS code 332611 include the following SIC industry:

- 3493 Steel springs, except wire

332612 Spring (Light Gauge) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing light gauge springs from purchased wire or strip.

The data published with NAICS code 332612 include the following SIC industry:

- 3495 Wire springs (pt)

332618 Other Fabricated Wire Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated wire products (except springs) made from purchased wire.

The data published with NAICS code 332618 include the following SIC industries:

- 3315 Steel wire and related products (pt)
- 3399 Primary metal products, n.e.c. (pt)
- 3496 Miscellaneous fabricated wire products

3327 Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33271, Machine Shops; and 33272, Turned Product and Screw, Nut, and Bolt Manufacturing.

33271 Machine Shops

This industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

332710 Machine Shops

This U.S. industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

The data published with NAICS code 332710 include the following SIC industry:

- 3599 Industrial machinery, n.e.c. (pt)

33272 Turned Product and Screw, Nut, and Bolt Manufacturing

This industry comprises establishments primarily engaged in (1) machining precision turned products or (2) manufacturing metal bolts, nuts, screws, rivets, and other industrial fasteners. Included in this industry are establishments primarily engaged manufacturing parts for machinery and equipment on a customized basis.

332721 Precision Turned Product Manufacturing

This U.S. industry comprises establishments known as precision turned manufacturers primarily engaged in machining precision products of all materials on a job or order basis. Generally precision turned product jobs are large volume using machines, such as automatic screw machines, rotary transfer machines, computer numerically controlled (CNC) lathes, or turning centers.

The data published with NAICS code 332721 include the following SIC industry:

3451 Screw machine products

332722 Bolt, Nut, Screw, Rivet, and Washer Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal bolts, nuts, screws, rivets, and washers, and other industrial fasteners using machines, such as headers, threaders, and nut forming machines.

The data published with NAICS code 332722 include the following SIC industry:

3452 Bolts, nuts, rivets, and washers

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332722 do not include establishments primarily engaged in the manufacture of turnbuckles and hose clamps. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3328 Coating, Engraving, Heat Treating, and Allied Activities

This NAICS industry group includes establishments classified in NAICS Industry 33281, Coating, Engraving, Heat Treating, and Allied Activities.

33281 Coating, Engraving, Heat Treating, and Allied Activities

This industry comprises establishments primarily engaged in one or more of the following: (1) heat treating metals and metal products; (2) enameling, lacquering, varnishing metals and metal products; (3) hot dip galvanizing metals and metal products; (4) engraving, chasing, or

etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates); (5) powder coating metals and metal products; (6) electroplating, plating, anodizing, coloring, and finishing metals and metal products; and (7) providing other metal surfacing services for the trade. Establishments in this industry coat engravings and heat treat metals and metal formed products fabricated elsewhere.

332811 Metal Heat Treating

This U.S. industry comprises establishments primarily engaged in heat treating, such as annealing, tempering, and brazing, metals and metal products for the trade.

The data published with NAICS code 332811 include the following SIC industry:

3398 Metal heat treating

332812 Metal Coating, Engraving (Except Jewelry and Silverware), and Allied Services to Manufacturers

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) enameling, lacquering, and varnishing metals and metal products; (2) hot dip galvanizing metals and metal products; (3) engraving, chasing, or etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates); (4) powder coating metals and metal products; and (5) providing other metal surfacing services for the trade.

The data published with NAICS code 332812 include the following SIC industry:

3479 Metal coating and allied services (pt)

332813 Electroplating, Plating, Polishing, Anodizing, and Coloring

This U.S. industry comprises establishments primarily engaged in electroplating, plating, anodizing, coloring, buffing, polishing, cleaning, and sandblasting metals and metal products for the trade.

The data published with NAICS code 332813 include the following SIC industry:

3471 Plating and polishing

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332813 do not include establishments primarily engaged in laminating steel. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3329 Other Fabricated Metal Product Manufacturing

This industry group comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, and nuts and bolts).

33291 Metal Valve Manufacturing

This industry comprises establishments primarily engaged in manufacturing one or more of the following metal valves: (1) industrial valves; (2) fluid power valves and hose fittings; (3) plumbing fixture fittings and trim; and (4) other metal valves and pipe fittings.

332911 Industrial Valve Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial valves and valves for water works and municipal water systems.

The data published with NAICS code 332911 include the following SIC industries:

3491 Industrial valves

332912 Fluid Power Valve and Hose Fitting Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power valves and hose fittings.

The data published with NAICS code 332912 include the following SIC industries:

3492 Fluid power valves and hose fittings

3728 Aircraft parts and equipment, n.e.c. (pt)

332913 Plumbing Fixture Fitting and Trim Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal and plastics plumbing fixture fittings and trim, such as faucets, flush valves, and shower heads.

The data published with NAICS code 332913 include the following SIC industry:

3432 Plumbing fittings and brass goods (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332913 include establishments primarily engaged in the manufacture of lawn hose nozzels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

332919 Other Metal Valve and Pipe Fitting Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal valves (except industrial valves, fluid power valves, fluid power hose fittings, and plumbing fixture fittings and trim).

The data published with NAICS code 332919 include the following SIC industries:

3429 Hardware, n.e.c. (pt)

3494 Valves and pipe fittings, n.e.c. (pt)

3499 Fabricated metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332919 do not include establishments primarily engaged in manufacturing lawn hose nozzels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33299 All Other Fabricated Metal Product Manufacturing

This industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metal products, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts and bolts, and metal valves).

332991 Ball and Roller Bearing Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ball and roller bearings of all materials.

The data published with NAICS code 332991 include the following SIC industry:

3562 Ball and roller bearings

332992 Small Arms Ammunition Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing small arms ammunition.

The data published with NAICS code 332992 include the following SIC industry:

3482 Small arms ammunition

332993 Ammunition (Except Small Arms) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ammunition (except small arms). Examples of products made by these establishments are bombs, depth charges, rockets (except guided missiles), grenades, mines, and torpedoes.

The data published with NAICS code 332993 include the following SIC industry:

3483 Ammunition, except small arms, n.e.c.

332994 Small Arms Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing small firearms that are carried and fired by the individual.

The data published with NAICS code 332994 include the following SIC industry:

3484 Small arms

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332994 do not include establishments primarily engaged in the manufacture of tranquilizer guns. The NAICS definitions will be fully implemented with the 2002 Economic Census.

332995 Other Ordnance and Accessories Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ordnance (except small arms) and accessories.

The data published with NAICS code 332995 include the following SIC industry:

3489 Ordnance and accessories, n.e.c.

332996 Fabricated Pipe and Pipe Fitting Manufacturing

This U.S. industry comprises establishments primarily engaged in fabricating (such as cutting, threading and bending) metal pipes and pipe fittings made from purchased metal pipe.

The data published with NAICS code 332996 include the following SIC industries:

3353 Aluminum sheet, plate, and foil (pt)

3498 Fabricated pipe and fittings

332997 Industrial Pattern Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial patterns.

The data published with NAICS code 332997 include the following SIC industry:

3543 Industrial patterns

332998 Enameled Iron and Metal Sanitary Ware Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing enameled iron and metal sanitary ware.

The data published with NAICS code 332998 include the following SIC industry:

3431 Metal sanitary ware

332999 All Other Miscellaneous Fabricated Metal Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts, and bolts, metal valves, ball and roller bearings, ammunition, small arms and other ordnances, fabricated pipes and pipe fittings, industrial patterns, and enameled iron and metal sanitary ware).

The data published with NAICS code 332999 include the following SIC industries:

3291 Abrasive products (pt)

3432 Plumbing fixture fittings and trim

3494 Valves and pipe fittings, n.e.c. (pt)

3497 Metal foil and leaf (pt)

3499 Fabricated metal products, n.e.c. (pt)

3537 Industrial trucks and tractors (pt)

3599 Industrial machinery, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332999 do not include establishments primarily engaged in manufacturing fire-place fixtures, traps, handcuffs and leg irons, ladder jacks, or other like metal products, or primarily engaged in manufacturing precious metal hollowware. The NAICS definitions will be fully implemented with the 2002 Economic Census.

333 Machinery Manufacturing

Industries in the Machinery Manufacturing subsector create end products that apply mechanical force, for example, the application of gears and levers, to perform work. Some important processes for the manufacture of machinery are forging, stamping, bending, forming, and machining that are used to shape individual pieces of metal. Processes, such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it

typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process.

In general, design considerations are very important in machinery production. Establishments specialize in making machinery designed for particular applications. Thus, design is considered to be part of the production process for the purpose of implementing NAICS. The NAICS structure reflects this by defining industries and industry groups that make machinery for different applications. A broad distinction exists between machinery that is generally used in a variety of industrial applications (i.e., general-purpose machinery) and machinery that is designed to be used in a particular industry (i.e., special-purpose machinery). Three industry groups consist of special-purpose machinery—Agricultural, Construction, and Mining Machinery Manufacturing; Industrial Machinery Manufacturing; and Commercial and Service Industry Machinery Manufacturing. The other industry groups make general-purpose machinery: Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing; Metalworking Machinery Manufacturing; Engine, Turbine, and Power Transmission Equipment Manufacturing; and Other General-Purpose Machinery Manufacturing.

3331 Agriculture, Construction, and Mining Machinery Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33311, Agricultural Implement Manufacturing; 33312, Construction Machinery Manufacturing; and 33313, Mining and Oil and Gas Field Machinery Manufacturing.

33311 Agricultural Implement Manufacturing

This industry comprises establishments primarily engaged in manufacturing farm machinery and equipment, powered mowing equipment, and other powered home lawn and garden equipment.

333111 Farm Machinery and Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing agricultural and farm machinery and equipment, and other turf and grounds care equipment, including planting, harvesting, and grass mowing equipment (except lawn and garden-type).

The data published with NAICS code 333111 include the following SIC industry:

3523 Farm machinery and equipment (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to

NAICS. Data for NAICS industry 333111 do not include establishments primarily engaged in manufacturing cotton ginning machinery. The NAICS definitions will be fully implemented with the 2002 Economic Census.

333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing powered lawnmowers, lawn and garden tractors, and other home lawn and garden equipment, such as tillers, shredders, and yard vacuums and blowers.

The data published with NAICS code 333112 include the following SIC industry:

3524 Lawn and garden equipment (pt)

33312 Construction Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

333120 Construction Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

The data published with NAICS code 333120 include the following SIC industry:

3531 Construction machinery (pt)

33313 Mining and Oil and Gas Field Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing oil and gas field and underground mining machinery and equipment.

333131 Mining Machinery and Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing underground mining machinery and equipment, such as coal breakers, mining cars, core drills, coal cutters, rock drills and (2) manufacturing mineral beneficiating machinery and equipment used in surface or underground mines.

The data published with NAICS code 333131 include the following SIC industry:

3532 Mining machinery

333132 Oil and Gas Field Machinery and Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing oil and gas field machinery and equipment, such as oil and gas field drilling machinery and equipment; oil and gas field production machinery and equipment; and oil and gas field derricks and (2) manufacturing water well drilling machinery.

The data published with NAICS code 333132 include the following SIC industry:

3533 Oil field machinery

3332 Industrial Machinery Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33321, Sawmill and Woodworking Machinery Manufacturing; 33322, Plastics and Rubber Industry Machinery Manufacturing; and 33329, Other Industrial Machinery Manufacturing.

33321 Sawmill and Woodworking Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

333210 Sawmill and Woodworking Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

The data published with NAICS code 333210 include the following SIC industry:

3553 Woodworking machinery

33322 Plastics and Rubber Industry Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

333220 Plastics and Rubber Industry Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

The data published with NAICS code 333220 include the following SIC industry:

3559 Special industry machinery, n.e.c. (pt)

33329 Other Industrial Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction, mining, sawmill and woodworking, and plastics and rubber products making machinery).

333291 Paper Industry Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing paper industry machinery for making paper and paper products, such as pulp making machinery, paper and paperboard making machinery, and paper and paperboard converting machinery.

The data published with NAICS code 333291 include the following SIC industry:

3554 Paper industries machinery

333292 Textile Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing textile machinery for making thread, yarn, and fiber.

The data published with NAICS code 333292 include the following SIC industries:

3552 Textile machinery

3699 Electrical equipment and supplies, n.e.c. (pt)

333293 Printing Machinery and Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing printing and bookbinding machinery and equipment, such as printing presses, type-setting machinery, and bindery machinery.

The data published with NAICS code 333293 include the following SIC industries:

3555 Printing trades machinery

3699 Electrical equipment and supplies, n.e.c. (pt)

333294 Food Product Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing food and beverage manufacturing-type machinery and equipment, such as dairy product plant machinery and equipment (e.g., homogenizers, pasteurizers, ice cream freezers), bakery machinery and equipment (e.g., dough mixers, bake ovens, pastry rolling machines), meat and poultry processing and preparation machinery, and other commercial food products machinery (e.g., slicers, choppers, and mixers).

The data published with NAICS code 333294 include the following SIC industry:

3556 Food products machinery

333295 Semiconductor Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wafer processing equipment, semiconductor assembly and packaging equipment, and other semiconductor making machinery.

The data published with NAICS code 333295 include the following SIC industry:

3559 Special industry machinery, n.e.c. (pt)

333298 All Other Industrial Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction and mining machinery, sawmill and woodworking machinery, plastics and rubber making machinery, paper and paperboard making machinery, textile machinery, printing machinery and equipment, food manufacturing-type machinery, and semiconductor making machinery).

The data published with NAICS code 333298 include the following SIC industries:

3559 Special industry machinery, n.e.c. (pt)

3639 Household appliances, n.e.c. (pt)

3333 Commercial and Service Industry Machinery Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33331, Commercial and Service Industry Machinery Manufacturing.

33331 Commercial and Service Industry Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and drycleaning machinery, office machinery, photographic and photocopying machinery, optical instruments and machinery, automotive maintenance equipment (except mechanic's handtools), industrial vacuum cleaners, and commercial-type cooking equipment.

333311 Automatic Vending Machine Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing coin, token, currency, or magnetic card operated vending machines and/or (2) manufacturing coin operated mechanism for machines, such as vending machines, lockers, and laundry machines.

The data published with NAICS code 333311 include the following SIC industry:

3581 Automatic merchandising machines

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333311 do not include establishments primarily engaged in the manufacture of change making machines. The NAICS definitions will be fully implemented with the 2002 Economic Census.

333312 Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and industrial laundry and drycleaning equipment and pressing machines.

The data published with NAICS code 333312 include the following SIC industry:

3582 Commercial laundry equipment

333313 Office Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing office machinery (except computers and photocopying equipment), such as mail-handling machinery and equipment, calculators, typewriters, and dedicated word processing equipment.

The data published with NAICS code 333313 include the following SIC industries:

3578 Calculating and accounting equipment (pt)

3579 Office machines, n.e.c. (pt)

333314 Optical Instrument and Lens Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing optical instruments and lens, such as binoculars, microscopes (except electron, proton), telescopes, prisms, and lenses (except ophthalmic); (2) coating or polishing lenses (except ophthalmic); and (3) mounting lenses (except ophthalmic).

The data published with NAICS code 333314 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3827 Optical instruments and lenses

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333314 include establishments primarily engaged in the manufacture of sighting and tracking laser products.

333315 Photographic and Photocopying Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing photographic and photocopying equipment, such as cameras (except television, video, digital projectors, film developing equipment, photocopying equipment, and microfilm equipment).

The data published with NAICS code 333315 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3861 Photographic equipment and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333315 include establishments primarily engaged in the manufacture of photographic laser products.

333319 Other Commercial and Service Industry Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and service industry equipment (except automatic vending machines, commercial laundry, drycleaning and pressing machines, office machinery, optical instruments and lenses, and photographic and photocopying equipment).

The data published with NAICS code 333319 include the following SIC industries:

3559 Special industry machinery, n.e.c. (pt)

3589 Service industry machinery, n.e.c.

3599 Industrial machinery, n.e.c. (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333319 do not include establishments primarily engaged in the manufacture of beauty and barbershop equipment, except chairs. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3334 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33341, Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing.

33341 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing ventilating, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment.

333411 Air Purification Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing stationary air purification equipment, such as industrial dust and fume collection equipment, electrostatic precipitation equipment, warm air furnace filters, air washers, and other dust collection equipment.

The data published with NAICS code 333411 include the following SIC industry:

3564 Blowers and fans (pt)

333412 Industrial and Commercial Fan and Blower Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing attic fans and industrial and commercial fans and blowers, such as commercial exhaust fans and commercial ventilating fans.

The data published with NAICS code 333412 include the following SIC industry:

3564 Blowers and fans (pt)

333414 Heating Equipment (Except Warm Air Furnaces) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing heating equipment (except electric and warm air furnaces), such as heating boilers, heating stoves, floor and wall furnaces, and wall and baseboard heating units.

The data published with NAICS code 333414 include the following SIC industries:

3433 Heating equipment, except electric

3634 Electric housewares and fans (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333414 do not include establishments primarily engaged in the manufacture of cooling towers of wood, metal, or sheet metal, or the manufacture of electric swimming pool heaters. The NAICS definitions will be fully implemented with the 2002 Economic Census.

333415 Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing air-conditioning (except motor vehicle) and warm air furnace equipment and/or (2) manufacturing commercial and industrial refrigeration and freezer equipment.

The data published with NAICS code 333415 include the following SIC industries:

3443 Fabricated plate work, boiler shops (pt)

3585 Refrigeration and heating equipment (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to

NAICS. Data for NAICS industry 333415 include establishments primarily engaged in the manufacture of metal cooling towers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3335 Metalworking Machinery Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33351, Metalworking Machinery Manufacturing.

33351 Metalworking Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing metalworking machinery, such as metal cutting and metal forming machine tools; cutting tools; and accessories for metalworking machinery; special dies, tools, jigs, and fixtures; industrial molds; rolling mill machinery; assembly machinery; coil handling, conversion, or straightening equipment; and wire drawing and fabricating machines.

333511 Industrial Mold Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial molds for casting metals or forming other materials, such as plastics, glass, or rubber.

The data published with NAICS code 333511 include the following SIC industry:

3544 Special dies, tools, jigs, and fixtures (pt)

333512 Machine Tool (Metal Cutting Types) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal cutting machine tools (except handtools).

The data published with NAICS code 333512 include the following SIC industries:

3541 Machine tools, metal cutting types

3699 Electrical equipment and supplies, n.e.c. (pt)

333513 Machine Tool (Metal Forming Types) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal forming machine tools (except handtools), such as punching, sheering, bending, forming, pressing, forging and die-casting machines.

The data published with NAICS code 333513 include the following SIC industries:

3542 Machine tools, metal forming types

333514 Special Die and Tool, Die Set, Jig, and Fixture Manufacturing

This U.S. industry comprises establishments, known as tool and die shops, primarily engaged in manufacturing special tools and fixtures, such as cutting dies and jigs.

The data published with NAICS code 333514 include the following SIC industry:

3544 Special dies, tools, jigs, and fixtures (pt)

333515 Cutting Tool and Machine Tool Accessory Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing accessories and attachments for metal cutting and metal forming machine tools.

The data published with NAICS code 333515 include the following SIC industry:

3545 Machine tool accessories (pt)

333516 Rolling Mill Machinery and Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing rolling mill machinery and equipment for metal production.

The data published with NAICS code 333516 include the following SIC industry:

3547 Rolling mill machinery

333518 Other Metalworking Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal working machinery (except industrial molds; metal cutting machine tools; metal forming machine tools; special dies and tools, die sets, jigs, and fixtures; cutting tools and machine tool accessories; and rolling mill machinery and equipment).

The data published with NAICS code 333518 include the following SIC industry:

3549 Metalworking machinery, n.e.c.

3336 Engine, Turbine, and Power Transmission Equipment Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33361, Engine, Turbine, and Power Transmission Equipment Manufacturing.

33361 Engine, Turbine, and Power Transmission Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive gasoline and aircraft).

333611 Turbine and Turbine Generator Set Units Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing turbines (except aircraft); and complete turbine generator set units, such as steam, hydraulic, gas, and wind.

The data published with NAICS code 333611 include the following SIC industry:

3511 Turbines and turbine generator sets

333612 Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing gears, speed changers, and industrial high-speed drives (except hydrostatic).

The data published with NAICS code 333612 include the following SIC industry:

3566 Speed changers, drives, and gears

333613 Mechanical Power Transmission Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing mechanical power transmission equipment (except motor vehicle and aircraft), such as plain bearings, brakes and clutches (except motor vehicle and electromagnetic industrial control), couplings, joints, and drive chains.

The data published with NAICS code 333613 include the following SIC industry:

3568 Power transmission equipment, n.e.c.

333618 Other Engine Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing internal combustion engines (except automotive gasoline and aircraft).

The data published with NAICS code 333618 include the following SIC industries:

3519 Internal combustion engines, n.e.c. (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

3339 Other General-Purpose Machinery Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33391, Pump and Compressor Manufacturing; 33392, Material Handling Equipment Manufacturing; and 33399, All Other General-Purpose Machinery Manufacturing.

33391 Pump and Compressor Manufacturing

This industry comprises establishments primarily engaged in manufacturing pumps and compressors, such as general-purpose air and gas compressors, nonagricultural spraying and dusting equipment, general-purpose pumps and pumping equipment (except fluid power pumps and motors), and measuring and dispensing pumps.

333911 Pump and Pumping Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose pumps and pumping equipment (except fluid power pumps and motors), such as reciprocating pumps, turbine pumps, centrifugal pumps, rotary pumps, diaphragm pumps, domestic water system pumps, oil well and oil field pumps and sump pumps.

The data published with NAICS code 333911 include the following SIC industries:

3561 Pumps and pumping equipment

3743 Railroad equipment (pt)

333912 Air and Gas Compressor Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose air and gas compressors, such as reciprocating compressors, centrifugal compressors, vacuum pumps (except laboratory), and nonagricultural spraying and dusting compressors and spray gun units.

The data published with NAICS code 333912 include the following SIC industry:

3563 Air and gas compressors

333913 Measuring and Dispensing Pump Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and dispensing pumps, such as gasoline pumps and lubricating oil measuring and dispensing pumps.

The data published with NAICS code 333913 include the following SIC industry:

3586 Measuring and dispensing pumps

33392 Material Handling Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing material handling equipment, such as elevators and moving stairs; conveyors and conveying equipment; overhead traveling cranes, hoists, and monorail systems; and industrial trucks, tractors, trailers, and stacker machinery.

333921 Elevator and Moving Stairway Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing elevators and moving stairways.

The data published with NAICS code 333912 include the following SIC industry:

3534 Elevators and moving stairways

333922 Conveyor and Conveying Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing conveyors and conveying equipment, such as gravity conveyors, trolley conveyors, tow conveyors, pneumatic tube conveyors, carousel conveyors, farm conveyors, and belt conveyors.

The data published with NAICS code 333922 include the following SIC industries:

3523 Farm machinery and equipment (pt)

3535 Conveyors and conveying equipment

333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing overhead traveling cranes, hoists, and monorail systems.

The data published with NAICS code 333923 include the following SIC industries:

3531 Construction machinery (pt)

3536 Hoists, cranes, and monorails

333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial trucks, tractors, trailers, and stackers (i.e., truck-type) such as forklifts, pallet loaders and unloaders, and portable loading docks.

The data published with NAICS code 333924 include the following SIC industry:

3537 Industrial trucks and tractors (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332994 do not include establishments primarily engaged in the manufacture of tranquilizer guns. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33399 All Other General-Purpose Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing general-purpose machinery (except ventilation, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery; engines, turbines, and power transmission equipment; pumps and compressors; and material handling equipment).

333991 Power-Driven Handtool Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing power-driven (e.g., battery, corded, pneumatic) handtools, such as drills, screwguns, circular saws, chain saws, staplers, and nailers.

The data published with NAICS code 333991 include the following SIC industry:

3546 Power-driven handtools

333992 Welding and Soldering Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing welding and soldering equipment and accessories (except transformers), such as arc, resistance, gas, plasma, laser, electron beam, and ultrasonic welding equipment; welding electrodes; coated or cored welding wire; and soldering equipment (except handheld).

The data published with NAICS code 333992 include the following SIC industries:

3548 Welding apparatus (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

333993 Packaging Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing packaging machinery, such as wrapping, bottling, canning, and labeling machinery.

The data published with NAICS code 333993 include the following SIC industry:

3565 Packaging machinery

333994 Industrial Process Furnace and Oven Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial process furnaces, ovens, induction and dielectric heating equipment, and kilns (except cement, chemical, wood).

The data published with NAICS code 333994 include the following SIC industry:

3567 Industrial furnaces and ovens

333995 Fluid Power Cylinder and Actuator Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) cylinders and actuators.

The data published with NAICS code 333995 include the following SIC industries:

3593 Fluid power cylinders and actuators

3728 Aircraft parts and equipment, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333995 include establishments primarily engaged in the manufacture of aerospace-type fluid power actuators. The NAICS definitions will be fully implemented with the 2002 Economic Census.

333996 Fluid Power Pump and Motor Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) pumps and motors.

The data published with NAICS code 333996 include the following SIC industries:

3594 Fluid power pumps and motors

3728 Aircraft parts and equipment, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333996 include establishments primarily engaged in the manufacture of aerospace-type fluid power actuators. The NAICS definitions will be fully implemented with the 2002 Economic Census.

333997 Scale and Balance (Except Laboratory) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing scales and balances (except laboratory).

The data published with NAICS code 333997 include the following SIC industry:

3596 Scales and balances, except laboratory

333999 All Other Miscellaneous General-Purpose Machinery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose machinery (except ventilating, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery;

engines, turbines, and power transmission equipment; pumps and compressors; material handling equipment; power-driven handtools; welding and soldering equipment; packaging machinery; industrial process furnaces and ovens; fluid power cylinders and actuators; fluid power pumps and motors; and scales and balances).

The data published with NAICS code 333999 include the following SIC industries:

3569 General industrial machinery, n.e.c.

3599 Industrial machinery, n.e.c. (pt)

334 Computer and Electronic Product Manufacturing

Industries in the Computer and Electronic Product Manufacturing subsector group establishments that manufacture computers, computer peripherals, communications equipment, and similar electronic products, and establishments that manufacture components for such products. The Computer and Electronic Product Manufacturing industries have been combined in the hierarchy of NAICS because of the economic significance they have attained. Their rapid growth suggests that they will become even more important to the economies of all three North American countries in the future, and in addition their manufacturing processes are fundamentally different from the manufacturing processes of other machinery and equipment. The design and use of integrated circuits and the application of highly specialized miniaturization technologies are common elements in the production technologies of the computer and electronic subsector. Convergence of technology motivates this NAICS subsector. Digitalization of sound recording, for example, causes both the medium (the compact disc) and the equipment to resemble the technologies for recording, storing, transmitting, and manipulating data. Communications technology and equipment have been converging with computer technology. When technologically related components are in the same sector, it makes it easier to adjust the classification for future changes, without needing to redefine its basic structure. The creation of the Computer and Electronic Product Manufacturing subsector will assist in delineating new and emerging industries because the activities that will serve as the probable sources of new industries, such as computer manufacturing and communications equipment manufacturing, or computers and audio equipment are brought together. As new activities emerge, they are less likely, therefore, to cross the subsector boundaries of the classification.

3341 Computer and Peripheral Equipment Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33411, Computer and Peripheral Equipment Manufacturing.

33411 Computer and Peripheral Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers; and computer peripheral equipment, such as storage devices, printers, monitors, input/output devices and terminals. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and comprise at least analog, control, and programming elements.

334111 Electronic Computer Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and contain at least analog, control, and programming elements. The manufacture of computers includes the assembly or integration of processors, coprocessors, memory, storage, and input/output devices into a user-programmable final product.

The data published with NAICS code 334111 include the following SIC industry:

3571 Electronic computers

334112 Computer Storage Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media. Examples of products made by these establishments are CD-ROM drives, floppy disk drives, hard disk drives, and tape storage and backup units.

The data published with NAICS code 334112 include the following SIC industry:

3572 Computer storage devices

334113 Computer Terminal Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing computer terminals. Computer terminals are input/output devices that connect with a central computer for processing.

The data published with NAICS code 334113 include the following SIC industry:

3575 Computer terminals

334119 Other Computer Peripheral Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing computer peripheral equipment (except storage devices and computer terminals).

The data published with NAICS code 334119 include the following SIC industries:

3577 Computer peripheral equipment, n.e.c.

3578 Calculating and accounting equipment (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334119 include establishments primarily engaged in the manufacture of laser products.

3342 Communications Equipment Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33421, Telephone Apparatus Manufacturing; 33422, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing; and 33429, Other Communications Equipment Manufacturing.

33421 Telephone Apparatus Manufacturing

This industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

334210 Telephone Apparatus Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

The data published with NAICS code 334210 include the following SIC industry:

3661 Telephone and telegraph apparatus (pt)

33422 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

The data published with NAICS code 334220 include the following SIC industries:

3663 Radio and TV communications equipment

3679 Electronic components, n.e.c. (pt)

33429 Other Communications Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).

334290 Other Communications Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, radio and television broadcast, and wireless communications equipment).

The data published with NAICS code 334290 include the following SIC industry:

3669 Communications equipment, n.e.c.

3343 Audio and Video Equipment Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33431, Audio and Video Equipment Manufacturing.

33431 Audio and Video Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

334310 Audio and Video Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

The data published with NAICS code 334310 include the following SIC industry:

3651 Household audio and video equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334310 do not include establishments primarily engaged in the manufacture of radio headphones. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3344 Semiconductor and Other Electronic Component Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33441, Semiconductor and Other Electronic Component Manufacturing.

33441 Semiconductor and Other Electronic Component Manufacturing

This industry comprises establishments primarily engaged in manufacturing semiconductors and other components for electronic applications. Examples of products

made by these establishments are capacitors, resistors, microprocessors, bare and loaded printed circuit boards, electron tubes, electronic connectors, and computer modems.

334411 Electron Tube Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electron tubes and parts (except glass blanks). Examples of products made by these establishments are cathode ray tubes (i.e., picture tubes), klystron tubes, magnetron tubes, and traveling wave tubes.

The data published with NAICS code 334411 include the following SIC industries:

3671 Electron tubes

334412 Bare Printed Circuit Board Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing bare (i.e., rigid or flexible) printed circuit boards without mounted electronic components. These establishments print, perforate, plate, screen, etch, or photoprint interconnecting pathways for electric current on laminates.

The data published with NAICS code 334412 include the following SIC industry:

3672 Printed circuit boards

334413 Semiconductor and Related Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing semiconductors and related solid state devices. Examples of products made by these establishments are integrated circuits, memory chips, microprocessors, diodes, transistors, solar cells, and other optoelectronic devices.

The data published with NAICS code 334413 include the following SIC industry:

3674 Semiconductors and related devices

334414 Electronic Capacitor Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electronic fixed and variable capacitors and condensers.

The data published with NAICS code 334414 include the following SIC industry:

3675 Electronic capacitors

334415 Electronic Resistor Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electronic resistors, such as fixed and variable resistors, resistor networks, thermistors, and varistors.

The data published with NAICS code 334415 include the following SIC industry:

3676 Electronic resistors

334416 Electronic Coil, Transformer, and Other Inductor Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electronic inductors, such as coils and transformers.

The data published with NAICS code 334416 include the following SIC industries:

3661 Telephone and telegraph apparatus (pt)

3677 Electronic coils and transformers

3825 Instruments to measure electricity (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334416 include establishments primarily engaged in the manufacture of telephone transformers or portable instrument transformers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

334417 Electronic Connector Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electronic connectors, such as coaxial, cylindrical, rack and panel, pin and sleeve, printed circuit and fiber optic.

The data published with NAICS code 334417 include the following SIC industry:

3678 Electronic connectors

334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing

This U.S. industry comprises establishments primarily engaged in loading components onto printed circuit boards or who manufacture and ship loaded printed circuit boards. Also known as printed circuit assemblies, electronics assemblies, or modules, these products are printed circuit boards that have some or all of the semiconductor and electronic components inserted or mounted and are inputs to a wide variety of electronic systems and devices.

The data published with NAICS code 334418 include the following SIC industries:

3661 Telephone and telegraph apparatus (pt)

3679 Electronic components, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334418 do not include

establishments primarily engaged in the manufacture of plotter controllers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

334419 Other Electronic Component Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electronic components (except electron tubes; bare printed circuit boards; semiconductors and related devices; electronic capacitors; electronic resistors; coils, transformers and other inductors; connectors; and loaded printed circuit boards).

The data published with NAICS code 334419 include the following SIC industry:

3679 Electronic components, n.e.c. (pt)

3345 Navigational, Measuring, Medical, and Control Instruments Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33451, Navigational, Measuring, Medical, and Control Instruments Manufacturing.

33451 Navigational, Measuring, Medical, and Control Instruments Manufacturing

This industry comprises establishments primarily engaged in manufacturing navigational, measuring, electromedical, and control instruments. Examples of products made by these establishments are aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

334510 Electromedical and Electrotherapeutic Apparatus Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electromedical and electrotherapeutic apparatus, such as magnetic resonance imaging equipment, medical ultrasound equipment, pacemakers, hearing aids, electrocardiographs, and electromedical endoscopic equipment.

The data published with NAICS code 334510 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3842 Surgical appliances and supplies (pt)

3845 Electromedical equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334510 include establishments primarily engaged in the manufacture of electro-medical laser products.

334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing search, detection, navigation, guidance, aeronautical, and nautical systems and instruments. Examples of products made by these establishments are aircraft instruments (except engine), flight recorders, navigational instruments and systems, radar systems and equipment, and sonar systems and equipment.

The data published with NAICS code 334511 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3812 Search and navigation equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334511 include establishments primarily engaged in the manufacture of search and detection laser products.

334512 Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use

This U.S. industry comprises establishments primarily engaged in manufacturing automatic controls and regulators for applications, such as heating, air-conditioning, refrigeration and appliances.

The data published with NAICS code 334512 include the following SIC industry:

3822 Environmental controls

334513 Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and related devices for measuring, displaying, indicating, recording, transmitting, and controlling industrial process variables. These instruments measure, display or control (monitor, analyze, and so forth) industrial process variables, such as temperature, humidity, pressure, vacuum, combustion, flow, level, viscosity, density, acidity, concentration, and rotation.

The data published with NAICS code 334513 include the following SIC industry:

3823 Process control instruments

334514 Totalizing Fluid Meter and Counting Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing totalizing (i.e., registering) fluid meters and counting devices. Examples of products made

by these establishments are gas consumption meters, water consumption meters, parking meters, taxi meters, motor vehicle gauges, and fare collection equipment.

The data published with NAICS code 334514 include the following SIC industry:

3824 Fluid meters and counting devices

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334514 do not include establishments primarily engaged in the manufacture of automotive ammeters and voltmeters or motor vehicle gauges. The NAICS definitions will be fully implemented with the 2002 Economic Census.

334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals

This U.S. industry comprises establishments primarily engaged in manufacturing instruments for measuring and testing the characteristics of electricity and electrical signals. Examples of products made by these establishments are circuit and continuity testers, volt meters, ohm meters, wattmeters, multimeters, and semiconductor test equipment.

The data published with NAICS code 334515 include the following SIC industry:

3825 Instruments to measure electricity (pt)

334516 Analytical Laboratory Instrument Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and instrumentation systems for laboratory analysis of the chemical or physical composition or concentration of samples of solid, fluid, gaseous, or composite material.

The data published with NAICS code 334516 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3826 Analytical instruments

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334516 include establishments primarily engaged in the manufacture of analytical and scientific laser products.

334517 Irradiation Apparatus Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing irradiation apparatus and tubes for applications, such as medical diagnostic, medical therapeutic, industrial, research and scientific evaluation. Irradiation can take the form of beta-rays, gamma-rays, X-rays, or other ionizing radiation.

The data published with NAICS code 334517 include the following SIC industry:

3844 X-ray apparatus and tubes

334518 Watch, Clock, and Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling clocks; watches; timing mechanisms for clockwork operated devices; time clocks; time and date recording devices; and clock and watch parts (except crystals), such as springs, jewels, and modules.

The data published with NAICS code 334518 include the following SIC industries:

3495 Wire springs (pt)

3579 Office machines, n.e.c. (pt)

3873 Watches, clocks, and watchcases

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334518 do not include establishments primarily engaged in the manufacture of electronic chronometers or watch jewels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

334519 Other Measuring and Controlling Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and controlling devices (except search, detection, navigation, guidance, aeronautical, and nautical instruments and systems; automatic environmental controls for residential, commercial, and appliance use; instruments for measurement, display, and control of industrial process variables; totalizing fluid meters and counting devices; instruments for measuring and testing electricity and electrical signals; analytical laboratory instruments; watches, clocks, and parts; irradiation equipment; and electromedical and electrotherapeutic apparatus).

The data published with NAICS code 334519 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3829 Measuring and controlling devices, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334519 include establishments primarily engaged in the manufacture of commercial geophysical, meteorological, survey, and drafting laser products.

3346 Manufacturing and Reproducing Magnetic and Optical Media

This NAICS industry group includes establishments classified in NAICS Industry 33461, Manufacturing and Reproducing Magnetic and Optical Media.

33461 Manufacturing and Reproducing Magnetic and Optical Media

This industry comprises establishments primarily engaged in (1) manufacturing optical and magnetic media, such as blank audio tape, blank video tape, and blank diskettes and/or (2) mass duplicating (i.e., making copies) audio, video, software, and other data on magnetic, optical, and similar media.

334611 Software Reproducing

This U.S. industry comprises establishments primarily engaged in mass reproducing computer software. These establishments do not generally develop any software; they mass reproduce data and programs on magnetic media, such as diskettes, tapes, or cartridges. Establishments in this industry mass reproduce products, such as CD-ROMs and game cartridges.

The data published with NAICS code 334611 include the following SIC industries:

7379 Computer Related Services, n.e.c. (pt)

334612 Prerecorded Compact Disc (Except Software), Tape, and Record Reproducing

This U.S. industry comprises establishments primarily engaged in mass reproducing audio and video material on magnetic or optical media. Examples of products mass reproduced by these establishments are audio compact discs, prerecorded audio and video cassettes, and laser discs.

The data published with NAICS code 334612 include the following SIC industries:

3652 Prerecorded records and tapes

7819 Services allied to motion pictures (pt)

334613 Magnetic and Optical Recording Media Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing magnetic and optical recording media, such as blank magnetic tape, blank diskettes, blank optical discs, hard drive media, and blank magnetic tape cassettes.

The data published with NAICS code 334613 include the following SIC industry:

3695 Magnetic and optical recording media

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334613 do not include establishments primarily engaged in the manufacture of magnetic tape cleaners. The NAICS definitions will be fully implemented with the 2002 Economic Census.

335 Electrical Equipment, Appliance, and Component Manufacturing

Industries in the Electrical Equipment, Appliance, and Component Manufacturing subsector manufacture products that generate, distribute and use electrical power. Electric lighting equipment manufacturing establishments produce electric lamp bulbs, lighting fixtures, and parts. Household appliance manufacturing establishments make both small and major electrical appliances and parts. Electrical equipment manufacturing establishments make goods, such as electric motors, generators, transformers, and switchgear apparatus. Other electrical equipment and component manufacturing establishments make devices for storing electrical power (e.g., batteries), for transmitting electricity (e.g., insulated wire), and wiring devices (e.g., electrical outlets, fuse boxes, and light switches).

3351 Electric Lighting Equipment Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33511, Electric Lamp Bulb and Parts Manufacturing; and 33512, Lighting Fixture Manufacturing.

33511 Electric Lamp Bulb and Parts Manufacturing

This industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

335110 Electric Lamp Bulb and Part Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

The data published with NAICS code 335110 include the following SIC industry:

3641 Electric lamps

33512 Lighting Fixture Manufacturing

This industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except vehicular), nonelectric lighting equipment, lamp shades (except glass and plastics) and lighting fixture components (except current-carrying wiring devices).

335121 Residential Electric Lighting Fixture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fixed or portable residential electric lighting fixtures and lamp shades of metal, paper, or textiles. Residential electric lighting fixtures include those for use both inside and outside the residence.

The data published with NAICS code 335121 include the following SIC industries:

- 3089 Plastics products, n.e.c. (pt)
- 3645 Residential lighting fixtures
- 3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 335121 include establishments primarily engaged in the manufacture of plastic lampshades. The NAICS definitions will be fully implemented with the 2002 Economic Census.

335122 Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing commercial, industrial, and institutional electric lighting fixtures.

The data published with NAICS code 335122 include the following SIC industry:

- 3646 Commercial lighting fixtures

335129 Other Lighting Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except residential, commercial, industrial, institutional, and vehicular electric lighting fixtures) and nonelectric lighting equipment.

The data published with NAICS code 335129 include the following SIC industries:

- 3648 Lighting equipment, n.e.c.
- 3699 Electrical equipment and supplies, n.e.c. (pt)

3352 Household Appliance Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33521, Small Electrical Appliance Manufacturing; and 33522, Major Appliance Manufacturing.

33521 Small Electrical Appliance Manufacturing

This industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares, household-type fans, household-type vacuum cleaners, and other electric household-type floor care machines.

335211 Electric Housewares and Household Fan Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares for heating, cooking, and other purposes, and electric household-type fans (except attic fans).

The data published with NAICS code 335211 include the following SIC industry:

- 3634 Electric housewares and fans (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 335211 do not include establishments primarily engaged in the manufacture of electric hair clippers for humans. The NAICS definitions will be fully implemented with the 2002 Economic Census.

335212 Household Vacuum Cleaner Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electric vacuum cleaners, electric floor waxing machines, and other electric floor care machines typically for household use.

The data published with NAICS code 335212 include the following SIC industries:

- 3635 Household vacuum cleaners
- 3639 Household appliances, n.e.c. (pt)

33522 Major Appliance Manufacturing

This industry comprises establishments primarily engaged in manufacturing household-type cooking appliances, household-type laundry equipment, household-type refrigerators, upright and chest freezers, and other electrical and nonelectrical major household-type appliances, such as dishwashers, water heaters, and garbage disposal units.

335221 Household Cooking Appliance Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing household-type electric and nonelectric cooking equipment (except small electric appliances and electric housewares).

The data published with NAICS code 335221 include the following SIC industry:

- 3631 Household cooking equipment

335222 Household Refrigerator and Home Freezer Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing household-type refrigerators and upright and chest freezers.

The data published with NAICS code 335222 include the following SIC industry:

3632 Household refrigerators and freezers

335224 Household Laundry Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing household-type laundry equipment.

The data published with NAICS code 335224 include the following SIC industry:

3633 Household laundry equipment

335228 Other Major Household Appliance Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electric and nonelectric major household-type appliances (except cooking equipment, refrigerators, upright and chest freezers, and household-type laundry equipment).

The data published with NAICS code 335228 include the following SIC industry:

3639 Household appliances, n.e.c. (pt)

3353 Electrical Equipment Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33531, Electrical Equipment Manufacturing.

33531 Electrical Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers; electric motors, generators, and motor generator sets; switchgear and switchboard apparatus; relays; and industrial controls.

335311 Power, Distribution, and Specialty Transformer Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers (except electronic components). Industrial-type and consumer-type transformers in this industry vary (e.g., step up or step down) voltage but do not convert alternating to direct or direct to alternating current.

The data published with NAICS code 335311 include the following SIC industries:

3548 Welding apparatus (pt)

3612 Transformers

335312 Motor and Generator Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing electric motors (except internal combustion engine starting motors), power generators (except battery charging alternators for internal combustion engines), and motor generator sets (except turbine generator set units). This industry includes establishments rewinding armatures on a factory basis.

The data published with NAICS code 335312 include the following SIC industries:

3621 Motors and generators

7694 Armature rewinding shops (pt)

335313 Switchgear and Switchboard Apparatus Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing switchgear and switchboard apparatus.

The data published with NAICS code 335313 include the following SIC industry:

3613 Switchgear and switchboard apparatus

335314 Relay and Industrial Control Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing relays, motor starters and controllers, and other industrial controls and control accessories.

The data published with NAICS code 335314 include the following SIC industry:

3625 Relays and industrial controls

3359 Other Electrical Equipment and Component Manufacturing

This industry group comprises establishments manufacturing electrical equipment and components (except electric lighting equipment, household-type appliances, transformers, switchgear, relays, motors, and generators).

33591 Battery Manufacturing

This industry comprises establishments primarily engaged in manufacturing primary and storage batteries.

335911 Storage Battery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing storage batteries.

The data published with NAICS code 335911 include the following SIC industry:

3691 Storage batteries

335912 Primary Battery Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wet or dry primary batteries.

The data published with NAICS code 335912 include the following SIC industry:

3692 Primary batteries, dry and wet

33592 Communication and Energy Wire and Cable Manufacturing

This industry comprises establishments insulating fiber-optic cable, and manufacturing insulated nonferrous wire and cable from nonferrous wire drawn in other establishments.

335921 Fiber Optic Cable Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing insulated fiber-optic cable from purchased fiber-optic strand.

The data published with NAICS code 335921 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

335929 Other Communication and Energy Wire Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing insulated wire and cable of nonferrous metals from purchased wire.

The data published with NAICS code 335929 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

33593 Wiring Device Manufacturing

This industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices and noncurrent-carrying wiring devices for wiring electrical circuits.

335931 Current-Carrying Wiring Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices.

The data published with NAICS code 335931 include the following SIC industry:

3643 Current-carrying wiring devices

335932 Noncurrent-Carrying Wiring Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing noncurrent-carrying wiring devices.

The data published with NAICS code 335932 include the following SIC industry:

3644 Noncurrent-carrying wiring devices

33599 All Other Electrical Equipment and Component Manufacturing

This industry comprises establishments primarily engaged in manufacturing electrical equipment (except electric lighting equipment, household-type appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, and wiring devices).

335991 Carbon and Graphite Product Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing carbon, graphite, and metal-graphite brushes and brush stock; carbon or graphite electrodes for thermal and electrolytic uses; carbon and graphite fibers; and other carbon, graphite, and metal-graphite products.

The data published with NAICS code 335991 include the following SIC industry:

3624 Carbon and graphite products

335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing industrial and commercial electric apparatus and other equipment (except lighting equipment, household appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, wiring devices, and carbon and graphite products). This industry includes power converters (i.e., AC to DC and DC to AC), power supplies, surge suppressors, and similar equipment for industrial-type and consumer-type equipment.

The data published with NAICS code 335999 include the following SIC industries:

3629 Electrical industrial apparatus, n.e.c.

3699 Electrical equipment and supplies, n.e.c. (pt)

336 Transportation Equipment Manufacturing

Industries in the Transportation Equipment Manufacturing subsector produce equipment for transporting people and goods. Transportation equipment is a type of machinery. An entire subsector is devoted to this activity because of the significance of its economic size in all three North American countries.

Establishments in this subsector utilize production processes similar to those of other machinery manufacturing establishments - bending, forming, welding, machining, and assembling metal or plastic parts into components and finished products. However, the assembly of components and subassemblies and their further assembly into finished vehicles tends to be a more common production process in this subsector than in the Machinery Manufacturing subsector.

NAICS has industry groups for the manufacture of equipment for each mode of transport - road, rail, air, and water. Parts for motor vehicles warrant a separate industry group because of their importance and because parts manufacture requires less assembly, and the establishments that manufacture only parts are not as vertically integrated as those that make complete vehicles.

Land use motor vehicle equipment not designed for highway operation (e.g., agricultural equipment, construction equipment, and materials handling equipment) is classified in the appropriate NAICS subsector based on the type and use of the equipment.

3361 Motor Vehicle Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33611, Automobile and Light Duty Motor Vehicle Manufacturing; and 33612, Heavy Duty Truck Manufacturing.

33611 Automobile and Light Duty Motor Vehicle Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing complete automobile and light duty motor vehicles (i.e., body and chassis or unibody) or (2) manufacturing chassis only.

336111 Automobile Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete automobiles (i.e., body and chassis or unibody) or (2) manufacturing automobile chassis only.

The data published with NAICS code 336111 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

336112 Light Truck and Utility Vehicle Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete light trucks and utility vehicles (i.e., body and chassis) or (2) manufacturing light truck and utility vehicle chassis only. Vehicles made include light duty vans, pick-up trucks, minivans, and sport utility vehicles.

The data published with NAICS code 336112 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

33612 Heavy Duty Truck Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special-purpose, heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

336120 Heavy Duty Truck Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special-purpose, heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

The data published with NAICS code 336120 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

3362 Motor Vehicle Body and Trailer Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33621, Motor Vehicle Body and Trailer Manufacturing.

33621 Motor Vehicle Body and Trailer Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing motor vehicle bodies and cabs or (2) manufacturing truck, automobile and utility trailers, truck trailer chassis, detachable trailer bodies and detachable trailer chassis. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

Motor homes are units where the motor and the living quarters are contained in the same integrated unit, while travel trailers are designed to be towed by a motor unit, such as an automobile or a light truck.

336211 Motor Vehicle Body Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing truck and bus bodies and cabs and automobile bodies. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

The data published with NAICS code 336211 include the following SIC industries:

3711 Motor vehicles and car bodies (pt)

3713 Truck and bus bodies

3714 Motor vehicle parts and accessories (pt)

336212 Truck Trailer Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing truck trailers, truck trailer chassis, cargo container chassis, detachable trailer bodies, and detachable trailer chassis for sale separately.

The data published with NAICS code 336212 include the following SIC industry:

3715 Truck trailers

336213 Motor Home Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing motor homes on purchased chassis and/or (2) manufacturing conversion vans on an assembly line basis. Motor homes are units where the motor and the living quarters are integrated in the same unit.

The data published with NAICS code 336213 include the following SIC industry:

3716 Motor homes

336214 Travel Trailer and Camper Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing travel trailers and campers designed to attach to motor vehicles; (2) manufacturing pickup coaches (i.e., campers) and caps (i.e., covers) for mounting on pickup trucks; and (3) manufacturing automobile, utility, and light-truck trailers. Travel trailers do not have their own motor but are designed to be towed by a motor unit, such as an automobile or a light truck.

The data published with NAICS code 336214 include the following SIC industries:

3792 Travel trailer and campers

3799 Transportation equipment, n.e.c. (pt)

3363 Motor Vehicle Parts Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33631, Motor Vehicle Gasoline Engine and Engine Parts Manufacturing; 33632, Motor Vehicle Electrical and Electronic Equipment Manufacturing; 33633, Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing; 33634, Motor Vehicle Brake System Manufacturing; 33635, Motor Vehicle Transmission and Power Train Parts Manufacturing; 33636, Motor Vehicle Seating and Interior Trim Manufacturing; 33637, Motor Vehicle Metal Stamping; and 33639, Other Motor Vehicle Parts Manufacturing.

33631 Motor Vehicle Gasoline Engine and Engine Parts Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle gasoline engines and engine parts, whether or not for vehicular use.

336311 Carburetor, Piston, Piston Ring, and Valve Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding carburetors, pistons, piston rings, and engine intake and exhaust valves.

The data published with NAICS code 336311 include the following SIC industries:

3592 Carburetors, pistons, rings, and valves

336312 Gasoline Engine and Engine Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding gasoline motor vehicle engines and gasoline motor vehicle engine parts, excluding carburetors, pistons, piston rings, and valves.

The data published with NAICS code 336312 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

33632 Motor Vehicle Electrical and Electronic Equipment Manufacturing

This industry comprises establishments primarily engaged in (1) manufacturing vehicular lighting and/or (2) manufacturing and/or rebuilding motor vehicle electrical and electronic equipment. The products made can be used for all types of transportation equipment (i.e., aircraft, automobiles, trains, ships).

336321 Vehicular Lighting Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing vehicular lighting fixtures.

The data published with NAICS code 336321 include the following SIC industry:

3647 Vehicular lighting equipment

336322 Other Motor Vehicle Electrical and Electronic Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding electrical and electronic equipment for motor vehicles and internal combustion engines.

The data published with NAICS code 336322 include the following SIC industries:

3679 Electronic components, n.e.c. (pt)

3694 Engine electrical equipment

3714 Motor vehicle parts and accessories (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336322 include establishments primarily engaged in the manufacture of electronic control modular chips for motor vehicles. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33633 Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

336330 Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

The data published with NAICS code 336330 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

33634 Motor Vehicle Brake System Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

336340 Motor Vehicle Brake System Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

The data published with NAICS code 336340 include the following SIC industries:

3292 Asbestos products (pt)

3714 Motor vehicle parts and accessories (pt)

33635 Motor Vehicle Transmission and Power Train Parts Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

336350 Motor Vehicle Transmission and Power Train Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

The data published with NAICS code 336350 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

33636 Motor Vehicle Seating and Interior Trim Manufacturing

This industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

336360 Motor Vehicle Seating and Interior Trim Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

The data published with NAICS code 336360 include the following SIC industries:

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

2531 Public building and related furniture (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336360 do not include establishments primarily engaged in the manufacture of metal motor vehicle seat frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33637 Motor Vehicle Metal Stamping

This industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

336370 Motor Vehicle Metal Stamping

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

The data published with NAICS code 336370 include the following SIC industry:

3465 Automotive stampings

33639 Other Motor Vehicle Parts Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, and motor vehicle stampings).

336391 Motor Vehicle Air-Conditioning Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing air-conditioning systems and compressors for motor vehicles, such as automobiles, trucks, buses, aircraft, farm machinery, construction machinery, and other related vehicles.

The data published with NAICS code 336391 include the following SIC industry:

3585 Refrigeration and heating equipment (pt)

336399 All Other Motor Vehicle Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, motor vehicle stampings, and motor vehicle air-conditioning systems and compressors).

The data published with NAICS code 336399 include the following SIC industries:

3519 Internal combustion engines, n.e.c. (pt)

3714 Motor vehicle parts and accessories (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336399 do not include establishments primarily engaged in the manufacture of luggage and utility racks or trailer hitches. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3364 Aerospace Product and Parts Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33641, Aerospace Product and Parts Manufacturing.

33641 Aerospace Product and Parts Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing complete aircraft, missiles, or space vehicles; (2) manufacturing aerospace engines, propulsion units, auxiliary equipment or parts; (3) developing and making prototypes of aerospace products; (4) aircraft conversion (i.e., major modifications to systems); and (5) complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

336411 Aircraft Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing or assembling complete aircraft; (2) developing and making aircraft prototypes; (3) aircraft conversion (i.e., major modifications to systems); and (4) complete aircraft overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

The data published with NAICS code 336411 include the following SIC industry:

3721 Aircraft

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336411 do not include establishments primarily engaged in the manufacture of target drones. The NAICS definitions will be fully implemented with the 2002 Economic Census.

336412 Aircraft Engine and Engine Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing aircraft engines and engine parts; (2) developing and making prototypes of aircraft engines and engine parts; (3) aircraft propulsion system conversion (i.e., major modifications to systems); and (4) aircraft propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft propulsion system to original design specifications).

The data published with NAICS code 336412 include the following SIC industry:

3724 Aircraft engines and engine parts

336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing aircraft parts or auxiliary equipment (except engines and aircraft fluid power subassemblies) and/or (2) developing and making prototypes of aircraft parts and auxiliary equipment. Auxiliary equipment includes such items as crop dusting apparatus, armament racks, inflight refueling equipment, and external fuel tanks.

The data published with NAICS code 336413 include the following SIC industry:

3728 Aircraft parts and equipment, n.e.c. (pt)

336414 Guided Missile and Space Vehicle Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete guided missiles and space vehicles and/or (2) developing and making prototypes of guided missile or space vehicles.

The data published with NAICS code 336414 include the following SIC industry:

3761 Guided missiles and space vehicles

336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing guided missile and/or space vehicle propulsion units and propulsion unit parts and/or (2) developing and making prototypes of guided missile and space vehicle propulsion units and propulsion unit parts.

The data published with NAICS code 336415 include the following SIC industry:

3764 Space propulsion units and parts

336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing guided missile and space vehicle parts and auxiliary equipment (except guided missile and space vehicle propulsion units and propulsion unit parts) and/or (2) developing and making prototypes of guided missile and space vehicle parts and auxiliary equipment.

The data published with NAICS code 336419 include the following SIC industry:

3769 Space vehicle equipment, n.e.c.

3365 Railroad Rolling Stock Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33651, Railroad Rolling Stock Manufacturing.

33651 Railroad Rolling Stock Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing and/or rebuilding locomotives, locomotive frames and parts; (2) manufacturing railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

336510 Railroad Rolling Stock Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing and/or rebuilding locomotives, locomotive frames, and parts; (2) manufacturing railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

The data published with NAICS code 336510 include the following SIC industries:

3531 Construction machinery (pt)

3743 Railroad equipment (pt)

3366 Ship and Boat Building

This NAICS industry group includes establishments classified in NAICS Industry 33661, Ship and Boat Building.

33661 Ship and Boat Building

This industry comprises establishments primarily engaged in operating shipyards or boat yards (i.e., ship or boat manufacturing facilities). Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Boats are defined as watercraft typically suitable or intended for personal use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

336611 Ship Building and Repairing

This U.S. industry comprises establishments primarily engaged in operating a shipyard. Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

The data published with NAICS code 336611 include the following SIC industry:

3731 Ship building and repairing

336612 Boat Building

This U.S. industry comprises establishments primarily engaged in building boats. Boats are defined as watercraft not built in shipyards and typically of the type suitable or intended for personal use.

The data published with NAICS code 336612 include the following SIC industry:

3732 Boat building and repairing (pt)

3369 Other Transportation Equipment Manufacturing

This industry group comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles and parts, aerospace products and parts, railroad rolling stock, ship building, and boat manufacturing).

33699 Other Transportation Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, metal tricycles, complete military armored vehicles, tanks, self-propelled weapons, vehicles pulled by draft animals, and other transportation equipment (except motor vehicles, boats, ships, railroad rolling stock, and aerospace products), including parts thereof.

336991 Motorcycle, Bicycle, and Parts Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, tricycles and similar equipment and parts.

The data published with NAICS code 336991 include the following SIC industries:

3751 Motorcycles, bicycles, and parts

3944 Games, toys, and children's vehicles (pt)

336992 Military Armored Vehicle, Tank, and Tank Component Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing complete military armored vehicles, combat tanks, specialized components for combat tanks, and self-propelled weapons.

The data published with NAICS code 336992 include the following SIC industries:

3711 Motor vehicles and car bodies (pt)

3795 Tanks and tank components

336999 All Other Transportation Equipment Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles, motor vehicle parts, boats, ships, railroad rolling stock, aerospace products, motorcycles, bicycles, armored vehicles, and tanks).

The data published with NAICS code 336999 include the following SIC industry:

3799 Transportation equipment, n.e.c. (pt)

337 Furniture and Related Product Manufacturing

Industries in the Furniture and Related Product Manufacturing subsector make furniture and related articles, such as mattresses, window blinds, cabinets, and fixtures. The processes used in the manufacture of furniture include the cutting, bending, molding, laminating, and assembly of such materials as wood, metal, glass, plastics, and rattan. However, the production process for furniture is not solely bending metal, cutting and shaping wood, or extruding and molding plastics. Design and fashion trends play an important part in the production of furniture. The integrated design of the article for both esthetic and functional qualities is also a major part of the process of manufacturing furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers.

Furniture may be made of any material, but the most common ones used in North America are metal and wood. Furniture manufacturing establishments may specialize in making articles primarily from one material. Some of the

equipment required to make a wooden table, for example, is different from that used to make a metal one. However, furniture is usually made from several materials. A wooden table might have metal brackets, and a wooden chair, a fabric or plastics seat. Therefore, in NAICS, furniture initially is classified based on the type of furniture (application for which it is designed) rather than the material used. For example, an upholstered sofa is treated as household furniture, although it may also be used in hotels or offices.

When classifying furniture according to the component material from which it is made, furniture made from more than one material is classified based on the material used in the frame, or if there is no frame, the predominant component material. Upholstered household furniture (excluding kitchen and dining room chairs with upholstered seats) is classified without regard to the frame material. Kitchen or dining room chairs with upholstered seats are classified according to the frame material.

Furniture may be made on a stock or custom basis and may be shipped assembled or unassembled (i.e., knock-down). The manufacture of furniture parts and frames is included in this subsector.

Some of the processes used in furniture manufacturing are similar to processes that are used in other segments of manufacturing. For example, cutting and assembly occurs in the production of wood trusses that are classified in Subsector 321, Wood Product Manufacturing. However, the multiple processes that distinguish wood furniture manufacturing from wood product manufacturing warrant inclusion of wooden furniture manufacturing in the Furniture and Related Product Manufacturing subsector. Metal furniture manufacturing uses techniques that are also employed in the manufacturing of roll-formed products classified in Subsector 332, Fabricated Metal Product Manufacturing. The molding process for plastics furniture is similar to the molding of other plastics products. However, plastics furniture producing establishments tend to specialize in furniture.

NAICS attempts to keep furniture manufacturing together, but there are two notable exceptions: seating for transportation equipment and laboratory and hospital furniture. These exceptions are related to that fact that some of the aspects of the production process for these products, primarily the design, are highly integrated with that of other manufactured goods, namely motor vehicles and health equipment.

3371 Household and Institutional Furniture and Kitchen Cabinet Manufacturing

This industry group comprises establishments manufacturing household-type furniture, such as living room, kitchen, and bedroom furniture, and institutional (i.e., public building) furniture, such as furniture for schools, theaters, and churches.

33711 Wood Kitchen Cabinet and Countertop Manufacturing

This industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

337110 Wood Kitchen Cabinet and Countertop Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

The data published with NAICS code 3371110 include the following SIC industries:

2434 Wood kitchen cabinets

2541 Wood partitions and fixtures (pt)

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337110 include establishments primarily engaged in manufacturing wood countertops as part of wood office and store fixtures. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33712 Household and Institutional Furniture Manufacturing

This industry comprises establishments primarily engaged in manufacturing household-type and public building furniture (i.e., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337121 Upholstered Household Furniture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing upholstered household-type furniture. The furniture may be made on a stock or custom basis.

The data published with NAICS code 337121 include the following SIC industries:

2512 Upholstered household furniture

2515 Mattresses and bedsprings (pt)

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337121 do not include establishments primarily engaged in manufacturing upholstered metal household furniture. The NAICS definitions will be fully implemented with the 2002 Economic Census.

337122 Nonupholstered Wood Household Furniture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonupholstered wood household-type furniture and freestanding cabinets (except television, radio, and sewing machine cabinets). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337122 include the following SIC industries:

2511 Wood household furniture

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337122 include establishments primarily engaged in manufacturing wood box spring frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

337124 Metal Household Furniture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing metal household-type furniture and freestanding cabinets. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337124 include the following SIC industry:

2514 Metal household furniture

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337124 include establishments primarily engaged in manufacturing upholstered metal household furniture or metal box spring frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

337125 Household Furniture (Except Wood and Metal) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing household-type furniture of materials other than wood or metal, such as plastics, reed,

rattan, wicker, and fiberglass. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337125 include the following SIC industry:

2519 Household furniture, n.e.c.

337127 Institutional Furniture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing institutional-type furniture (e.g., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337127 include the following SIC industries:

2531 Public building and related furniture (pt)

2599 Furniture and fixtures, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337127 do not include establishments primarily engaged in manufacturing wood or nonwood lunchroom tables and chairs. The NAICS definitions will be fully implemented with the 2002 Economic Census.

337129 Wood Television, Radio, and Sewing Machine Cabinet Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wood cabinets used as housings by television, stereo, loudspeaker, and sewing machine manufacturers.

The data published with NAICS code 337129 include the following SIC industry:

2517 Wood TV and radio cabinets

3372 Office Furniture (Including Fixtures) Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33721, Office Furniture (Including Fixtures) Manufacturing.

33721 Office Furniture (Including Fixtures) Manufacturing

This industry comprises establishments primarily engaged in manufacturing office furniture and/or office and store fixtures. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337211 Wood Office Furniture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337211 include the following SIC industry:

2521 Wood office furniture

337212 Custom Architectural Woodwork and Millwork Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing custom designed interiors consisting of architectural woodwork and fixtures utilizing wood, wood products, and plastics laminates. All of the industry output is made to individual order on a job shop basis and requires skilled craftsmen as a labor input. A job might include custom manufacturing of display fixtures, gondolas, wall shelving units, entrance and window architectural detail, sales and reception counters, wall paneling, and matching furniture.

The data published with NAICS code 337212 include the following SIC industry:

2541 Wood partitions and fixtures (pt)

337214 Office Furniture (Except Wood) Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonwood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337214 include the following SIC industry:

2522 Office furniture, except wood

337215 Showcase, Partition, Shelving, and Locker Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing wood and nonwood office and store fixtures, shelving, lockers, frames, partitions, and related fabricated products of wood and nonwood materials, including plastics laminated fixture tops. The products are made on a stock basis and may be assembled or unassembled (i.e., knockdown). Establishments exclusively making furniture parts (e.g., frames) are included in this industry.

The data published with NAICS code 337215 include the following SIC industries:

2426 Hardwood dimension and flooring mills (pt)

2541 Wood partitions and fixtures (pt)

2542 Partitions and fixtures, except wood

3499 Fabricated metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337215 include establishments primarily engaged in manufacturing wood or non-wood lunchroom tables and chairs, but do not include establishments primarily engaged in manufacturing wood or metal box spring frames, finished plastic furniture parts, convertible bed sleeper mechanisms or chair glides. The NAICS definitions will be fully implemented with the 2002 Economic Census.

3379 Other Furniture Related Product Manufacturing

This industry group comprises establishments manufacturing furniture related products, such as mattresses, blinds, and shades.

33791 Mattress Manufacturing

This industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

337910 Mattress Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

The data published with NAICS code 337910 include the following SIC industry:

2515 Mattresses and bedsprings (pt)

33792 Blind and Shade Manufacturing

This industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

337920 Blind and Shade Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

The data published with NAICS code 337920 include the following SIC industry:

2591 Drapery hardware, blinds, and shades

339 Miscellaneous Manufacturing

Industries in the Miscellaneous Manufacturing subsector make a wide range of products that cannot readily be classified in specific NAICS subsectors in manufacturing. Processes used by these establishments vary significantly, both among and within industries. For example, a variety of manufacturing processes are used in manufacturing sporting and athletic goods that include products, such as tennis racquets and golf balls. The processes for these products differ from each other, and the processes differ significantly from the fabrication processes used in making dolls or toys, the melting and shaping of precious metals to make jewelry, and the bending, forming, and assembly used in making medical products.

The industries in this subsector are defined by what is made rather than how it is made. Although individual establishments might be appropriately classified elsewhere in the NAICS structure, for historical continuity, these product-based industries were maintained. In most cases, no one process or material predominates for an industry.

Establishments in this subsector manufacture products as diverse as medical equipment and supplies, jewelry, sporting goods, toys, and office supplies.

3391 Medical Equipment and Supplies Manufacturing

This NAICS industry group includes establishments classified in NAICS Industry 33911, Medical Equipment and Supplies Manufacturing.

33911 Medical Equipment and Supplies Manufacturing

This industry comprises establishments primarily engaged in manufacturing medical equipment and supplies. Examples of products made by these establishments are laboratory apparatus and furniture, surgical and medical instruments, surgical appliances and supplies, dental equipment and supplies, orthodontic goods, dentures, and orthodontic appliances.

339111 Laboratory Apparatus and Furniture Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing laboratory apparatus and laboratory and hospital furniture (except dental). Examples of products made by these establishments are hospital beds, operating room tables, laboratory balances and scales, furnaces, ovens, centrifuges, cabinets, cases, benches, tables, and stools.

The data published with NAICS code 339111 include the following SIC industry:

3821 Laboratory apparatus and furniture

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339111 do not include establishments primarily engaged in the manufacture of hospital beds or operating tables. The NAICS definitions will be fully implemented with the 2002 Economic Census.

339112 Surgical and Medical Instrument Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing medical, surgical, ophthalmic, and veterinary instruments and apparatus (except electrotherapeutic, electromedical, and irradiation apparatus). Examples of products made by these establishments are syringes, hypodermic needles, anesthesia apparatus, blood transfusion equipment, catheters, surgical clamps, and medical thermometers.

The data published with NAICS code 339112 include the following SIC industries:

3829 Measuring and controlling devices, n.e.c. (pt)

3841 Surgical and medical instruments

339113 Surgical Appliance and Supplies Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing surgical appliances and supplies. Examples of products made by these establishments are orthopedic devices, prosthetic appliances, surgical dressings, crutches, surgical sutures, and personal industrial safety devices (except protective eyewear).

The data published with NAICS code 339113 include the following SIC industries:

2599 Furniture and fixtures, n.e.c. (pt)

3842 Surgical appliances and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339113 do not include establishments primarily engaged in the manufacture of rubber gloves and life jackets. The NAICS definitions will be fully implemented with the 2002 Economic Census.

339114 Dental Equipment and Supplies Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing dental equipment and supplies used by dental laboratories and offices of dentists, such as dental chairs, dental instrument delivery systems, dental hand instruments, and dental impression material.

The data published with NAICS code 339114 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3843 Dental equipment and supplies

339115 Ophthalmic Goods Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing ophthalmic goods. Examples of products made by these establishments are prescription eyeglasses (except manufactured in a retail setting), contact lenses, sunglasses, eyeglass frames, and reading glasses made to standard powers.

The data published with NAICS code 339115 include the following SIC industry:

3851 Ophthalmic goods

339116 Dental Laboratories

This U.S. industry comprises establishments primarily engaged in manufacturing dentures, crowns, bridges, and orthodontic appliances customized for individual application.

The data published with NAICS code 339116 include the following SIC industry:

8072 Dental laboratories

3399 Other Miscellaneous Manufacturing

This NAICS industry group includes establishments classified in the following NAICS Industries: 33991, Jewelry and Silverware Manufacturing; 33992, Sporting and Athletic Goods Manufacturing; 33993, Doll, Toy, and Game Manufacturing; 33994, Office Supplies (Except Paper) Manufacturing; 33995, Sign Manufacturing; and 33999, All Other Miscellaneous Manufacturing.

33991 Jewelry and Silverware Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing, engraving, chasing, or etching jewelry; (2) manufacturing metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases); (3) manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter cutlery and flatware; (4) manufacturing, engraving, chasing, or etching personal metal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases); (5) stamping coins; (6) manufacturing unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing; (7) cutting, slabbing, tumbling, carving, engraving, polishing, or faceting precious or semiprecious stones and gems; (8) recutting, repolishing, and setting gem stones; and (9) drilling, sawing, and peeling cultured and costume pearls.

339911 Jewelry (Except Costume) Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing, engraving, chasing, or etching precious metal solid or precious metal clad jewelry; (2) manufacturing, engraving, chasing, or etching personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases) made of precious solid or clad metal; and (3) stamping coins.

The data published with NAICS code 339911 include the following SIC industries:

3479 Metal coating and allied services (pt)

3911 Jewelry, precious metal

339912 Silverware and Holloware Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter flatware and other plated ware.

The data published with NAICS code 339912 include the following SIC industries:

3479 Metal coating and allied services (pt)

3914 Silverware and plated ware (pt)

339913 Jewelers' Material and Lapidary Work Manufacturing

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing; (2) cutting, slabbing, tumbling, carving, engraving, polishing or faceting precious or semiprecious stones and gems; (3) recutting, repolishing, and setting gem stones; and (4) drilling, sawing, and peeling cultured pearls.

The data published with NAICS code 339913 include the following SIC industry:

3915 Jewelers' materials and lapidary work

339914 Costume Jewelry and Novelty Manufacturing

This U.S. industry comprises establishments primarily engaged in (1) manufacturing, engraving, chasing, and etching costume jewelry; and/or (2) manufacturing, engraving, chasing, or etching nonprecious metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases). This industry includes establishments primarily engaged in manufacturing precious plated jewelry and precious plated personal goods.

The data published with NAICS code 339914 include the following SIC industries:

3479 Metal coating and allied services (pt)

3499 Fabricated metal products, n.e.c. (pt)

3961 Costume jewelry

33992 Sporting and Athletic Goods Manufacturing

This industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

339920 Sporting and Athletic Goods Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

The data published with NAICS code 339920 include the following SIC industry:

3949 Sporting and athletic goods, n.e.c.

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339920 do not include establishments primarily engaged in the manufacture of wet suits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33993 Doll, Toy, and Game Manufacturing

This industry comprises establishments primarily engaged in manufacturing dolls, toys, and games, such as complete dolls, doll parts, doll clothes, action figures, toys, games (including electronic), hobby kits, and children's vehicles (except metal bicycles and tricycles).

339931 Doll and Stuffed Toy Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing complete dolls, doll parts, and doll clothes, action figures, and stuffed toys.

The data published with NAICS code 339931 include the following SIC industry:

3942 Dolls

339932 Game, Toy, and Children's Vehicle Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing games (including electronic), toys, and children's vehicles (except bicycles and metal tricycles).

The data published with NAICS code 339932 include the following SIC industry:

3944 Games, toys, and children's vehicles (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339932 do not include

establishments primarily engaged in the manufacture of rubber toys, except dolls or embroidery kits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

33994 Office Supplies (Except Paper) Manufacturing

This industry comprises establishments primarily engaged in manufacturing office supplies. Examples of products made by these establishments are pens, pencils, felt tip markers, crayons, chalk, pencil sharpeners, staplers, hand operated stamps, modeling clay, and inked ribbons.

339941 Pen and Mechanical Pencil Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing pens, ballpoint pen refills and cartridges, mechanical pencils, and felt tipped markers.

The data published with NAICS code 339941 include the following SIC industry:

3951 Pens and mechanical pencils

339942 Lead Pencil and Art Goods Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing nonmechanical pencils and art goods. Examples of products made by these establishments are pencil leads, crayons, chalk, framed blackboards, pencil sharpeners, staplers, artists' palettes and paints, and modeling clay.

The data published with NAICS code 339942 include the following SIC industries:

2531 Public building and related furniture (pt)

3579 Office machines, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

339943 Marking Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing marking devices, such as hand operated stamps, embossing stamps, stamp pads, and stencils.

The data published with NAICS code 339943 include the following SIC industry:

3953 Marking devices

339944 Carbon Paper and Inked Ribbon Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing carbon paper and inked ribbons.

The data published with NAICS code 339944 include the following SIC industry:

3955 Carbon paper and inked ribbons

33995 Sign Manufacturing

This industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, displays).

339950 Sign Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, displays).

The data published with NAICS code 339950 include the following SIC industries:

3993 Signs and advertising specialties

33999 All Other Miscellaneous Manufacturing

This industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), and signs).

339991 Gasket, Packing, and Sealing Device Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing gaskets, packing, and sealing devices of all materials.

The data published with NAICS code 339991 include the following SIC industry:

3053 Gaskets, packing and sealing devices

339992 Musical Instrument Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing musical instruments (except toys).

The data published with NAICS code 339992 include the following SIC industry:

3931 Musical instruments

339993 Fastener, Button, Needle, and Pin Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing fasteners, buttons, needles, pins, and buckles (except precious metals or precious and semiprecious stones and gems).

The data published with NAICS code 339993 include the following SIC industries:

3131 Footwear cut stock and findings (pt)

3965 Fasteners, buttons, needles, and pins

339994 Broom, Brush, and Mop Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing brooms, mops, and brushes.

The data published with NAICS code 339994 include the following SIC industries:

2392 Housefurnishings, n.e.c. (pt)

3991 Brooms and brushes

339995 Burial Casket Manufacturing

This U.S. industry comprises establishments primarily engaged in manufacturing burial caskets, cases, and vaults (except concrete).

The data published with NAICS code 339995 include the following SIC industry:

3995 Burial caskets

339999 All Other Miscellaneous Manufacturing

This U.S. industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical

equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), musical instruments, fasteners, buttons, needles, pins, brooms, brushes, mops, and burial caskets).

The data published with NAICS code 339999 include the following SIC industries:

2499 Wood products, n.e.c. (pt)

3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339999 do not include establishments primarily engaged in the manufacture of electronic cigarette lighters. The NAICS definitions will be fully implemented with the 2002 Economic Census.

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:

1. 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” (nsc) 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.

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.

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 SIC-based 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.

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

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, complete-coverage 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.

Appendix D. Geographic Notes

OREGON

Albany is in Benton and Linn Counties.

Lake Oswego is in Clackamas, Multnomah, and Washington Counties.

Milwaukie is in Clackamas and Multnomah Counties.

Portland is in Clackamas, Multnomah, and Washington Counties.

Salem is in Marion and Polk Counties.

Tualatin is in Clackamas and Washington Counties.

Wilsonville is in Clackamas and Washington Counties.

Appendix E. Metropolitan Areas

OREGON

Eugene—Springfield, OR MSA

Lane County, OR

Medford—Ashland, OR MSA

Jackson County, OR

Portland—Vancouver, OR—WA PMSA

Clackamas County, OR

Columbia County, OR

Multnomah County, OR

Washington County, OR

Yamhill County, OR

Clark County, WA

Portland—Salem, OR—WA CMSA

Portland—Vancouver, OR—WA PMSA

Clackamas County, OR

Columbia County, OR

Multnomah County, OR

Washington County, OR

Yamhill County, OR

Clark County, WA

Salem, OR PMSA

Marion County, OR

Polk County, OR

Salem, OR PMSA

Marion County, OR

Polk County, OR

